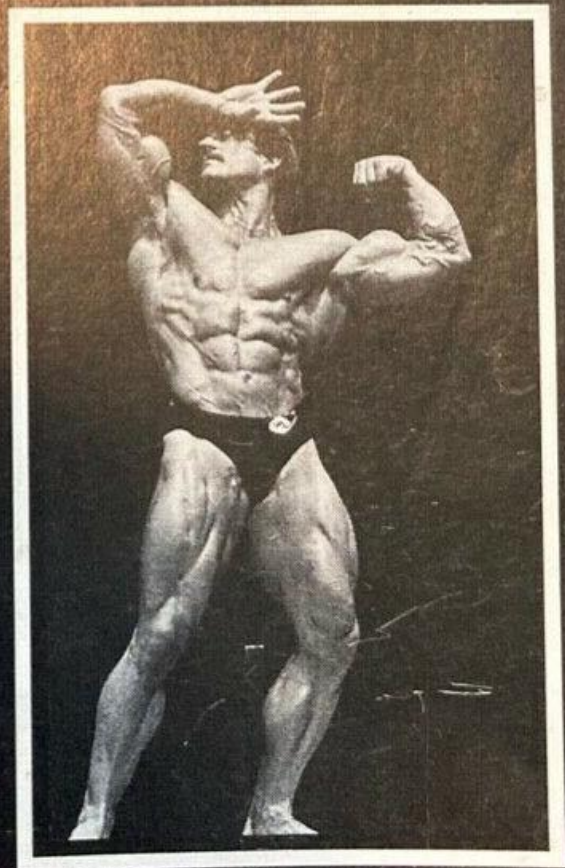
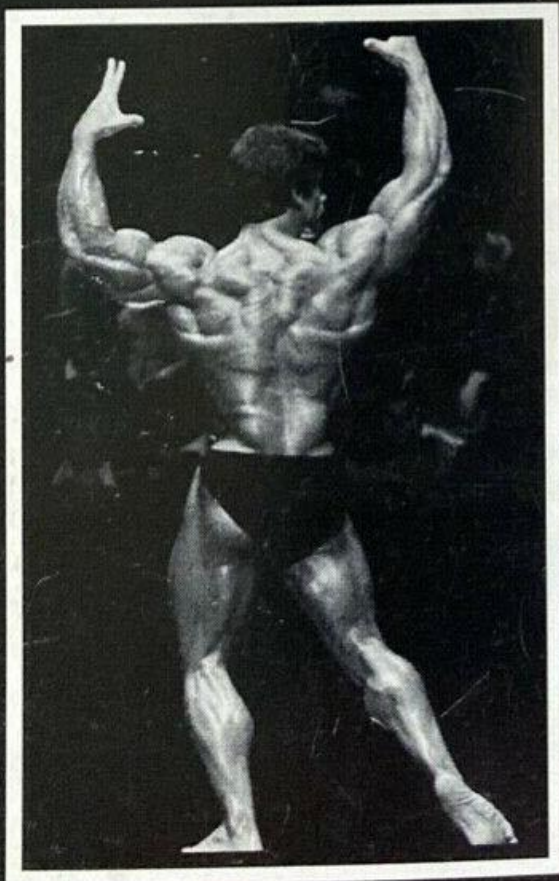


# MIKE MENTZER

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## HEAVY DUTY II: MIND AND BODY



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## TABLE OF CONTENTS

Introduction.....	vii
I The Mind: Check Your Premises .....	13
II Nature, To Be Commanded, Must Be Obeyed .....	33
III Another Kind Of Definition .....	47
IV Balancing The Theoretical Account .....	59
V Praxis .....	81
VI Serving The Needs Of The Growth Mechanism .....	135
VII Either-Or .....	147

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## **MIKE MENTZER HEAVY DUTY II: MENTE Y CUERPO**

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"Es solo en el contexto de haber desarrollado adecuadamente tu mente que lo harás ser capaz de disfrutar verdaderamente el logro de sus valores materiales, incluido el de un Cuerpo mas musculoso. "- Mike Mentzer vu pie'. Siempre adelantado a los tiempos, y a pesar de la oposición y el ridículo, Mike se dispuso a hacer una diferencia enseñando a los culturistas que necesitan alcanzar un mayor nivel intelectual, no para ir por la vida a ciegas siguiendo lo que otros dicen, sino para usar El pensamiento racional y la lógica para convertirse en pensadores independientes. Micro Transmitió con éxito este mensaje, y casi una década después, Mentzer. los fanáticos y simpatizantes continúan informando que HEAVY DUTY II: Mind and Body © cambió completamente su progreso en el culturismo, sus carreras y su relaciones Este es un testimonio del valor y la importancia de Mike Mentzer Increíble trabajo, que se ha mantenido firme contra toda oposición y ha sido innegable Pasó la prueba del tiempo. Es tanto un honor como un privilegio para mí mantener el El libro HEAVY DUTY II: Mind and Body © está disponible para quienes no lo han hecho. anteriormente tuve la oportunidad de beneficiarse de la sabiduría de Mike Mentzer. Joanne Sharkey, CEO / Presidente Mentzer-Sharkey Enterprises, Inc. Copyrights 2002 - 2005 © - Todos los derechos reservados. Visite el sitio web oficial de Mike Mentzer en [www.Mikementzer.com](http://www.Mikementzer.com). VIII Introducción Este libro representa un intento final, por mi parte, de aclarar completamente los aspectos fundamentales. Cuestiones de la ciencia del culturismo. Mucho más que en cualquiera de mis anteriores. escritos, este libro utiliza un contexto filosófico-científico muy amplio dentro del cual Presentar mis puntos de vista sobre el tema del ejercicio / estrés anaeróbico, de alta intensidad. fisiología. De hecho, el contexto filosófico de este libro no es meramente amplio, sino completo, es decir, incluye todos los principios filosóficos relevantes requeridos Para lograr una comprensión de cualquier ciencia, al menos en términos de amplia fundamentos Para muchos, algunos de los términos o conceptos serán nuevos en la medida en que se usan en la forma intelectual adecuada: por ejemplo, filosofía, razón, lógica, principio, teoría, identidad, naturaleza, causalidad, racional, cognición, volición, y - exclusiva de Libros de culturismo: ética, moralidad y juicio crítico. Una firma intelectual La comprensión de estos conceptos filosóficos es una condición previa no meramente para entendiendo la ciencia, pero todas las cuestiones fundamentales de la vida humana. UNA El tema fundamental es uno que pertenece a todos los miembros de la especie hombre; un Aspecto ineludible de la existencia humana. Este libro ayudará a cualquier persona con un interés intelectual sincero en el tema a obtener una Comprensión firme de todos los elementos básicos y primarios del ejercicio del culturismo. ciencia. En este libro, profundizo sobre los principios fundamentales explicados en mi último libro, deberes pesados. Lo hice utilizando nuevas perspectivas para ayudar. aclarar cualquier posible confusión, así como para proporcionar al lector una visión más amplia y una comprensión más profunda de los principios teóricos. Y algo nuevo: yo introducir la distinción entre fundamentos y derivados, un La comprensión de

lo que es crucial para aquellos que buscan realmente dominar el ejercicio La ciencia - o cualquier contexto de conocimiento. El material en este libro deriva de observaciones personales de los entrenamientos de mis clientes de entrenamiento, así como mi más claro

Página 3

IX Comprensión y aplicación más meticulosa de las leyes de la lógica desde la escritura. HEAVY DUTY hace tres años, he hecho algunos descubrimientos emocionantes, llegué a nuevas y sorprendentes conclusiones y extrajo una gama más amplia de inferencias que harán las delicias de los lectores de mis trabajos anteriores y, posiblemente, Apetito intelectual del nuevo lector. Los últimos tres años de mi vida han sido un Viaje rico, alegre y gratificante del descubrimiento científico-filosófico: los resultados De los cuales me gustaría compartir con los de mentalidad similar. Uno de los hallazgos más esclarecedores fue el resultado de haber visto algunos de los implicaciones más profundas relacionadas con el hecho de que la ciencia del culturismo es en realidad el Ciencia de la fisiología anaeróbica, de alta intensidad, ejercicio / estrés. En gran parte, La fisiología del ejercicio es la fisiología del estrés. La teoría de la fisiología del estrés fue desarrollado hace varios años por un brillante investigador médico, el Dr. Hans Selye. El logro del Dr. Selye, que ha sido ampliamente aclamado en todo el campo de la ciencia médica, ha aumentado la comprensión de un médico especialista de Fisiología humana considerablemente. Otro hallazgo importante fue que la ciencia del ejercicio fluye de la ciencia médica; de hecho, debe considerarse adecuadamente como una rama de la ciencia médica. Sabiendo esto Puede ayudar a muchos a superar su confusión sobre el tema del ejercicio, y, por lo tanto, Cómo proceder mejor con sus esfuerzos de entrenamiento. ¿Por qué nombrar este libro MENTE Y CUERPO? Porque de eso se trata este libro. El hombre es una unidad integrada de conciencia y materia, de mente y cuerpo. Él es No es un alma sin cuerpo o un cuerpo descerebrado. La filosofía dominante de La civilización occidental está sufriendo en medio de una brecha intelectual letal, conocida Como la dicotomía mente-cuerpo. Tan grave es esta condición, es responsable de la Continua decadencia de nuestra gloriosa cultura. Específicamente, tal decadencia es la resultado ineludible de la concentración excesiva en los valores físicos / materiales, casi a La exclusión de los valores intelectuales propios, que mejoran la vida. Cada especie viva debe seguir un curso específico de acción para sobrevivir, y su El curso de acción está dictado por su naturaleza. El curso de acción requerido para los humanos. La supervivencia es, ante todo, intelectual. (La supervivencia humana implica más que mera supervivencia física, e incluso aquí muchos no tienen éxito.) La mente del hombre, como su cuerpo y todo lo que existe, tiene una naturaleza. Religioso La filosofía mística ha sido un obstáculo para el desarrollo futuro de la humanidad. Debido a sus restricciones éticas en el área del razonamiento humano, insistiendo en su opuesto a la fe. La mayoría de los seres humanos nunca han prestado la más mínima consideración. al hecho de que la mente debe

ser utilizada de una manera específica, dictada por su identidad, si se trata de obtener un conocimiento válido de la realidad, incluida una teoría de la producción ejercicio. Muchos consideran al ser humano, especialmente a la mente, como algo fuera del El resto de la naturaleza, como sobrenatural, o incluso subnatural. Y en esa medida precisa, El desarrollo intelectual-moral del hombre ha sido severamente detenido. Cuando yo Le expliqué a uno de mis clientes recientemente: un joven inteligente con un gran interés interés por la filosofía: el hecho de que el conocimiento y el pensamiento éticos tienen una naturaleza (o estructura) que podría identificarse de manera completa y precisa, reaccionó como lo hice en el primer aprendizaje de esto. Poseyendo un fuerte "sentido de vida" moral, este individuo ha estado buscando activamente una filosofía de la vida ética, no religiosa y científica - la Único tipo para proporcionar al hombre el conocimiento requerido para alcanzar la moral. perfección. Entendiendo las enormes implicaciones de mi declaración, fue Sobresaltado, y aulló de alegría. Como todos los objetivistas, buscamos no solo lograr

Página 4

Nuestros valores y metas personales, materiales, pero también el deseo de lograr Perfección intelectual-moral - y una sociedad ideal. Una sociedad ideal es una en que la preponderancia de los ciudadanos son intelectualmente independientes, y poner fin a un gobierno prepotente, paternalista y estatista. XI 'F. ■.: \* I;: .. HJ La secuencia de temas del capítulo en este libro sigue la estructura lógica de La filosofía misma, con el material en los primeros seis capítulos que fluye de los dos Ramas básicas - metafísica y epistemología; que identifican lo fundamental la naturaleza del hombre y de la existencia, incluidos sus medios de conocimiento, Capítulo Uno, en De hecho, se refiere al papel del pensamiento en la vida adulta madura - y se titula, EL MENTE: REVISE SUS LOCALES; mientras que el Capítulo Dos explica que la lógica es la Método específico requerido para adquirir conocimiento de la realidad. Capítulos tres a seis. Demostrar cómo utilicé la lógica para refinar la teoría del entrenamiento de alta intensidad. El tema del capítulo final trata de la tercera rama de la filosofía: la ética. En el capítulo siete, evaluó críticamente el estado moral del campo del culturismo. basado en la declaración de Ayn Rand de que "Nada hecho por el hombre debe ser aceptado de manera no crítica. "Y que el precepto ético y operativo adecuado no es" no juzgar ", sino que es en cambio, "juzga, y prepárate para ser juzgado". Sólo de esta manera puede un El individuo o una cultura conservan un curso racional, moral, es decir, que mejora la vida. Para aquellos para quienes la filosofía es nueva, y posiblemente aterradora, les sugiero Persiste en la lectura de este libro hasta que adquieras un entendimiento firme. Dónde los conceptos son nuevos, consulte el diccionario y 'espiral' con ellos, es decir, conéctelos a otras ideas y experiencias relacionadas que ya tienes en el almacenamiento de tu mente Área, el subconsciente. Eventualmente, encontrarás lo que es una agradable sorpresa una vez. Has captado su significado preciso. Y, si continúas el estudio de Filosofía, madurarás como un

adulto racional hasta que, finalmente, habrás logrado El propósito de tal estudio: una comprensión y visión integrales de existencia. Es solo en el contexto de haber desarrollado adecuadamente tu mente, que podrás disfrutar verdaderamente del logro de sus valores materiales, Incluido el de un cuerpo más musculoso. LA MENTE: COMPRUEBE SUS

LOCALES yo 13 xu \* 14 Deberes pesados II LA MENTE: COMPRUEBE SUS

LOCALES 15 "Fije la razón firmemente en su asiento y llame a su tribunal cada hecho, cada opinión. Cuestiona con audacia incluso la existencia de un dios; porque, incluso si hay Uno, debe aprobar más el homenaje de la razón, que el de los ojos vendados. temor." Thomas Jefferson, tercer presidente de los Estados Unidos, y un filósofo. "La independencia es el reconocimiento del hecho de que la suya es responsabilidad de el juicio y nada puede ayudarlo a escapar, que ningún sustituto puede hacer su Página 5

pensando, ya que ningún bateador emergente puede vivir tu vida, esa es la forma más vil de la autoagresión y la autodestrucción es la subordinación de tu mente a la mente de otro, la aceptación de una autoridad sobre tu cerebro, la aceptación de su las afirmaciones como hechos, su opinión, así como la verdad, sus edictos como intermediarios entre tu La conciencia y tu existencia ". Ayn Rand, Atlas se encogió de hombros. El primer capítulo de mi último libro, el revisado HEAVY DUTY, tiene derecho, LOS BODYBUILDERS ESTÁN CONFUNDIDOS. ¿Están confundidos? Como las puntuaciones de culturistas individuales que leyeron mi libro - y llamaron para decir que se identificaron con esa declaración: indique, la respuesta es un SÍ sin reservas, sin reservas. Casi sin excepción, los individuos con los que he hablado u observado de primera mano están impotentemente desconcertados, literalmente casi paralizados por la duda de sí mismo; que, en este contexto, se caracteriza por una incapacidad continua para llegar a una empresa Conclusión sobre cómo proceder con su formación. Este es el resultado de su ignorancia de la naturaleza y el valor de los principios fundamentales, y el papel que desempeñan Juega guiando el pensamiento, así como su entrenamiento. Por más gratificante que uno pueda imaginar la actualización de su potencial muscular, muchos culturistas aparentemente están perdiendo una cuestión más crucial y fundamental: la La importancia de alcanzar la estatura humana completa aprendiendo a pensar y juzgar independientemente No hay nada de malo en tener un físico musculoso, pero de ninguna manera es un sustituto viable para una mente madura y racional. (Los la probabilidad de que un individuo logre sus objetivos aumenta a medida que su conocimiento y la capacidad de razonar aumenta.) Como miembro de la especie Hombre, biológicamente rasgo distinguible - tu medio de supervivencia - es tu mente; por lo tanto, hay nada que pueda ser más gratificante que "saber", es decir, tener un concepto comprensión de la realidad (incluida tu propia vida interior) apropiada para un humano adulto siendo. Como ocurre con la mayoría de los demás en nuestra cultura, la gran mayoría de los culturistas no han enseñado a ser intelectualmente autosuficiente, es decir, a pensar racionalmente ya juzgar críticamente para 1} } dieciséis Deberes pesados II sí mismos. En cambio, se les

instruyó para que tuvieran "fe", que es la antítesis de razón; Es la aceptación ciega de ideas para las cuales no hay evidencia sensorial. o prueba racional. También se les enseñó a "no juzgar", o la versión secular, a Mantener una mente abierta." La idea de que uno no debe juzgar, o que debe mantener Una mente abierta, es muy peligrosa; Se usa para mantener a la gente confundida por. Sugerir que es una virtud otorgar plausibilidad a cualquier cosa. Obviamente, no todo. puede ser verdad En su lugar, uno debería cultivar una "mente activa", una que trate ideas. críticamente, buscando distinguir la verdad de la falsedad. El resultado inevitable de aceptar sin acritud nociones falsas es la reducción del rango intelectual de uno y Capacidad para afrontar con éxito la realidad. En conversaciones con mis clientes de consultas telefónicas y clientes en el gimnasio, así como con otros (no culturistas), he observado que en muchos casos el individuo tiene logrado una considerable eficacia particularizada, es decir, un vasto cuerpo de especialistas conocimiento y una gran habilidad para usar la razón en su campo elegido de esfuerzo, ya sea Medicina, derecho, fontanería, etc. Sin embargo, pocos logran mucho en el sentido de lo metafísico, o generalizada, la eficacia - que es la capacidad de uno para lidiar con el resto de la realidad, ya sea

Página 6

en el área de relaciones, la capacidad de analizar críticamente ideas en otros campos, o correctamente juzgar a los demás. (El más notable fue un neurocirujano que rechazó mi enfoque teórico para el culturismo, que se basa en los principios médicos de fisiología humana, porque su entrenador personal, que ni siquiera podía deletrear neurocirugía o fisiología, no me gustó!) Literalmente sumido en la proliferación oceánica de nuevas "teorías" sobre el ejercicio, el El culturista promedio ni siquiera puede comenzar a juzgar o evaluar adecuadamente la inundación De información contradictoria, contradictoria. Su pensamiento se ve gravemente obstaculizado, limitado a las interminables discusiones sobre detalles relativamente poco importantes, como si hay que girar el meñique hacia arriba o hacia abajo al hacer los laterales con mancuernas; es un agarre ancho mejor que un agarre estrecho; es cuatro series de cinco ejercicios mejor que cinco series de cuatro ejercicios LA MENTE: COMPRUEBE SUS LOCALES 17 es es dos días de descanso y un día de descanso mejor que un día de descanso y dos días de descanso; o son ¿Representaciones parciales mejores que las de rango completo? Estas personas no solo están perdiendo el bosque por los árboles, sino por su estrecha inteligencia intelectual. El enfoque a menudo los tiene hipnotizados por una pequeña pulga en la corteza de un solo árbol. los Los detalles mencionados anteriormente no son totalmente sin importar; en realidad son detalles puntos, o derivados, que solo tienen relevancia en el contexto de tener primero Entendido y aplicado los fundamentos. ¿Cuál es la diferencia, por ejemplo, si un culturista realiza cuatro series de cinco ejercicios o cinco series de cuatro Ejercicios, si no ha captado el fundamento fundamental de la ciencia del culturismo. el hecho de que un estrés de entrenamiento de alta intensidad, es decir, entrenamiento a puntos de momentáneo Falla muscular, es un requisito absoluto, objetivo para inducir el crecimiento. Estimulación, y, por lo



tanto, ninguno de sus conjuntos está activando el mecanismo de crecimiento. en movimiento? O bien, no es consciente de la importancia crucial de regular con precisión Tanto el volumen como la frecuencia de sus entrenamientos debido a que el cuerpo es estrictamente Capacidad limitada para tolerar el "desgaste" del entrenamiento de alta intensidad. subraya, sin saberlo, se vuelve tan excesivamente entrenado que, incluso si estuviera estimulando cualquier crecimiento, el avance excesivo hecho en su capacidad de recuperación lo haría Evita la posibilidad de que su cuerpo produzca algún crecimiento. La nueva tiranía: la verdad por consenso Los culturistas cuyo pensamiento es así restringido, a menudo recurren a un tipo de "ruso" ruleta, "donde se mueven con ansiedad e incertidumbre de una teoría de entrenamiento a la siguiente, esperando o deseando que algún día por suerte encuentren algo eso funciona. O haber sacrificado el juicio individual y la soberanía personal. completamente, temiendo que él - y él solo - sufre de una deficiencia sin nombre, muchos optar por 18 OBRA PÚBLICA || conforme a la "manada", y siga ciegamente a las otras ovejas adoptando el entrenamiento Programa que cuenta con la mayor cantidad de adeptos en su gimnasio. Poco sospecha que Los otros están haciendo precisamente lo mismo. Como él, piensan que los demás deben saben lo que están haciendo; después de todo, ¿cómo puede la mayoría estar equivocada? (De hecho, la El mundo entero puede estar equivocado, y un hombre correcto. Puede recordar de mi último libro, Señalé que, mientras que durante miles de años, millones de personas creyeron que la tierra era plana, por lo que no lo hizo así.) En lógica, esto se conoce como el anuncio de la falacia verecundum, o la "apelación a la reverencia"; Específicamente, reverencia por las opiniones. Página 7

de otros. En ningún caso, el individuo entiende lógicamente por qué está haciendo que esta haciendo el. (No importa cuán grandes sean los músculos, una vida interior dominada por La duda crónica y la incertidumbre son incompatibles con la confianza, la autoestima y felicidad.) Este fenómeno es muy común en la cultura antirracional de hoy. Eso se ve en la amplia dependencia de las encuestas de opinión como un medio para establecer La verdad, sobre todo en el ámbito de la política. Mientras que los hombres en un momento sacrificaron su independencia intelectual volviéndose a Textos sagrados para la "verdad" según lo revelado por la omnisciencia sobrenatural y infalibilidad de Dios, muchos hoy en día son "sobrenaturalistas seculares" que tienen Sustituyó a los demás por Dios como medio para la verdad. En el culturismo, el músculo. revista ha asumido el estado de un texto sagrado de hoy en día, que muchos confían en acríticamente como la verdad revelada e incuestionable tal como es contada por otros. Hubo mejores épocas en la historia del Hombre, como explicó el Dr. Leonard Peikoff en su Cinta introductoria para su serie, Lógica. Hubo períodos en que los hombres tenían una profunda reverencia por la lógica y como la "corte de apelación final" en resolver argumentos y resolver desacuerdos, es decir, establecer la verdad. Mientras tenían una profunda reverencia por el poder de la razón y la lógica, tenían que Poseer considerable orgullo y autoestima, ya que la

razón es un atributo de la El pensamiento individual es un proceso complejo de identificación lógica y LA MENTE: COMPRUEBE SUS LOCALES 19

Integración de los hechos de la realidad, y solo puede ser realizada por el individuo. mente. Como tal, el pensamiento es un acto profundamente personal e intensamente privado, egoísta. actividad. Los que evaden la responsabilidad y el esfuerzo necesarios para conocer las leyes. De la lógica, los principios del pensamiento, pierden la posibilidad de lograr plena, racional, adultez independiente, e inevitablemente se vuelven dependientes, desinteresados, Namby-Pamby Shmoos a merced de cualquier oportunidad intelectual actual o bocina que viene. \*\*\* \*\*\* El hombre mayoritariamente responsable de establecer la política educativa de la El sistema escolar estadounidense era John Dewey, mejor conocido como el padre de educación progresiva El objetivo de la educación, según Dewey, no era enseñar a los niños cómo conceptualizar, o pensar, y usar el conocimiento teórico, tal ser una "carga antinatural", pero enseñar la conformidad. Como el intelectual arquitectos de la toma de poder nazi, Dewey entendió que cuando se destruye un la capacidad de la persona para pensar y juzgar independientemente, el resultado inevitable - de ¡curso! - Es que se vuelve dependiente, y se conformará pasivamente a cualquier Führer. descaradamente lo suficientemente fuerte como para llamar su atención. En efecto, el resultado es: "¿Quién soy yo para pensar o juzgar? Si es lo suficientemente bueno para el Führer, es lo suficientemente bueno para mí ". ¿Cuál es el valor de poseer músculos que le darían crédito a un gorila adulto? ¿El individuo es arrestado intelectualmente en el nivel de un hijo dependiente? Solo un Hace unos meses en la revista Flex , un culturista muy joven, cuyo rápido, estelar El ascenso a la cima del desarrollo profesional lo ha cosechado. atención considerable en la prensa de culturismo, se citó en negrita, "Si 20 conjuntos por bodypart fue lo suficientemente bueno para Arnold, es lo suficientemente bueno para mí ". Cuando alguien pregunta: "¿Quién soy yo para juzgar?" realmente tienes que preguntarte Tu "yo", tu "yo" es tu mente, es decir, tus conceptos, ideas, creencias; en resumen, tu Filosofía: lo que determina el alcance de tu capacidad de pensar y juzgar. Cuando una persona ha renunciado a su juicio, aplazando ese 20

Página 8

OBRA PÚBLICA || responsabilidad a los demás, en efecto, ha sacrificado su SP si y termina literalmente "Desinteresado", sufriendo una crisis de identidad. Pensar dos veces Arthur Jones, una vez describió a un culturista muy musculoso de mi conocido como "un niño en un traje de gorila". El motivo de la declaración del Sr. Jones fue no derogar maliciosamente el carácter del fisicoculturista, sino subrayar La deslumbrante disparidad entre el tamaño de sus músculos y su intelectual. desarrollo. Y su intelecto sub-estándar no fue el resultado de una Cerebro defectuoso o deficiente. No, él fue intelectualmente auto arrestado. Esta El individuo aparentemente había decidido, desde su adolescencia, que su conocimiento era suficiente. El resultado se manifestó en su emocionalidad

inarticulada, una incapacidad para explicar nada en absoluto sobre los principios del ejercicio científico, o escribir incluso uno párrafo sobre el tema, y una profunda falta de confianza en sí mismo fuera de la gimnasio. Por supuesto, no todos los culturistas optan por detener su crecimiento mental al negarse a Integrar conocimiento, adquirir convicciones conscientes y ganar intelectualidad. certeza. Los que lo hagan sufrirán inevitablemente las consecuencias. Habiendo rechazado sus medios de supervivencia, vivirán como vacas, abyectas físicamente, torturadas por Duda crónica incesante: extraños y temerosos en un mundo que nunca "Aquellos de ustedes que no han abandonado su mente, que están luchando heroicamente para lograr una eficacia intelectual y una filosofía de vida racional, encontrarán Aliento en lo que vas a leer. La lucha no es solo tuya, ni se limita a los culturistas. El problema usted están teniendo con sus emociones, y en obtener el control independiente completo de sus procesos de pensamiento, no se debe a algún "defecto fatal" de Shakespeare o a un Déficit idiosincrásico en la composición de tu cerebro. Eres, en parte, una víctima. LA MENTE: COMPRUEBE SUS LOCALES 21 de una cultura que es intelectualmente moralmente en bancarrota; una cultura que ha rechazado Razón, lógica, ciencia, moralidad, justicia y libertad. Nuestra cultura ha sido socavado y agotado por aquellos cuyo trabajo es proporcionar orientación racional: Intelectuales profesionales, es decir, nuestros profesores y profesores universitarios. ¿Qué relevancia tiene este tema en un libro sobre culturismo? Todo - si Estás sinceramente interesado en desarrollar tu cuerpo, el más vitalmente importante. Aspecto que es el cerebro. Una precondition absoluta, objetiva e ineludible de aprender a pensar y juzgar independientemente, como debería hacer un adulto maduro, es que uno adquiere un sonido, base racional del conocimiento. Tal base filosófica consiste principalmente en una vista de la naturaleza fundamental de la existencia y el hombre - y de la relación del hombre con existencia. Los intelectuales profesionales han abandonado sus papeles como guardianes de la cultura enseñando que no hay realidad objetiva, o existencia, independiente de La conciencia del hombre - por lo tanto, el "conocimiento" es una ilusión subjetiva, la ciencia. Sobre la base de principios universales, una imposibilidad, razón una anticuada La superstición, y la ética, un lujo prescindible, subjetivo. Implícito en esta vista de realidad, el hombre y el conocimiento es la noción de que el hombre mismo no puede ser radiante competente, un héroe creativo y productivo, pero, en cambio, es una mera parte de sustancia material desafortunadamente empujada por desconocido, misterioso universal Fuerzas para siempre más allá de su comprensión y control.

Página 9

El importante papel que juega la autoestima en el desarrollo del intelecto es innegable. ¿Qué posibilidades tendrán nuestros jóvenes de adquirir una autoestima saludable y Independencia de pensamiento y juicio cuando nuestras universidades les están enseñando. que no hay un universo objetivo "legítimo" y, por lo tanto, esa razón, la lógica, ¿La ciencia y la ética son irrelevantes? Sin

embargo, esta es la filosofía dominante que se enseña en Nuestras escuelas y grandes universidades. Cuando prácticamente toda una cultura adopta como Sus principios filosóficos fundamentales son estos irracionales, anti-mente, : yo 22 PESADO DEBER || Ideas anti-vida, el resultado es el caos que vemos a nuestro alrededor. Si usted también, como tantos otros, se ha alarmado cada vez más por los informes. indicando el declive progresivo en el conocimiento y entendimiento de los estudiantes el mundo que los rodea; el aumento precipitado del abuso de drogas y el suicidio; la violencia paralizándolo nuestros pueblos y ciudades; Los crímenes intelectuales que se hacen pasar por "arte" - el Novelas y películas que representan al hombre como poco más que un homicida obsesionado con el sexo. Maniaco, ahora tienes una idea del "por qué". (Los valores artísticos de una cultura son un barómetro de su estado intelectual-moral.) Y si piensa que la escuela o la universidad es Sigo siendo el mejor o el único lugar al que ir para el "entrenamiento mental" o que exageraba. sobre el tipo de ideas que se enseñan hoy, será mejor que lo piense dos veces. Considere, por ejemplo, lo que los filósofos de hoy, aquellos cuyo trabajo en el La división intelectual del trabajo es de la mayor importancia: establecer los criterios de lo que puede ser aceptado como conocimiento humano válido - están enseñando a jóvenes mentes La filosofía contemporánea está ahora dominada por los

"posmodernos". Su acercamiento al ámbito del intelecto, es decir, el contexto a gran escala de la historia de Ideas, es que tal reino no existe. No están en desacuerdo con Platón, Aristóteles, Santo Tomás de Aquino, Kant y Ayn Rand sobre sus respuestas a los principios fundamentales. Preguntas sobre la naturaleza del hombre y su relación con la realidad. Sus respuestas, De acuerdo con los post-modernos, no son importantes porque las preguntas se equivocan, no tienen base y son irrelevantes para la vida humana. En otra palabras, su reclamo del título "filósofo" consiste en negar la existencia misma La filosofía como disciplina intelectual viable. Dr. Gary Hull, un objetivista que es profesor de filosofía en el Whittier College, Explica en su artículo, "Filosofía contemporánea: un informe del agujero negro" que el enfoque posmoderno de la filosofía "... se habla con reverencia en conferencias profesionales y en publicaciones académicas; se está alimentando a la fuerza próxima generación de filósofos; y LA MENTE: COMPRUEBE SUS LOCALES 23 está influyendo en todos los temas de la historia y la literatura a la ley y la economía ". Revelación de la filosofía postmoderna es esta cita de su más célebre defensor, Michael Foucault, "Mi trabajo irrita a las personas porque mi objetivo no es Proponer un principio global o analizar cualquier cosa ... La concepción de la filosofía. Ya no es el de un tribunal de razón pura que defiende o desacredita las demandas de Conocimiento hecho por la ciencia, la moral, el arte o la religión. Más bien la voz de la El filósofo es el del diletante informado. Ahora que la filosofía se ha desalojado de la cultura civilizada y del reino de la intelecto al proclamar que los principios fundamentales no existen, estamos presenciando

El resultado inevitable: la progresiva desintegración de la ciencia moderna. (Era Aristóteles que enseñó que la filosofía es la ciencia fundamental. Su función es Establecer los principios fundamentales de la realidad que permiten a las ciencias especiales. para luego estudiar aspectos aislados del universo.) No hace tanto tiempo, nada menos que la Asociación Americana de Psicología. votó BF Skinner como el psicólogo moderno más influyente, en segundo lugar solamente a Freud como el psicólogo más importante de todos los tiempos. La idea central de Skinner's. Filosofía, que elaboró en su libro más vendido, BEYOND FREEDOM. Y DIGNIDAD, es que "el hombre no es consciente", nada más que un "autómata de estímulo-respuesta". Quizás la mejor respuesta a tales Un comentario sin sentido fue el comentario de Ayn Rand: "En su caso, lo creo; ¡BF Skinner no está consciente! "¿Dónde enseñó Skinner a su feroz y odioso hombre? ¿Filosofía conocida como conductismo? ¿Qué te parece el título de su libro? ¿Implica?) ¿Por qué Harvard no menos, ese bastión de la educación superior? En esa otra "torre de marfil", Berkeley, hay un filósofo muy famoso de ciencia, el profesor Paul Feyerabend, quien apoya la subyugación religiosa del pensamiento individual. No solo aprobó públicamente la Inquisición castigo de Galileo, pero en su libro, DESPEDIDA DE LA RAZÓN, Feyerabend \* = ■ 24 OBRA PÚBLICA I protesta por la renuencia de la Iglesia moderna a enseñar a los "lobos de la ciencia" algunos modales ". Teniendo en cuenta que Galileo fue encarcelado y casi decapitado como un recompensa por su descubrimiento de que la Tierra no era el centro del universo, uno puede pero me pregunto qué habrían hecho los gustos de Feyerabend a Thomas Edison, Madame Curie, Jonas Salk o Albert Einstein. \*\*\* \*\*\* \*\*\* Considerar seriamente la larga y tortuosa lucha intelectual que se extiende desde Platón y Aristóteles, a Santo Tomás de Aquino, a John Locke, a nuestro Padres fundadores - Thomas Jefferson y James Madison. Estos eran hombres de La mente cuyo compromiso con la realidad, el hombre, la objetividad, la razón, la ciencia, la moral. y la justicia fueron directamente responsables de **The Renaissance, The Age of Enlightenment, and their products: capitalism (freedom) and the Constitution of the United States (freedom's protector)**. Compare their achievement to what the man-haters of the modern world are advocating - the destruction of philosophy and the enshrine-ment of blind emotionalism by the "post-Moderns"; Más allá Freedom And Dignity to enslavement and degradation - by modern psychology; and Farewell to Reason, or good-bye to science, by the new crusaders for a Second Inquisition. Yes, dear reader, our's is not merely a new "Dark Age," but as Dr. Hull's paper indicates, a Black Hole. (If the above isn't evidence enough to prove Dr. Hull's contention, then what about the fact that there are 32 bloody civil wars going on in the world at this moment, not to mention that 100,000,000 men have been slaughtered in this century alone. And for those foolish enough to point to modern scientific technology and its achievements as proof otherwise, remember: such are the products of relatively few minds. And that among the loudest minds today - the environmentalists - there are many who would "blast" us back to the Middle Ages and mud huts and

social, and has no place in a bodybuilding book, check your premises. Bodybuilding does not exist in a vacuum, apart from the rest of life. The idea of "a healthy mind in a healthy body" comes to us from the age of classical Greece, 23 centuries ago. Theirs was a "Golden Age" which idealized the beauty of the human body and exalted the power of man's mind. (In fact, it is to Plato's active, probing mind that we owe an enormous debt for discovering the very concept "philosophy" - and the fact that man needs a method of thought for making valid philosophic identifications of the fundamental nature of things.) The distinctive power of man's mind lies in its ability to form abstractions, ie, concepts, by distinguishing differences and similarities among entities, isolating their common characteristics, and uniting them by means of a specific definition. Concept-formation is man's means of cognition, and it's what distinguishes him from all other living species. The power (or health) of an individual man's mind is directly proportional to his conceptual range, ie, the number of concepts his mind has integrated, how well he understands their exact meaning, and the number of logical connections he has made among them. As a human being, you have no choice as to whether you need a conceptual grasp of reality, ie, a philosophy. To quote Ayn Rand on this matter: "...your only choice is whether you define your philosophy by a conscious, disciplined, rational process of thought, and scrupulously logical deliberation - or let your subconscious accumulate a junk heap of unwarranted conclusions, false generalizations, undefined contradictions, undigested slogans, unidentified doubts, wishes and fears, thrown together by chance, but integrated by your sub-conscious into a kind of mongrel philosophy and fused into a single, solid weight: self-doubt, like a ball and chain in the place where your mind's wings of confidence should have grown." "Philosophy" literally means "love of knowledge." The essence of modern philosophy, underneath the paralyzing HE AVYDUTY, THE MIND: CHECK YOUR PREMISES 27 weight of all the obscurantist language, is the desire to annihilate man's mind by destroying the meaning, role and value of knowledge, ie, man's concepts. Si you've ever taken a course in philosophy, or have tried to read any Kant, Hegel, Schopenhauer, Wittgenstein, Freud, Skinner, Feyerabend, Kuhn, Popper, or any of the "post-Moderns," and given up in frustration, don't make the mistake of thinking that you're not "smart enough." It was your healthy pro-man, pro-mind sense of life that rejected it and prevented you from wasting your time trying to decipher that virulent irrationalism. There was a time earlier in my life - my late teens - when I recognized I needed a philosophy, and thought reading that garbage would help. It wasn't until I got to Nietzsche that I thought I found the "answer." After a period of reading his works, I realized that even though he was stimulating my intellect as none of the others did, I still wasn't clear about the role of philosophy in my life. Without understanding it at the time, my sense

of life (the preconceptual equivalent of a conscious, intellectual philosophy, ie, an emotional, subconscious view of man and existence) - which was and is in love with the sacredness of the species "man" - was responding to something similar in Nietzsche, which was expressed only implicitly in his writings. But my conceptual development was still immature, and I didn't understand that his explicit philosophy was poorly defined, Pagina 12

inconsistent, contradictory and irrational; as such, it could not help me gain an "integrated view of existence." In the course of my "seeking," I happened upon the works of Ayn Rand. Ms. Rand was a novelist/philosopher whose fiction and technical philosophical writings clearly express an unbreached harmony between her subconscious, emotionally integrated sense of life and her conscious convictions. Finally, someone who felt a love for man similar to mine, and gave it an eloquent, articulate, expression - and without contradiction. This was something entirely different from anything I had previously encountered, and I found it irresistibly attractive. At last, HEAVY DUTY || found an intelligent and rational adult who was serious - very serious, in the appropriate manner, as I'm going to explain -about the mind and the realm of the intellect, ie, ideas. Ayn Rand taught that philosophy is not something one does to while away his free hora; or just an academic substitute for failed physicists and mathematicians; or a bauble one uses to impress others during the lulls at cocktail parties. En lugar, philosophy is the most important factor in human life - "the wholesaler of man's affairs." Every action taken by a human being is preceded and prompted by an idea he has in his mind; therefore, the success, or failure, of any man's actions depend on the quality of the ideas he has integrated into his mind. Of utmost importance, I learned that knowledge - like everything else that exists - has identity, a nature. Human knowledge is hierarchal in structure. Formando el base of philosophy's hierarchic knowledge are its two fundamental branches: metaphysics, which studies the fundamental nature of reality and man; y epistemology, which studies the nature of knowledge and man's means of acquiring it. Logically based on and derived from these two fundamental branches of philosophy is the third branch - ethics. It is only after one has properly identified the fundamental nature of man - including his means of knowledge - and of the universe in which he acts, that it is possible to formulate a prescription for what man "ought" to do. The next step up man's hierarchal structure of knowledge is politics. Its proper function is to identify and implement the principles that serve as a logical transition from guiding a man's actions to guiding his actions with others. And to tie it all together, and present to man his abstract theoretical philosophy in concertized form -for his pleasure and contemplation - is esthetics, or art. Unlike her antipode, Immanuel Kant, and some of his intellectual descendants mentioned earlier, Ms Rand was an ■objectivist" who believed that "reality is real"; that there is a THE MIND: CHECK YOUR PREMISES 29 rational, "lawful" universe of clear-cut identity governed by one set of never changing principles; that man's mind is not impotent, but perfectly capable of gaining an independent conceptual grasp of objective reality; that man is not an "instinct-

driven" or "stimulus-response" automaton, but a being of volitional consciousness who chooses whether he is a hero or a villain; that reason is not a superstition, but instead is "the fountainhead of human progress," responsible for the discovery of the wheel, the control of fire, the creation of the loom, the telescope, the computer, architecture, modern medicine, and the Constitution. Among her many epochal philosophic achievements is her theory of concepts as

Página 13

"objective." She stated that "Since man gains and holds knowledge in conceptual form, the validity of man's knowledge depends on the validity of his concepts." And that while the issue of the nature of concepts may seem esoteric to some, she reminded us that "the fate of human societies, of knowledge, of science, of progress and of every human life depends on it." Another of her landmark achievements - one that had a profoundly personal and helpful impact on me - was her identification of the nature of emotions. Emotions are not "tools of cognition," but are "the products of your premises, the thinking you have done or failed to do." Your emotions are automatized value-responses issuing from the subconscious which indicate, within the context of an individual's knowledge, what is "for him" and "against him." If you don't learn to think, ie, make correct identifications and evaluations of the things around you, the inevitable result is you'll end up spurning that which you should love, and embracing that which you should hate. If the implications of the above aren't literally stunning, then what is? If you're still reading this, you might be interested to know that Ayn Rand also taught that ethics is not a mystic fantasy or a dispensable subjective luxury, but an objective necessity of man's survival qua man; that self-sacrifice is a "V 30 HEAVY DUTY II sin, and selfishness (rational self-interest) a virtue; that neurotic "complexes" aren't inevitable, and an integrated personality - harmony of intellect and emotion - is possible; that productive achievement is not vile, but is man's noblest activity; and that capitalism is not vulgar greed, but the ideal, or "just," social system based on the recognition of "man's rights," including property rights. No, learning how to think and judge independently isn't easy. (But neither is bodybuilding.) Just as in bodybuilding, the actions one must perform require guidance by specific principles. Nature allows us no choice in this matter. If, like so many, you'd rather evade the truth and live in a solipsistic torture chamber; remain at the dirty feet of some unintelligible guru; take up tarot cards or tea-leaf reading as a means of gaining "enlightenment"; chant endlessly a litany of Oriental gibberish to achieve synchrony with the deep-centered rhythm of the cosmos; or sit around all weekend at a "male-bonding workshop" crying with a group of namby-pamby misfits about your "lost" masculine identity, instead of accepting the responsibility and effort necessary to learn the laws of logic, the principles of thought, and achieve intellectual independence, ie, your full human stature, of course you are free to do so. But you are not free to escape the Consequencias. Just as there is and can be only one valid theory of medicine, physics, electronics, engineering, mathematics or productive bodybuilding



exercise, so there can be only one valid, correct, true theory of life - and Ayn Rand discovered it: Objectivism. Stop being a victim of the culture. If you would like to train your mind - but are tired of wading through the mystic-emotionalist/objectivist junk heap - and gain an independent, objective, conceptual grasp of reality, then I suggest you consider the works of Ayn Rand. If and when you do, you'll feel like those first men of the Renaissance, who, having emerged from the Dark Ages and the "medieval shackles," gained a fresh, new perspective of the world and realized happiness is

Página 14

THE MIND: CHECK YOUR PREMISES 31 possible. Ours is a "benevolent universe," but only if you learn and obey its fundamental laws. T«. NATURE, TO BE COMMANDED, MUST BE OBEYED t \* 33 yo HEAVY DUTY I "Centuries ago, the man - no matter what his errors - the greatest of your philosophers, had stated the formula defining the concept of existence and the rule of all knowledge: A is A. A thing is itself. You have never grasped the meaning of his statement. I am here to complete it: Existence is Identity, Consciousness is Identification. Ayn Rand, Atlas Shrugged. "The strength of the human understanding is incalculable, its keenness of discernment would ultimately penetrate to every corner of nature, were it permitted to operate with uncontrolled and unqualified freedom." Elihu Palmer, radical spokesman of the American Enlightenment. NATURE, TO BE COMMANDED, MUST BE

OBEYED 35 As a young man, the word "nature" suggested many things to me. Most of them were held merely in sensory-perceptual form with strong emotional connotations, including images of powerful birds of prey swooping down on their helpless victims; the rich odor of horse manure in verdant fields; fearsome visions of august beasts - such as lions and tigers - dominating the jungles of Africa. Y other loose, random associations many less concrete: sex, violence, birth and muerte. As such, these represented my subconscious, emotional "sense of life." Nothing was clearly defined, explicitly verbalized, or denoted the actual meaning of nature. Now, however, having achieved a pinnacle of sorts in regard to my understanding of philosophy, I've been able to translate my emotional, immature sense of life into a conscious, clearly verbalized and mature philosophy of life. I learned that the concept nature plays a key intellectual role in the formation of a rational philosophy of life, as well as in the special sciences. It forms a triumvirate with two other concepts, consciousness and existence, which together are the axioms of philosophy that literally establish the base of all human knowledge, the foundation of reason and objectivity. Implicit in every statement, proposition, fact or bit of knowledge is the idea: I am conscious of something that exists, and everything that exists does so possessing identity, ie, a nature. %■ ft- yo HEAVY DUTY || The Two Fundamental Laws of Nature Recall from Chapter One that philosophy is the intellectual discipline whose purpose is to discover the fundamental principles, or laws, underlying/governing the structure (and action) of the entities that constitute the universe, which enable

Página 15

sciences to then study specific, isolated aspects of reality. Philosophy's discovery and explicit statement of The Law of Identity, and its corollary, the Law of Causality, provided man with the requisite intellectual base that made it possible for medicine, geology, physics, and any and all other sciences to flourish. The Law of Identity states that everything which exists (entities and their actions, qualities, attributes and relationships) has an identity, or nature; that a thing is what it is, and can be nothing else; or, as Aristotle simply said, A is A. The Law of Identity applied to action is the Law of Causality (cause and effect), which states that an entity can act only in accord with its nature, and cannot act otherwise; or a rock cannot fly, a bird cannot conceptualize, a muscle cannot grow without imposing the requisite stimulus, and man cannot exist as anything other than hombre. An Identification of Man's Nature: An Integrate of Mind and Body recognize the fact that which flows through it - and a man uses that knowledge of reality as in the stake - a fund — that other mistakes: the value fail to quantify the part of exercise science that science is an exact science requires that one should (logic applied to practice) can successfully achieve his goals. NATURE, TO BE COMMANDED, MUST BE OBEYED 37 That aspect of reality of most central concern and importance to man is man él mismo. In order to survive and succeed as man qua man, ie, the rational animal, he must identify his own nature (including his means of gaining knowledge) as well as the nature of the universe in which he acts. And, remember, fundamentally a thing is what it is; we live in a universe where everything - including man's mind and body - has a specific, clear-cut identity and can be nothing else. Man is not a dog, a cat, a bird, a fish, a computer chip, or a stream of photons - A is A, and man is man. Or as Ayn Rand stated, in terms of the sheerest, broadest fundamentals entailing awareness of identity and causality, "Man is a specific organism of a specific nature that requires specific actions to sustain his life." \*\*\* \*\*\* \*\*\* Birth defects and genetic anomalies notwithstanding, the physical identity of the human species is characterized by the fact that each member's anatomy is comprised of organelles, cells, tissues, organs and appendages whose physiologic principles of organization and function are common to all. Médico science - and exercise science - is based on an understanding of the universality of the principles of human anatomy and physiology. While this last statement may seem redundant to some, considering the near-universal confusion recently concerning the fact that "there is and can be only one valid theory of bodybuilding exercise," such tautology is necessary. It is precisely this fact - that the principles of human anatomy and physiology are universal, or applicable to all members of the species - which makes the sciences of medicine and exercise viable intellectual disciplines. Any attempt to refute the validity of either of these theoretical sciences requires a proof that not all humans are essentially human, ie, that each possesses the same fundamental defining characteristics. Ya que man is the "rational animal," one would have to marshal irrefutable evidence that human beings exist who do not possess an animal's anatomy and physiology - Página 16

nor a t HEAVY DUTY || rational faculty. Don't hold your breath while looking for any such creature. In my last book, I pointed out that the intellectual pillars of bodybuilding orthodoxy rested on a shaky foundation; in fact, nothing more than mystic quicksand. Su ideological base consists of the notion that "because we are all different, each individual bodybuilder requires a different training approach -or theory." Yes, of course, in the most fundamental sense, each individual is different from every other in that each occupies a definite, different space in time. Psychologically, each is different in that every individual possesses the unique stamp of an unrepeatable mental character, ie, personality. Important in the context of medical/exercise science is that, anatomically and physiologically, every human being is essentially the same. (This is precisely the point on which the modern mystics of muscle go awry, and explains why they can't understand why only one valid theory could exist.) I emphasize the term "essentially" because, albeit true that certain anatomical and physiologic features may vary among individuals, such variations exist within a limited measurable range, without altering the fact that the basic governing principles are the same, without altering the essence of man's animal aspect, his physical nature. por example, the fact that some Negroes don't possess the gastric enzymes necessary for digesting dairy products doesn't alter the fact that, nutritionally, each requires a well-balanced diet; that some people have lesser or greater melanin (skin pigment) doesn't alter the fact that all require the presence of a high-intensity sunlight stress to obtain a sun tan; that some have higher IQ's than others doesn't alter the fact that each must volitionally gain knowledge to think and survive; or the fact that there are endomorphs, ectomorphs and mesomorphs doesn't alter the fundamental fact that each requires a high-intensity, anaerobic training stress to induce a strength and muscular size increase. Prove to me that low to moderate intensity aerobic "\*>; '>#. NATURE, TO BE COMMANDED, MUST BE OBEYED 39 3 '

DUTY || training will work better to develop the muscles than high-intensity, or anaerobic, bodybuilding exercise. It can't be done because A is A - and man is man. Recently I was discussing the "one valid scientific theory of bodybuilding exercise" controversy with one of my in-the-gym training clients. My client is the esteemed Dr. Gregory Kay, a highly trained Western theoretical medical scientist. An experienced cardiac surgeon with close to a 100 percent success rate in the surgical suite, who performs well over 300 open-heart operations a year. Dr. Kay made the point, in effect, that his success, not to mention the overall success rate of modern medical science, is proof that there "is and can be only one valid theory of medicine." And I added, "...indirectly it proves the same for exercise science." To stress the point one step further: If you were to find yourself in the jungle tomorrow, and you happened upon a voodoo witch doctor, he would have close to a zero percent

Página 17

success rate with his patients. Then suppose you introduced him to this miracle, Western theoretical medical science, ie, logical diagnostic procedure, antibiotics, analgesics, sterile technique, and surgery, etc. All of a sudden the voodoo witch

doctor's success skyrockets off the charts. He can't figure it out; he thinks you're in league with God and the Devil. To say that there is no one valid theory, or that all approaches have merit, is tantamount to stating that the intellectual method of the voodoo witch doctor is as likely to correct a brain aneurysm as would the intellectual method of a neurosurgeon. Obviously, there is a life-and-death difference between the application of false ideas and the application of true ideas. Knowledge (truly valid ideas), remember, is man's means of achieving all of his goals, including that final goal or end which makes the others possible - the maintenance of his life. Speaking of "intellectual method," just as there is and can be only valid theory of exercise to guide you success- NATURE, TO BE COMMANDED, MUST BE OBEYED 41 fully on your journey toward the acquisition of larger muscles, so there can be only one valid method, or theory, to guide one's thinking toward the acquisition of valid human knowledge. And it only stands to reason that a serious bodybuilder should want to know that the ideas (or principles) directing his training efforts are true ideas. And how will he ever come to distinguish true ideas from false ideas until or unless he learns something about the nature of ideas, which requires knowledge of the identity of man's mind. To settle for anything less than certainty about the truth of the ideas guiding you in the pursuit of your life's goals is to leave your life literally to chance. Remember that the identity of an entity determines how it will act; entities can act only in accordance with their nature, and cannot act otherwise. Just as the identity of man's physical character dictates that certain specific causes be enacted to effect the buildup of muscle tissue beyond normal levels, so the identity of man's mind dictates the specific intellectual method that must be used to achieve valid knowledge. All of the intellectual advances made by philosophy and science resulted from man's use of logic and reason to identify the nature of that which exists. The ultimate goal of religion and mysticism is to prevent you from understanding that your consciousness, like your body and everything that exists, has an identity, too; that it is a faculty with a specific nature and functions through specific means. Those who want to control you - the cult leaders, the gurus, the wizards, the shamans, the soothsayers, and government bureaucrats - all of the modern mystics, in every form and fashion, rely on you relinquishing your consciousness in favor of theirs. But it is a control only you can give them. If you abdicate the responsibility of learning the nature of your consciousness, your means of survival, then you can never control it; thus you unknowingly deliver yourself into the power of those who wish you the worst - whether he's molesto JE? 9 9a- I

Página 18

HEAVY DUTY II to sell you a used wig you don't need, an erroneous training theory, or that theory of politics known as socialist dictatorship. Nature, to be commanded, must be obeyed. The absolutism of reality dictates how you must guide your training efforts to successfully develop larger muscles, and the absolutism of reason determines how you must direct your thinking so as to

achieve intellectual success - truth, knowledge and certainty. Your mind is a rational faculty, which means it has the capacity to reason. Razón is the faculty that identifies and integrates the material provided by man's senses. Unlike the other animal species, which are guided automatically and unerringly by instincts, man is given nothing automatically. Everything he wants and needs, both existentially and spiritually - whether food, clothing, shelter, transportation, big muscles, or certainty, serenity and a mature philosophy of life - requires that man volitionally choose to make the specific mental effort necessary to focus his perception and thought outward toward reality; only in this way can he gain conocimiento. Knowledge, like man's mind, has a nature, too. As stated in Chapter One, all of man's knowledge is hierarchal in structure. It has a foundation, consisting of fundamental ideas and principles. On top of this base, man's knowledge spirals upward in logical progression, toward higher and more complex, derivative concepts and principles. The hierarchal structure of man's knowledge can be most readily observed in mathematics where the fundamentals are addition, subtraction, multiplication and division. It is only on the basis of understanding these fundamentals that one may move logically, ie, step by step, toward increasingly more complex derivative aspects of mathematics, such as algebra and calculus. (The hierarchal structure of knowledge in exercise science is described in the next chapter.) Man's basic method of gaining knowledge is logic. Ayn Rand stated that "Man's means to establish the truth of his answers is logic, and logic rests on the axiom that existence NATURE, TO BE COMMANDED, MUST BE OBEYED 43 existe Logic is the art of noncontradictory identification...No concept man forms is valid unless he integrates it without contradiction into the total sum of his pensando. To arrive at a contradiction is to confess an error in one's thinking; a maintain a contradiction is to abdicate one's mind and to evict oneself from the realm of reality." Aristotle stated that the whole of logic is predicated on the Law of (Non)Contradiction, ie, "that a thing is what it is, and cannot be something else, at the same time and in the same respect." Or a muscle is a muscle; it is not a mind, never, nor in any respect. A muscle cannot reason, properly utilize the principles of thought, develop a valid theory of anything, design an Apollo rocket, direct a symphony, conceive of a MedX exercise rehab machine for medical therapy of the human lower lumbar muscles, or extravasate a subdural hematoma. Only the mind of a man, a man who has embraced the volitional responsibility of rational thought and critical judgment, who has chosen to learn the proper use of logic, can do these wonderful things that make our existence so different from that of all other living species. Man's mind is man's mind, and logic is logic. There is no such thing as "polylogic." There is no Aryan logic, no maternal logic, no lesbian logic, no minority logic; Página 19

sólo existe la lógica de la especie hombre - hombre el animal racional - y es la Arte / habilidad de identificación no contradictoria de lo que existe. La razón detrás de la continua desintegración de la ciencia y la completa El colapso de la filosofía en el siglo XX es el deseo de los intelectuales modernos de eximir a la conciencia del hombre (y su método de uso, la lógica) de la Ley de Identidad.

¿Cuántas veces has escuchado estas frases filosóficas: "Es Puede ser cierto para ti, pero no lo es para mí. "No estés tan seguro, nadie puede estar ¿Está seguro de algo? "" Puede ser bueno en teoría, pero no funciona en la práctica ". "Es lógico, pero la lógica no tiene nada que ver con la realidad". Mientras todos los hemos escuchado Una y otra vez, pocos se dan cuenta de su profunda filosofía. OBRA PÚBLICA || trascendencia. Todos dicen algo sobre la naturaleza de la realidad, el hombre y el hombre. La eficacia de la mente del hombre para adquirir conocimiento de la realidad, lo cual, les recuerdo, es una cuestión de la vida y la muerte. No son más que una receta para el subjetivismo. Lo esencial el significado de estas frases es que la realidad no es un objetivo absoluto; por lo tanto, los principios universales no existen, y la mente del hombre es impotente, él puede saber nada. Esta, querido lector, es la filosofía dominante de nuestra era, y es Responsable de la destrucción del mundo moderno. Cuando alguien dice que hay no existe tal cosa como una teoría válida de nada, está implicando, en efecto, que la realidad no es real, que A no es A y, por lo tanto, nadie puede estar seguro de nada. Y al hacerlo confiesa una contradicción; es la falacia lógica de autoexclusión. La afirmación de que "no hay una teoría válida" es incompatible con Su propio contenido. Es una contradicción porque la afirmación en sí misma es una teoría; eso Se incluye, por lo tanto, implica lo contrario. Si no hay una teoría válida, y mi La declaración es una teoría, entonces "hay o puede haber una teoría válida". Lo mismo con el idea "nadie puede estar seguro". Como representa un reclamo de verdad, se incluye a sí mismo. (ya que nadie puede estar seguro, no puedo estar seguro de que no puedo estar seguro), e implica que lo contrario es cierto, que "la certeza es posible". \*\*\* \*\*\* \*\*\* Filosóficamente, aquellos que reclaman conocimiento están disponibles sin esfuerzo (es decir, sin el recurso necesario a un método riguroso) se conocen como místicos, Mientras que aquellos que afirman que el conocimiento no es posible son escépticos. Antes de mi reciente Proclamando que la teoría del entrenamiento de alta intensidad es la única y posible teoría válida del ejercicio anaeróbico / culturismo, la actitud implícita de la La ortodoxia del culturismo era mística. Porque nadie hasta ese momento había cumplido plenamente. enfocados en el tema de la verdad y la falsedad, todos ellos implícitamente acordaron entregar cada otro, un efecto de chequeo intelectual y moral en blanco, oye, no voy a mencionar el tema si no puedes entonces todos podemos La naturaleza, para ser ordenada, debe ser obedecida 45 Continuemos fingiendo que somos 'expertos' y ganamos dinero. Que lo más despiadado ganar." El místico, recuerda, es alguien que abdica el esfuerzo y la responsabilidad de El escrupulosamente exigente uso de la lógica. Es como si creyera que simplemente por **regurgitating the arbitrary contents of his subconscious onto a piece of paper, he has himself a valid theory and should be accorded the title genius, or expert. Since my proclamation, most** of these people turned into skeptics. Now they say either "there cannot be just one valid theory," or, "nobody knows for certain what's

Página 20  
true" or, more directly personal, "Well, who does Mentzer think he is! Who's to say he's right?" In fact, the actual issue should not be "Who's right?" but "What is

true?" The theory of high-intensity, anaerobic, bodybuilding exercise is not true because I or anyone else, no matter how many might agree, say it is true. It is the fact that the logic of the theory is unassailable which makes it true. -I

ANOTHER KIND OF DEFINITION -JB HEAVY DUTY || ANOTHER KIND OF DEFINITION 49 t \*■\*\*.' t "Most people...think that abstract thinking must be "impersonal," which means that ideas must hold no personal meaning, value or importance to the thinker... But if you are the kind of person who knows that reality is not your enemy, that truth and knowledge are of crucial, personal, selfish importance to you and your own life - then the more passionately personal the thinking, the truer the clearer." Ayn Rand, Philosophical Detection. "Man cannot survive except through his mind. He comes on earth unarmed. His brain is his only weapon... Everything we are and everything we have comes from a single attribute of man, the function of his reasoning mind." Ayn Rand, The Fountainhead The subject of logic is vast, a complete examination of which is certainly outside the scope of this work. I will address, however, one of the most crucially important aspects of logic - completely overlooked by bodybuilding theorists - which relates to the role played by unequivocal definitions. Because man acquires and holds his knowledge in the form of concepts, it is the validity of his concepts, ie, the precision of their definitions, which determines the validity of his knowledge. To quote Ayn Rand, from Introduction to Objectivist Epistemology, on this issue: "Since concepts, in the field of cognition, perform a function similar to that of numbers in the field of mathematics, the function of a proposition is similar to that of an equation: it applies conceptual abstractions to a specific problem. " A proposition, however, can perform this function only if the concepts of which it is composed have precisely defined meanings. If, in the field of mathematics, numbers had no fixed, firm values, if they were approximations determined by the mood of their users - so that "5," for instance, could mean five in some calculations, but  $6\frac{1}{2}$  or  $4\frac{3}{4}$  in others, according to the user's 'convenience' - there would be no such thing as mathematics." \*\*\* •\*\* \*\*\* A theory, properly defined, is a set of principles, or propositions (statements of fact), which claims to be a correct description of some aspect of reality and/or a guide for successful human action. Recall from above that a proposition or a theory can fulfill its proper intellectual function only if the concepts that make it up have precisely defined

meanings. This is true of any theory, whether it be the theory of relativity, IC; \*>.i'.\*VVli(I. HEAVY DUTY || ANOTHER KIND OF DEFINITION

Página 21

51 the theory of evolution, or the theory of high-intensity training. El proceso de establishing precise definitions is rigorously demanding, which is why mystics and skeptics turn away from the realm of the intellect. Concepts are the tools of thought; the better your tools, the better, ie, the more precise, the closer to the actual facts of reality, will your thinking be. The improper use of concepts, using them without knowing their exact definitions, is one of the primary causes of

illogic, especially in the field of bodybuilding. Let's look at the field of exercise science. Just as knowledge in the fields of mathematics and philosophy has a structure, so does the context of knowledge which constitutes exercise science. The most basic, or fundamental, distinction in exercise science is the one delimiting aerobic exercise as a branch separate from anaerobic exercise. Aerobic exercise is geared exclusively to the development of endurance of a specific type - with activity that involves a metabolic pathway that efficiently resynthesizes energy substrates, especially ATP, in the presence of oxygen. Aerobic literally means with oxygen, and is properly defined as low-intensity, long-duration exercise. Anaerobic activity is an entirely different species of exercise, one that is geared specifically to the development of strength, muscular size, and speed, and it involves a different metabolic pathway, one that utilizes glycogen almost exclusively as its energy substrate. Anaerobic means without oxygen, and is properly defined as high-intensity, short-duration exercise. Aerobic activity is carried out at such a low level of intensity (with very few muscle fibers contracting at any given moment) that the body can deliver the muscles sufficient oxygen for rapid enough resynthesis of the energy substrates; thus the activity can be carried on for long periods. Anaerobic activity, such as weight training to failure or sprinting, is carried out at such a high level of intensity (with as many fibers contracting as possible) that the body cannot obtain nearly sufficient oxygen to resynthesize energy substrates, and within a very short period is forced to switch to glucose for energy metabolism. The body's ability to provide energy from purely glucose metabolism is quite limited. So when a muscle has used up all available oxygen possible, the activity will cease very quickly as at the last rep of a set of bodybuilding exercise to failure. And if the high-intensity exercise is repeated beyond that initial bout or burst, because the amount of glycogen (stored glucose) within the muscle is quite low, the activity will soon lapse, willy-nilly, into a less intense form. While the fields of aerobic exercise and anaerobic exercise don't have much in common, the one intellectual element they obviously do possess together is the concept "intensity." As I stated above, aerobic activity is low-intensity, long duration, while anaerobic-bodybuilding activity is high-intensity, short-duration. The concept "intensity," I submit, is the foundation (or most fundamentally important principle) of exercise science. It is only on the basis of an understanding of intensity that one may define either type of activity, as well as establish the contexts necessary for studying both energy metabolism and the issues of volume and frequency. First Cause When a bodybuilder goes to the gym to work out, his goal, of course, is to build bigger muscles. Therefore, there has to be some element, some factor, some

variable within the workout itself which is responsible for inducing growth estímulo. It is only within the context of understanding what this variable is that a bodybuilder can consciously and intelligently enact the cause necessary to effect growth stimulation. And, of course, it is related to the intensity of effort involved with any given set of an exercise. Arthur Jones properly defined inten- HEAVY DUTY || ANOTHER KIND OF DEFINITION 53 ft-' « s/fy as referring to the



percentage of possible momentary muscular effort being exerted. An understanding of the precise meaning of this concept is required before one may move logically to further develop the theory of high-intensity training. Since the definition of intensity is rather abstract, it may be quite difficult to understand. The best way to clarify a high-level abstraction is to go to a concrete, ie, an example in perceptual reality, as done below. Let's assume, hypothetically, that you can curl a 100-pound barbell for a maximum of 10 reps to failure, but you couldn't possibly finish an 11th rep. You, like any healthy, well-conditioned person, are capable of exerting yourself with a maximum effort at any given moment. If you looked outside your window right now, for instance, and saw a loved one pinned under a car, without a second thought or need of warm-up, you'd run out and attempt to lift the car off that person utilizing 100 percent of your possible momentary muscular ability or, more simply, 100 percent intensity of effort. The first rep of that set of curls with 100 pounds to failure, however, does not require an all-out effort. Of all of the reps of that set, the first would obviously be experienced by you as the easiest, the one requiring the least intensity of effort. That first rep would fatigue you slightly, however, and that's why the second rep would be experienced by you as a little bit harder to complete. Whereas the first rep may require on the order of 8-12 percent of your possible maximum momentary muscular effort, the second rep may require 16 percent. The second rep fatigues you even further, and the third rep will be harder still, requiring a more intense effort to complete than did the segundo. And so it goes with each successive rep, each growing progressively more difficult to complete, each requiring a more intense effort than did the preceding one. Until, finally, we get to that last possible rep, in this case the 10th one, which requires a maximum, all-out effort. You are gritting your teeth, shaking all over and you're just barely able to curl the bar to the top. That would be the only rep of that set which is said to require literally 100 percent intensity of effort. If you could curl 100 pounds for 10 reps, but you only did the first rep and put the bar back down on the floor, never attempting any more than that, do you think you'd ever grow? No, you wouldn't. ¿Por qué? Because the intensity of the effort required would be too low to stimulate, or cause, an adaptive response, ie, a strength and muscular size increase. Do you see where it stands to reason that the last rep would be better than the second, third and fourth reps, etc?

Page 23

That last rep is very special. There is something that goes on physiologically at that point in the set where maximal intensity of effort is being exerted, which is literally responsible for triggering the growth machinery into motion. Además, once you've actually induced growth stimulation by reaching a point of momentary muscular failure, you don't have to do it again. ¿Por qué? Because you've already achieved your goal of setting the growth mechanism into motion. It's like when you throw the switch to turn on a light - once you've thrown the switch, the

mechanism is in motion, and you don't have to stand there flipping the switch up and down. This was a point I didn't fully clarify in my last book, which was responsible for considerable confusion. It resulted in people's failure to grasp the essence of the cardinal principle of the theory, which is: only one set of an exercise carried to failure is all that is required to stimulate an optimal increase in strength and muscular tamaño. Lacking a grasp of this point inevitably leads to the commitment of a number of serious training errors - mistakes that will seriously compromise training progress short of optimal increases. I noticed, for instance, that many of my phone consultation clients would call back for a first follow-up to report on their progress, and state something to the effect that while they enjoyed the intense, short workouts, they often felt they should do one or two sets more for an exercise than the one set I had prescribed. Based on their feeling, they performed the additional set or two. You would respond by informing them that the "feeling" they were experiencing was fear, specifically a fear that they hadn't done enough to achieve the goal of stimulating growth. I finally recognized that the fault was mine in that I had not adequately emphasized the fact that the last rep of a set carried to failure was the trigger that set the growth mechanism into motion; once activated, it was neither necessary nor desirable to do it again. In other cases, phone clients were calling back to report that they had added "drop sets" as a means of increasing the intensity, something I had not advised them to do. With drop sets, the individual performs a conventional high-intensity set to failure, whereupon he immediately removes (drops) an arbitrary amount of weight from the bar or machine, then immediately goes back to perform the same exercise to failure once again, repeating the drop process as many as two or three times. This is not a method of intensifying the effort, but of extending the effort; therefore, it is more of an endurance training technique. Since the person already triggered the growth machinery into motion by reaching momentary muscular failure on the first part of the set, any more exercise after that is not just wasted effort, it is counterproductive. Any exercise beyond that is unnecessary in that it doesn't serve to effect further growth stimulation; it is undesirable because it effects a further inroad into recovery ability, using that much more of the body's resources for compensation (recovery), thus leaving that much less of the body's resources available for overcompensation (growth). More on this in the next capítulo. It only stands to reason that without a knowledge of what the specific stimulus is that causes a strength and muscular size increase, one cannot know how many sets to perform or how frequently to train. It is only on the basis of understanding the principle of intensity that one may move logically to the issue of precisely regulating volume and frequency. \*£.

Page 24

HEAVY DUTY || words, if one doesn't understand the nature of the stimulus, what is he going to regulate? And why? And how? \*\*\* \*\* Although people seek to develop larger muscles and obtain a suntan for cosmetic reasons, nature evolved these capacities as adaptive responses to intense physical stresses. The buildup

of muscles and melanin beyond normal levels represent defensive barriers against future assaults from the same high-intensity physical stressors; namely, anaerobic bodybuilding and ultraviolet sunlight. In the late 1800's, the famous French physiologist Claude Bernard stated that the ability of living organisms to maintain the constancy of their internal physiologic milieu despite changes in the environment is perhaps their most salient physical characteristic. For example, an individual exposed to fluctuations in atmospheric temperatures doesn't experience a change in body temperature unless, of course, the environmental changes are radical. An individual can also eat large quantities of a particular food substance without fear of greatly altering the composition of his blood such as to be dangerous. The capacity to maintain a constant internal environment is known as homeostasis (from the Greek, "to keep a similar position"). And it is the body's adaptive capacity that makes homeostasis possible despite the disruptive influence of stressors. The body is very economical with its reserve of adaptive biochemical resources, and will not disrupt its homeostatic balance by using these resources unless there is sufficient cause to do so. Only a high-intensity, anaerobic, exercise stress - or a high-intensity ultraviolet sunlight stress - is sufficiently "threatening" to the body's reserve of resources that it will mobilize its defensive forces. The adaptive process is essentially defensive in nature, and the degree to which an adaptive response is stimulated is directly proportional to the intensity of the stressor. Y it's an either/or situation. Either the intensity of the stressor is high enough to cause a specif- A NOTHER KIND OF DEFINITION 57 ic adaptive response or it is not. An absolute, objective requirement of nature is that a set of an exercise be carried to a point of momentary muscular failure to effect an increase in strength and muscular size. Attempting to go beyond your existing capacity makes for such an inroad into the body's existing reserve of resources, it will enlarge upon its existing capacity as a means of protecting its precious limited reserves. If not, the reserves would eventually be exhausted, and death would soon supervene. To conclude this chapter, man's specific physiologic characteristics dictate what training causes must be enacted to achieve the desired effect, ie, an optimal increase in strength and muscular size. The primary causal determinant is the imposition of a high-intensity stress. And while the imposition of a high-intensity training stress is a first necessary cause, it is not sufficient cause to effect an optimal increase in strength and muscular size. The fact that the human body possesses a limited recovery ability must also be given adequate consideration. yo BALANCING THE THEORETICAL CUENTA

Page 25

60 BALANCING THE THEORETICAL ACCOUNT 61 "The disintegration of philosophy in the 19th century and its collapse in the 20th have led to a similar, though much slower and less obvious, process in the course of modern science." Ayn Rand, *Capitalism: The Unknown Ideal*. Since starting my training business some six years ago, I've had considerable success with my clients. Their progress

has generally ranged from mostly satisfactory to occasionally dramatic, and in a handful of cases, phenomenal. In the relatively few cases where progress was less than satisfactory, such was the result of either very poor genetics and/or mistakes on my part, mistakes which I won't make again. As well as my clients were doing, I was aware for some time that they should be doing even better - especially with their long-range progress. I was in the midst of a period of very intensive study of philosophy, logic and the nature of theoretical knowledge. I had arrived at a juncture in my studies when I clearly recognized that, if in possession of a valid theory, and the proper practical application of the theoretical principles is made, progress - no matter what the field of endeavor - should be immediate, continuous and worthwhile until the goal has been reached. (A theory, remember, is a set of principles which serves as either a correct description of some aspect of reality and/or a guide for successful human action.) While my clients' progress was always immediate from the outset of their training with me, it wasn't always continuous and worthwhile in every single case. Why not, if, in fact, I was in possession of a valid theory and was making the proper application? I immediately concluded that there had to be a flaw in the theory of high-intensity training as preferred by Arthur Jones - and uncritically accepted by just about everyone within his sphere of influence. Recall from Chapter Two that in the field of cognition (thought), concepts play a role similar to that of numbers in a mathematical equation, but they may do so only if the concepts are precisely defined. If any of the theoretical principles were improperly defined, practice would be skewed to that extent and progress would be compromised. In checking the theory for intellectual precision, I went to the first principle, the principle of intensity, and found it to be properly defined. The philosophic-scientific precision of Jones' definition was unquestionable. He stated that intensity refers to the percentage of possible momentary muscular effort being exerted, and that to stimulate an optimal increase in strength and muscular size, a set of an exercise must be carried to a point of momentary muscular failure where 100 percent intensity of effort is being exerted. It was after Jones precisely defined intensity that he made a grievous mistake, a mistake that seriously compromised the efficacy of a superior approach to training to the extent that I and thousands of others who thought we had the Holy Grail quickly grew frustrated. It was here that Jones left the realm of science and cognitive precision, and slipped into the arbitrary. Whereas the dominant training ideology of the time as espoused by Weider, Schwarzenegger et al advocated

Page 26

that everyone train each muscle with 12-20 sets two to three times a week, for a total of six workouts or more per week, Jones properly indicated that such a regimen amounted to gross overtraining. His prescription for the problem, however, wasn't much better: he suggested everyone train the whole body three times a week with a total of 12-20 sets per workout, which quickly amounted to mild, and then severe, overtraining. In other words, while the bodybuilding orthodoxy seemed to be operating on the notion that "more is better," Jones

countered by suggesting "less is better." El said that to be productive, intense exercise must be brief and infrequent. Qué does brief and infrequent mean precisely? Jones equivocated. He left his legion of intransigently devoted followers, many of whom almost seemed to regard him as omniscient and infallible, wanting. We knew that the theory had some validity, yet didn't yield the results we knew were possible. .1 64 HEAVY DUTY || In a very real sense, Jones was merely reacting in knee-jerk fashion to Weider. This was due to a critical blind spot on his part. Jones wasn't intellectually ensconced in theoretical fundamentals as much as he was literally obsessed with discovering methods for making extremely accurate measurements of certain derivative aspects of exercise, such as range of motion, speed of rep, number of reps, torque, friction and stored energy, among other things. As noble an endeavor as this may be, the appropriate integration and application of such knowledge is possible only within the context of a precise understanding of the fundamentals. For instance, what's the difference if one understands the exact role of speed of rep and range of motion if the trainee is performing too much in the way of both volume and frequency of exercise so that he's overtrained. No matter how much more growth stimulation is being induced as a result of the application of knowledge of derivatives, such only assumes relevance once the fundamentals are properly understood and applied. Most bodybuilders today still seem to have the notion that the purpose is to go into the gym and discover how many sets they can perform, or how long they can endure. A bodybuilding workout is not aerobic training - nor is it an endurance contest! Many others, including Dorian Yates, and high-intensity theorists Arthur Jones and Ellington Darden, are operating on the idea that the purpose is to go into the gym and do merely less than what the majority is doing. I'm saying that since the majority hasn't the slightest clue as to what they're doing, to do merely less is not good enough. To illustrate the point in extreme form: if the orthodox opinion has it that 400 sets performed six days a week is the best way to build muscle, and that is overtraining, just performing 200 sets three days a week, which is certainly less, doesn't necessarily make that the best way to train. Eso represents a form of the blind leading the blind. Science is an exacting discipline whose purpose is to dis- BALANCING THE THEORETICAL ACCOUNT sesenta y cinco cover the specific, precise facts of reality; it is an idea which flows from the philosophic fundamental that a thing is what it is and can be nothing else - or A is A. Weider's notion that one should perform 12-20 sets for each muscle is not exact Is it 12 sets, 14 sets, 17 sets or 20 sets? And if 12 sets is sufficient, why do 20 sets? Since he never provided any explanatory context to support his notion, it Page 27

amounts to nothing more nor less than a blind, groundless assertion. Jones' response wasn't based on or derived from a scrupulous process of thought either. Weider said turn left, Jones said turn right. To advise people to train with 12-20 sets for the whole body instead of each muscle is inexact and arbitrary. And why should people necessarily train either six times a week or three times a ¿semana? Our culture has traditionally insisted that it is a virtue to work six days a week with

one day, Sunday, off for rest and religious observance. Also, in our culture the number "3" has enormous traditional meaning - three square meals a day, the Holy Trinity, the three bears, the notion that catastrophes occur in lots of three, etc. Weider and Jones both established approaches to bodybuilding exercise based on religious tradition and the arbitrary. With a truly scientific, theoretical approach to exercise, there is no room for the traditional or the arbitrary. So the proper attitude is to go into the gym like a rational human being and perform only the precise amount of exercise required by nature. Not more is better, not less is better, but the precise amount required is "best." And as it turns out, the Precise amount of exercise required by nature is less than anyone realized until recently. Scientific Precision:  $2+2*3\frac{1}{2}$  If you were going to have an appendectomy or some other delicate surgical operation, obviously you would very much HEAVY DUTY || BALANCING THE THEORETICAL

ACCOUNT 67 want the anesthesiologist to inject, or apply, the precise amount of chemical compound required to induce a state of anesthesia. If, as you were being wheeled into the surgical suite, you overheard the anesthesiologist say, "Pump him up," as is said in bodybuilding, "pump him up, give him more, more anesthesia is better than less!" you wouldn't feel very good. In fact, you would jump up off the stretcher and run out the door. Or if you overheard the anesthesiologist say, "Let's give the patient less anesthesia than we gave that one yesterday, we killed the poor man," you wouldn't feel much better. In this particular situation, where life and death is clearly the issue, it's very easy to grasp why scientific precision is so important. But that same principle from medical theory carries over and has direct application to bodybuilding theory. (Recall from Chapter Two that exercise science derives from medical science. The ideal, in both medical and exercise science, is to work to alter, or correct, human physiology with as high a degree of precision and exactitude as is required.) In the field of bodybuilding science, however, we are not looking to inject, or apply, a specific chemical compound to induce muscular hypertrophy. (Ultimately, of course, inducing muscular hypertrophy by imposing a training stress is effected via a biochemical change. It is conceivable that, in the near future, biochemists could discover a chemical compound that would be injected into a human being to induce muscle growth beyond normal levels without any need of a training stress being imposed - unlike the case with steroids, which merely facilitate the process of protein synthesis but require a training stress.) Instead the idea is to impose, or apply, a specific training stress onto the human physiology that will serve to induce the biochemical changes which result in muscular growth. Applying any more training stress than is precisely required by nature is overdosing on the medicine, or as is commonly referred to in bodybuilding, overtraining.

Page 28

From my present vantage point today, in late August of 1995,<sup>1</sup> see that when I wrote the new, revised HEAVY DUTY three years ago, my level of understanding

in this field was something like two plus two equals three-and-one-half. That is close to the truth, but it isn't close enough to balance one's check book, or my clients' physiologic account. The workout routine suggested in that book represents a concretization (or practical application) of my understanding of the theory's conceptual, abstract principles at the time. Y while that routine worked well for thousands, including my own personal clients, I realize now that we were all settling for something less than 100 possible units of Progreso. Presently, my understanding of the fundamental principles of the theory of high-intensity training is thorough and complete - not two plus two equals three-and-a-half, but two plus two equals four! Heretofore, I would only occasionally have clients gain 10 to 20 pounds in a month or 30 to 40 pounds in three to four months. Now such is no longer the exception, but the rule! (The routine offered in the next chapter represents the last word on achieving optimal results from anaerobic, high-intensity, bodybuilding exercise; it is the ultimate consequence and final practical application of the properly validated theoretical fundamentals.) Remember, it was the depth and clarity of my understanding of the nature of theoretical knowledge that led me to question my clients' progress. Esta prompted me to review some of the work of Dr. Hans Selye, the brilliant medical scientist whose research on the phenomenon of stress led to his theory, the general adaptation syndrome, or GAS. It was his theory of stress that helped me to better understand as well as further develop the theory of highintensity formación. (The field of medical physiology received an enormous boon when Selye published his theory of stress physiology; today the theory of exercise physiology is closely linked to the theory of stress physiology.) Dr. Selye defined stress thusly, "Stress is a state manifested by a specific syndrome which consists of an HEAVY DUTY || of the nonspecifically induced changes within a biologic system." In other words, stress has specific characteristics but no particular one cause. The human body is exposed to myriad stressors (stress-producing agents) day in and day out. These include pain, hot and cold temperatures, emotional stimuli, muscular activity and sunlight, to name a few. While all of these things can induce a stress state, thus making causation nonspecific, the form it takes is always específico. While most think of the development of a suntan or large muscles as merely cosmetic, ie, to improve one's appearance, nature, of course, did not have such in mind. A suntan, like larger muscles, is a "defensive barrier" the body erects to protect itself from future assaults from high-intensity physical stress. Pero esos barriers can be overwhelmed. A person who overexposed his skin repeatedly to intense August sunlight would eventually die as the the sun's ray would literally cook his tissues. And as the recent work of Dr. Kenneth Cooper indicates, chronic, gross overtraining may ultimately result in long-range medical problems, such as heart disease and cancer. (This is not difficult to grasp if you think of exercise, in fact, as a form of stress on the entire human physiology. It only stands to reason that chronic, gross overtraining would inordinately tax the overall physical system and could result in a breakdown somewhere within the

Page 29

system, such as the glandular system. Cooper attributes the lymph cancer of Lemieux, the famous hockey player, and, Marty Liquori, the distance runner, to chronic, gross overtraining.) A person exposed to the sun's ultraviolet rays at the equator in summer would not have the slightest concern whether the intensity of the stress is high enough to disturb the physiology sufficiently so as to induce an adaptive response, ie, the buildup of a suntan. His only concern, his overriding consideration, would be to properly regulate the duration (or volume) and frequency of exposure time so as not to overdose BALANCING THE THEORETICAL ACCOUNT 69 on the stress/stimulus - and incur a sunburn, or in extreme cases, death. UNA person at the equator in summer doesn't fret a s to whether or not he'll develop an optimal suntan, but only if he doesn't overexpose. Bodybuilder's utilizing the non-theoretical, volume approach to training do fret continuously over the prospects of ever developing their muscles because they know nothing about the nature of the specific stress/stimulus required to induce a buildup of muscle mass beyond normal levels. Their blind concern is with volume. Unlike the suntanner, however, who is rationally concerned with the proper regulation of the imposition of the sunlight stress, the bodybuilder has an irrational obsession with (over)imposing the training stress. The Next Step in the Logical Hierarchy - Recovery Ability Those who are unaware of philosophic fundamentals usually have a very difficult time achieving their goals. Being emotionally driven, instead of conceptually directed, they seem to operate on the fuzzy notion that if their desire to achieve the goal is great enough, such will suffice and goal achievement is inevitable. Y having never made it a policy to check for inappropriate mental habits, most bodybuilders semicon-sciously resort to the unchallenged, unchecked premise "more is better." If stated in words, their basic attitude would be, "I want big muscles so badly, if I persevere, and go to the gym for hours a day, eventually I will succeed. After all, I am me, I am special, and everything I've heard in the culture suggests that if I'm relentless, if I remain a slave to my art trough sheer dint of unrelenting effort, I must succeed, wen, the joke is on them; cómo pathetically wrong they are. We all live in a reality that is an objective absolute. t yo BALANCING THE THEORETICAL ACCOUNT 71 reality and its laws, the laws of nature, that dictate the specific actions that must be taken to achieve a goal. Neither a wish, a whim, a hope or a dream is sufficient to cause a muscle mass increase. Neither is the application of a false idea, or theory, blindly accepted. Nor will faith, intuition or revelation imbue anyone with a true idea, or theory; only the conscientious use of logic will yield valid human conocimiento. In the last chapter, I made the point that man's physiologic nature demands the imposition of a high-intensity stress as a first, necessary cause, but that it is not sufficient cause to effect the desired result. One of man's specific physical characteristics dictates that the imposition of the training stress must be cautiously regulated in terms of both volume and frequency: it is his strictly limited Page 30

recovery ability. The human being does not possess an infinite capacity for tolerating the exhaustive effects of intense physical stresses. In fact, nothing in



the universe is literally infinite, including the biochemical reserve of resources that make up recovery ability. This fact is what led Arthur Jones to state, "It is only rational to use that which exists in limited supply as economically as possible." Very few would argue that a high-intensity training stress is an absolute requirement for stimulating growth. (As a first step toward refuting the theory, one would have to prove that the principle of intensity is invalid; that the first rep of a set of 10 reps to failure is more likely to stimulate an increase than the last, or 10th rep.) The problem that most people have in accepting the theory results from their failure to grasp the full significance of the previous paragraph. Mientras que la principle of intensity must be understood as a first requisite for understanding anything else of value about exercise, the fact of a limited recovery ability is the next key concept that must be grasped in the logically interdependent hierarchy of scientific, physiologic knowledge. Es solo HEAVY DUTY II the basis of knowing that the body has a limited recovery ability that one may understand why volume and frequency of exercise must be cautiously regulated. I realize now that the issue has never gained the full attention it deserves, which is why many continue to chronically, grossly overtrain. (When was the last time you heard the term "recovery ability" used by an advocate of the orthodox, volume approach to training? Not only has the bodybuilding orthodoxy failed to define any of its concepts, its conceptual range is profoundly limited.) The fact that recovery ability is strictly limited leads ineluctably to a logically warranted conclusion: the issue of volume, or number of sets, whether one set or 100 sets is performed, is a negative factor - negative with a capital N. In other words, the extent to which you work out, perform a number of sets, is a negative because for every set performed there is caused a deeper inroad into recovery ability; this is undeniably, unquestionably a negative factor. For every set performed, more and more of the body's limited reserve of biochemical resources is used in the attempt to merely recover, or compensate, for the exhaustive effects of the workout, leaving that much less left over for overcom-pensation in the form of new muscle. So, clearly, the issue of volume is a negative factor. Even one set is a negative; insofar that you train at all you are utilizing biochemical resources that must be replaced, and the more you use the more that must be replaced. It follows log- ically that optimal results can be achieved only as the result of the least, or precise, amount of exercise necessary being performed. Of course, at least one set must be performed to have a workout. LAN CING THE THEORETICAL ACCOUNT 73  
Toward a

Better Understanding of Frequency I find it curious that the great majority of bodybuilders, knowing that overtraining means something decidedly neg-tive never look into the issue seriously. El termino is always used as a negative. In fact, try using the concept "overtraining" in a positive context, and you quickly realize it's impossible. By definition, overtraining means performing any more exercise, in terms of both volume and frequency, than is precisely required.

Just as there is and can be only one valid theory of anything likewise there can be only one valid definition - in any given context - of any concept. The definition above is the one valid definition of overtraining. \*\*\* \*\* Most bodybuilders today apparently don't understand that the big picture essentially involves two elements of equal value, literally 50-50, not 70-30 or 60-40 - but 50-50, with neither of the two elements being slightly more important than the other. The first element is the workout itself, of course, the second element is the rest period between workouts. The workout, understand, doesn't produce muscle growth, it merely serves to stimulate the body's growth mechanism into motion. It is the body that produces the growth, but only if it is undisturbed during a sufficient rest period. Now here's the crux of the problem. How can one know with reasonable certainty just how much time needs to elapse between workouts? The answer is to be found in the following. Immediately upon completion of a workout, you feel the same as you did immediately before the workout - you are exhausted. In addition to the subjective experience of feeling fatigued, you are also exhausted in a technical sense, in that a considerable portion of your limited reserve of biochemical resources, known as energy, was used up to fuel the workout. To the extent that one works out, ie, performs a number of sets, he makes an inroad into his recovery ability. Visualize an inroad as an 'in' into your reserves, ie, a hole. You perform one set, a small hole is made. You perform a second set, a deeper hole; a third set, the hole is deeper still, and so forth! The first thing your body must do after the workout is not build a mountain, ie, the muscle, on top, but fill that hole, ie, recover, overcome the deficit, compensate for the exhaustive effects of the workout. Now the important point: the process of recovery is not completed - zip! - in five minutes after the workout. De hecho, la completion of the recovery process may take up to several days, or longer, before the body will have the opportunity to start building the mountain, ie, over-compensating, producing muscle growth. (Keep in mind: if you work out again before the recovery process is completed, you will short-circuit the growth process.) That's right, the recovery process alone may take several days to be completed. And here's the proof. Every bodybuilder has had the experience of doing a tremendous leg workout, for instance, on a Friday afternoon, and then after resting all weekend, he wakes up Monday morning still tired. It usually goes something like this. You went to bed early the night before the Friday workout in anticipation of a great workout; in addition, you had a hefty breakfast that morning in preparation. You go into the gym later in the day feeling more motivated and energetic than usual, and the workout was even better than you'd hoped. Not only was your squat up 20 pounds over your previous best, but the reps were three more than with your previous best weight. The entire workout was "balls to the wall," as Dorian Yates likes to say, and you leave the gym feeling triumphant, but very tired as well. Then you go home and intentionally rest the entire weekend, avoiding any demanding activity. You do so, thinking that this will

see you fully recovered and ready for another great workout on Monday. However, quite to your surprise, you're still generally fatigued all day Monday.

BALANCING THE THEORETICAL ACCOUNT 75 The fact that you are still fatigued on Monday - as a result of your Friday workout - is proof that you hadn't fully recovered even after 72 hours, that there is still a deficit, ie, you're still in a hole. And to work out that day would be a grave mis- take. Because you're still in a hole, you would be disinclined to work out at all, and you'd be weaker than you were last workout. And to further disturb the physiology at this juncture with more exercise, you'd prevent the body from starting to build the mountain on top, the muscle - and you'd just start the digging of a deeper hole. Every bodybuilder has had the experience of being weaker one workout to the next. And this explains why. Let's assume that, for some reason, you were forced to miss your scheduled workout on Monday, thus leaving the physiology undisturbed, and affording your body the further opportunity it absolutely requires to fully compensate for the exhaustive effects of Friday's workout. When you wake up on Tuesday, you're no longer fatigued - not teeming with energy, but feeling recovered. Were you to go into the gym on Tuesday, having provided the body with the added opportunity it required to fully recover, your desire to train wouldn't be great, and you'd only be as strong as you were the last workout - no weaker, but no stronger either, only lo mismo. And to work out at this point would again be a mistake, because stressing the body with more exercise, you'd short-circuit the process of growth production just as it was about to begin. Now let's assume you were forced to forego Tuesday's workout. And you wake up on Wednesday not just feeling recovered, but energetic and eager to train. En the gym you'd most likely even be delighted as you'd be up 10 pounds on some exercises, a rep or two on others, and things would go generally well. Unbeknownst to you, however, as you hadn't yet read this book, it would be a mistake to tram on Wednesday. ¿Por qué? Because at that point the body only had the opportunity it required to fully recover, but it had produced J&S? yo yo something less than 100 percent of the mountain, or muscle Had you waited one more day, your body would more likely have fully completed the growth production process, and you would have been up 20 or more pounds on some exercises and four or five reps on others. Once I understood the above, in February of 1995,<sup>1</sup> immediately switched my personal training clients from training every 48-72 hours to every 96-120 hours - and the improvement in their progress has been literally phenomenal! While I had been doing everything just about right in terms of my application of the other two principles of high-intensity training, namely, intensity and the proper regulation of volume, I was considerably off the mark concerning my understanding of how to **Regula con precisión la frecuencia, en parte, debido al miedo. Ahora no. No desde que yo superé mi miedo con una comprensión plena. Mi miedo estaba asociado con el hecho de que no había pensado adecuadamente en el cuestión de descompensación, o atrofia, es decir, pérdida muscular, después de un período de no formación. Yo, como todos los demás al parecer (incluido Arthur Jones), había cegado aceptó la noción prevaleciente de que la pérdida de fuerza y tamaño inevitablemente comienza** Página 33

dentro de las 96 horas siguientes al cese de su último entrenamiento. Recuerdo que cuando reduje la frecuencia de entrenamiento de mis clientes de cada 48 Horas a cada 72 horas, estaba eufórico. Pensé que había descubierto la última clave para Haciendo la aplicación perfecta de la teoría del entrenamiento de alta intensidad. Ya que no estaban haciendo tan bien como sabía que deberían entrenar una vez cada 48 horas, y pensar esa descompensación comenzaría después de 96 horas, me pareció que debía haberla alcanzado Perfecto haciendo que entrenen una vez cada 72 horas. Pero cuando vi que algunos no estaban haciendo tan bien como deberían en un horario de una vez cada 72 horas, o eso Otros pronto dejaron de progresar, me sorprendió. ¿Podría ser que incluso eso? ¿Era demasiado la frecuencia de entrenamiento? Y tan difícil como la había tenido. tratando de EQUILIBRANDO LA CUENTA TEÓRICA 77 convencer al mundo, y ganarse la vida, que el entrenamiento una vez cada 72 horas era correcto, que demonios iba a hacer ahora? En realidad, la idea de que mi conocimiento recién adquirido podría ser rechazada por Otros, o que podía perder clientes, no me asustaron. Parece que una significativa Parte de mi carrera en el culturismo ha girado en torno al cuestionamiento y la ira. - el establecimiento. Hace mucho tiempo decidí que no estoy en esta tierra para ganar un concurso de popularidad, por lo que no me molestó. Fue el tema de la descompensación. Después de 96 horas sin entrenamiento, me frenó, al menos por un tiempo. El tema de la descompensación surgió en medio de un período de riguroso Recapitación filosófica de mi parte, cuando hice una convicción consciente de nunca acepta cualquier cosa que alguien diga sin crítica otra vez. De hecho, había observado que así muchas verdades generalmente aceptadas, aceptadas por ninguna razón mejor que "ellos dicen" eran falsos Decidí desafiar la noción de descompensación que se produce después de 96 horas Razoné que, dado que puede demorar hasta tres o cuatro días, o más, en algunos casos - para completar el proceso de compensación / sobrecompensación, **how could one state with any certainty that decompensation starts at 96 hours? En other words, how and why would the body start to decom-pensate before it had yet compensated or overcompensated, ie, to lose muscle after a workout before it even recovered and/or grew from that workout? Interesting point! (Always question broad generalizations presented without proof or explanatory context; especially in the area of physiology, where there exists numerous mitigating influences, including genetics.) How many times have you and your bodybuilding associates observed that one always comes back stronger after a one- or two-week layoff? Every individual - without exception -that I've asked this question has responded with ■ baacaHy the same answer, "Yes, you know, it's funny, but now -m : you mention it, I have noticed that I come back stronger after i umm^- £sj,-. - &&&&• HEAVY DUTY || every layoff."** If you are stronger after a layoff, don't you see that it's proof positive you were overtraining (in terms of frequency and, most likely, volume), and that decompensation doesn't even start after a two-week layoff - let alone a mere 96 hours?! Please, don't gloss over this lightly. It's one of the most important issues in

bodybuilding science. Decompensation does not start within 96 hours upon cessation of your last workout. I have not observed such with any of my personal training clients, and I've trained in the neighborhood of 2000 individuals over the last six plus years. Recently one of my regular local training clients intentionally rested six days between workouts. This was two days longer than his usual four-day rest. He had called me the night before his scheduled workout on day four to complain of still being very tired from his session three days earlier - and it consisted of only four total sets. And it was not a leg workout, but delts and arms. (The degree of the stress/demands exacted by Heavy Duty, high-intensity training are of a literally staggering magnitude, which is one of the reasons for it being the most productive type of anaerobic/bodybuilding training.) When my client asked if it wouldn't be best to rest one extra day, or five total, I insisted, considering the severity of his fatigue, that he take two extra rest days. yo explained to him that the two extra days off would not possibly pose the risk of a loss, no threat of a negative. However, it would most assuredly present the actuality of a positive: it would provide us with that much greater certainty that enough time had elapsed between workouts to allow for full recovery and total completion of the growth production process. I made it clear to my client that his being fatigued after three days of rest was a clear indication that his body hadn't fully compensated for the exhaustive effects of the workout; therefore, there hadn't been any overcompensation. And to further disturb his physiology at that juncture with more exercise would shortcircuit BALANCING THE THEORETICAL ACCOUNT 79 the growth production process before it had even had an opportunity to start. By the time he returned to the gym on day six, he stated he felt much better and was rarin' to go. It was his scheduled leg workout, and I bet him that he'd break his record best on Leg Extensions. I placed the pin in the last plate of the machine, which is 250 pounds, and entreated him to give it his all. Talk about improvement! By repetition number 12, it appeared as though he would continue Siempre. It was only by rep number 20 that he started to visibly fatigue, and he went on to complete 27 reps to failure, breaking his previous best by seven full reps. What made it more interesting was the fact he hadn't trained his legs at all for a full 13 days prior to this workout. yo yo PRAXIS I v . HEAVY DUTY || "Man is in a position to act because he has the ability to discover causal relations which determine change and becoming in the universe." Ludwig Von Mises, Human Action. PRAXIS 83 A principle is a general truth which embodies a number of lesser truths. Or as Ayn Rand defined it: "A principle is an abstraction which subsumes a great number of concretes." Abstract principles represent condensations of a large number of Page 35

facts about perceptual, concrete reality which, if man had to hold all of them separately and individually, would destroy his cognitive ability. The weight of the cognitive/factual material would be too ponderous for any man to work with effectively. Broad abstract principles, in other words, reduce the number of mental

units a man has to deal with. This improves the efficiency of the cognitive division of labor such that it enormously expands the amount of material that a person can utilize and retain mentally. The principle of intensity, for instance, makes it possible to understand the level of effort involved in all the possible types of exercise activity because its definition subsumes all the concretes you're ever likely to encounter - from complete rest to the last rep of a set carried to failure as well as any and all aerobic activity. The validity of the theoretical principles of the science of productive, high-intensity, bodybuilding exercise, elucidated in the preceding chapters of this book, cannot be denied or refuted. ¿Por qué? Because such was arrived at as the end result of a long period of empirical observation and meticulous logical deliberation. And, quite simply, because they do in ac , represent the noncontradictory fundamentals of the acjuaisa-ence of anaerobic exercise/stress fisiología. While it should not be difficult for anyone to gain a full grasp °^^ mental theoretical principles, what may be difficult is the. find concrete, practical solitud. As mentioned previously, I had 84 HEAVY DUTY || PRAXIS 85 made a number of mistakes myself, mistakes that seriousl compromised the progress of my training clients. Toward a Finer Application I recognized that the theory was basically sound, that it was unquestionably closer to the truth than any other theory, or method, being advocated. In fact, no other set of training ideas even came close to being a theory qua theory, ie, as the concept is properly defined. Everything else being promulgated as training theory amounted to nothing more nor less than a wanton assemblage of random, disconnected and contradictory ideas. The plethora of training methods being espoused today are composed of unwarranted assumptions, erroneous gener- alizations, and insuperable contradictions. Such does not, cannot, constitute a valid theory; therefore, it cannot serve as a guide for successful human action. The realm of the intellect is more demanding than the average bodybuilding writer realizes, and formulating a rational, logical, noncontradictory system of thought requires knowledge of the fundamental nature of man's physiology as well as of his mind, and his method of using it - logic. A mere passionate discharge of the arbitrary contents of one's subconscious onto a piece of a paper is just that - intellectual vomitus. The routine listed in my previous book was the product of my grasp of the theory and of my first few years of experience as a personal trainer. I had known for quite a long time, prior to becoming a personal trainer and writing HEAVY DUTY, that the 12-20 set, full body workouts three times a week as advocated by Jones and Darden amounted to overtraining for the majority. So when I started training people as a business, I had my clients perform only seven to nine sets per workout on a split routine of three days a week. My clients generally made

Page 36

progress on such a protocol that ranged from fair to quite good; however, such progress only lasted up to a few months at the most, until it slowed down and then stopped completely. (Such is no longer the case. Now my clients' progress

is immediate, worthwhile and continuous.) The following explains how I arrived at the present concrete application of the theoretical principles - the actual workout I am presently using so successfully with training clients from all over the world. An Air Bubble in the Sea of Causality? Since I had my earlier clients doing considerably less than what Jones advocated, I initially had some difficulty grasping that their less-than-satisfactory, long-range progress was due to overtraining. I also realized it couldn't possibly be the effect of under training. So what was the cause? At about the time that I was pondering this question, a young college student named Racy Chatterji signed on with me as a personal training client. Racy, who is intellectually oriented, had already read my articles, and he recognized and accepted the logic of the theory as basically sound. Believing he had discovered the Rosetta Stone of bodybuilding, he was wildly enthusiastic to get started on Mike Mentzer's high-intensity, Heavy Duty training system. I started Racy out on a seven- to nine-set regimen of three workouts a week, conducted on Monday, Wednesday and Friday. Racy's wide-eyed, innocent enthusiasm was contagious, especially his insatiable <sup>^^</sup> and I eagerly looked forward to his workout sessions. But after two months, it was starkly apparent that the program was not working at all. His strength <sup>^^</sup> at best, and after two months he could barely perform HEAVY DUTY || slightly, going down a few reps on most exercises. And, of course, there was no visible muscle mass increase or body-weight gain. I had suggested that for the first six to seven weeks, we should withhold judgment to give the program a little more time. It wasn't long before Racy's careering enthusiasm convoluted back onto itself, and metamorphosed into a sad dispiritedness. Not sure what to do myself at that juncture, my first suggestion to Racy was that he was violating an ethical principle by becoming so despondent over a lack of bodybuilding progress. Nature gives no one an automatic guarantee that life will reward him with everything he desires, how he desires it, in the proportion he desires it, when he desires it. And since the achievement of happiness is man's highest moral purpose, to lose volitional, cognitive control of your concepts, in favor of an undesirable emotion, is violating the Objectivist code of morality. Furthermore, it would be good for his self-esteem to learn how to turn mistakes and failures into valuable learning experiences; therefore, we should look at this not just as a physical adventure, but an intellectual one as well. Always immediately responsive to a positive philosophic concept, Racy said, "I agree. How do we do that?" "Let's go to the theory you and I both accept as the one valid theory of training," I enjoined. "Let's check each of the three fundamental principles, and how we are employing them. Therein will lie our answer." And so we proceeded. There was no doubt that Racy was training to failure. Carné de identidad had enough clients by that time who tried to fake the intensity, and none got away Page 37

con eso. Besides, Racy was no stranger to rugged, heavy physical exertion, having won several world championships in the martial arts. We were both convinced that he was okay with the first principle: he was generating sufficient intensity of effort by carrying each exercise to a point of momentary muscular

failure. PRAXIS 87 if-', 88 HEAVY DUTY || Since Racy and I were conversant with the theory, and he knew of the results I was obtaining with some of my other clients, we were left to conclude that he was overtraining in terms of volume, frequency, or both. I decided to reduce both, from 7-9 sets every 48 hours to only five sets per workout every 72 hours, which is every third day. And after a few weeks it was once again obvious that something was wrong, as Racy made literally zero progress! However, rather than lapse into an irrational emotional state, now Racy regarded this as an intellectual challenge. "Alright, Mike, as you and Ayn Rand say: Man is the problem-solving species, so let's figure it out." Before I could say anything, Racy stated what I was thinking, in effect, that he must still be overtraining. This put me in a bit of a quandary. This was the first client I'd ever trained who was so thoroughly nonresponsive to high-intensity training as I was practically applying it. Could it be that Racy would never respond to high-intensity exercise? Was Racy proof that I was wrong about the universal validity of the theory? Or was this a species of metaphysical churlishness, an air bubble in the sea of causality? I knew better, of course, because the laws of reality and nature are immutable. Just because I had a firm intellectual grasp of the theory, however, didn't mean I had possession of certain ancillary knowledge that might be crucially important. There had to be something about this individual's physiology which would account for his lack of progress. Something that would explain why on so brief and infrequent a program, he was still overtraining. This led me to a review of some of what I knew about the role of genetics. I reasoned that, since genetically mediated traits such as height, sunlight stress tolerance, and intelligence, were expressed across a broad continuum, such would most likely be true of individual exercise stress tolerance. Concerning a height, there are midgets at one extreme PRAXIS 89 and giants at the other; with regard to sunlight stress tolerance, there are Scandinavians (and those genetic anomalies known as albinos) at the far left end of the continuum, and negroid people at the far right; and with intelligence, there are those with low, almost moronic IQ's (and the genetic anomaly, retardation) at one extreme and genius IQ's at the other. As Racy likes to tease and cut up a lot, I told him he must be a midget or moron of recovery ability. Although hard to accept at first, my conclusion about genetics led me to reduce Racy's workouts again - this time to only three sets per workout every five to seven days. Y funcionó. Racy started growing stronger and bigger, although his progress was never dramatic. He properly concluded that he simply doesn't have the genetics to grow in strength or size at the faster rate

Page 38

exhibited by other of my clients. (For more on the role of genetics in regulating the rate and extent of individual response to exercise, look to HEAVY DUTY I.) Where I was actually apprehensive, initially, at the prospect of reducing training volume and frequency to so low a level with other clients, Racy's success emboldened me. My in-the-gym training and phone consultation businesses were burgeoning by this time, and I decided to reduce all of my clients' training to five



sets or so every 72 hours. ¿Por qué? Because, as mentioned previously, I knew they should have been doing better. Now bear in mind, I never claimed to possess exhaustive knowledge on the subject of exercise science, but then apparently no one else does either, as I was the only bodybuilding theorist moving in this direction, the right direction. In a sense, I was groping with the issue of proper practical application since I hadn't been a trainer all that long. None of the other so-called experts were moving in any direction, as some were advocating the exact same approach for a number of décadas. If you are doing exactly the same thing every decade, every year of your life, you aren't learning anything. 9 k 'H? HEAVY DUTY || And just because I'm not omniscient didn't mean that the theory I chose to embrace wasn't basically sound. An abstract theory may have validity, yet still be revised, or modified, or expanded, in light of new knowledge. I was satisfied that now I must have it straight. After all, I made radical changes in my clients' training, reducing the average client's baseline from 7-9 sets every 48 hours to only 3-5 sets every 72 hours. It wasn't long, however, before I grew disillusioned once again. While the majority did better than before, I again had no doubt that they could, or should, do better still, and progress always slowed down considerably after two to three months. This was at the time when my understanding of the nature of theoretical knowledge had grown enormously. Recall that my desire to continue thinking on the subject was motivated by the idea: when in possession of a truly valid theory, and your making the proper practical application, progress should be at least very good, if not spectacular, all the time. I realized that the actualization of an individual's full muscular potential shouldn't take 10 years, or even the two years that Arthur Jones claimed, but one year or less. That's right! One year or less. (More on the issue of actualizing potential later in this chapter.) The mistake I was making was operating on the idea that "less is better." Incluso though in my last book I had presented the idea that one should perform the precise or least amount of exercise required, at the time I wrote it, and for some time afterward, I wasn't grasping its full meaning and import. I actually found it hard to believe myself that even less training was required for optimal results. One of my favorite philosophic statements was made by Arthur Koestler: "Most scientific discoveries represent successful escapes from blind alleys." One of the blindest alleys almost everyone is caught in is the blind alley of tradition. In a similar vein, Ayn Rand stated, "The role of chance, accident and tradition in an individual's life stands in inverse ratio to the PRAXIS 91 power of his philosophic equipment." I had, for a time, uncritically, unquestioningly accepted two traditional beliefs: 1)

Page 39

Training with weights three times a week was best; and 2) Decompensation started after 96 hours. Despite my more extensive intellectual work with the abstract theory of high-intensity training, the full and proper application required more practical experience with my clients. It was the regular analysis of my phone clients' progress charts that ultimately provided me with the data I needed. The

Last Causal Connection - Overlapping and Recovery At the beginning of 1995, I couldn't help but notice that more and more of my longterm phone clients were calling back for their regular progress monitoring follow-up calls, reporting that while they were still making good progress with strength increases in the legs, their upper body strength increases slowed down or ceased rather quickly - within eight weeks or so. It was never the opposite, ie, leg progress stopped and their upper body continued increasing. This was a new bit of information to analyze. Why the upper body ceased making progress, while the legs continued? My clients were on a three-workout protocol which had them training chest and back together, then training shoulders and arms 72 hours later, then training legs 72 hours after that. None of the exercises they were performing for the upper body overlapped, involved and affected the ^J^ were getting much more recovery time. For every exercise they performed for the "PP/^ involved and affected a considerable portion of the 93 sidered a pectoral exercise, it unavoidably involves the deltoids, and even more so, the triceps. The red flag went up for me on that one when one of my gym clients had a terrific Incline Press workout; he was up 40 pounds and two reps from his previous workout. When he came back into the gym 72 hours later, his pectorals weren't sore at all, but his triceps were literally sore to the touch! And while the Pulldown is traditionally regarded as a latis-simus exercise, it also is a very effective deltoid exercise, and even more so as a biceps exercise. In fact, the Close-Grip, Palms-Up Pulldown is the best biceps exercise you could do better than the curl. When performing a curl, whether a Nautilus Curl or conventional Barbell Curl, you work the biceps around a single joint axis, the elbow, and the predominant stress goes into the lower biceps. When performing a Close-Grip, Palms-Up Pulldown, you are working the biceps around two joint axes, the elbow and the shoulder; thus you are working the biceps muscle more uniformly from both ends. Then 72 hours after my clients trained the chest and back, they worked their shoulders and arms; again, the exercises for those muscles overlapped, involved and affected the pecs and lats as well. In other words, all of the upper body muscles were being worked twice within 72 hours, whereas the legs were being worked only once every nine days, or every 216 hours. An enormous difference in recovery time. And, remember, the legs were still responding positively in every caso. The solution was to separate the upper body workouts by a greater number of days, with a leg workout inserted between them. In addition, I added an extra day of rest time between workouts to further ensure that enough time was elapsing so that both the recovery process and the growth production process were terminado. And because I came to understand that an extra rest day or two beyond what a client had been doing while making progress would not pose a threat of a negative, that no decompensation could occur, I Page 40

u yo now had no fear or hesitancy with doing so. Also very important here, I instructed my clients that sticking points in progress weren't inevitable. I continued to remind them, on their regular follow-up calls, that as they continue to grow stronger week to week, lift progressively heavier weights, the stresses grow

greater at the same time. And that, unless they periodically inserted another rest day or two to compensate for the ongoing, increasing stresses, the stresses would eventually reach a critical point and would constitute overtraining. This, in turn, would cause a slowdown in progress and, then, cessation of progress entirely. After a time, depending on the individual's rate of progress and the efficiency of his particular recovery ability, he would by necessity start training once every five or six days as his regular regimen. This last point, I have come to discover, is one of the most crucially important elements of anaerobic exercise science, and until now has been completely overlooked by everyone. Every other bodybuilding theorist - high-intensity or otherwise - has the trainee stay on the same volume and frequency protocol virtually forever. Once the fundamental principles are understood, the issue of progressively decreasing the volume and, especially, the frequency becomes the most pressing issue. If the bodybuilder bears this in mind, he will never reach a sticking point, there will be no need to periodize, and he will actualize his muscular potential in a relatively short time. A New High-Intensity Technique-Static Contractions Technically, a bodybuilder is a bodybuilder, not a weightlifter. As a bodybuilder your primary goal is not to lift heavy weights per se, but to achieve high-intensity muscular contractions as a means of inducing optimal growth stimulation. While it is true that to grow larger muscles one must increase his strength, such is not a bodybuilder's main purpose. A bodybuilder lifts progressively heavier weights in order to progressively increase the stress/intensity of his workouts - a prerequisite for growing progressively larger muscles. Para el bodybuilder, in other words, lifting weights is the means, not the end. The science of productive bodybuilding exercise starts with a study and understanding of the nature of full, or high-intensity, muscular contractions. Basically, muscles perform work by contracting, ie, reducing their length. Y muscles contract in an "all or nothing" fashion, which means that only the number of muscle fibers required to move a resistance are recruited, and these contract with 100 percent of their contractile ability. It's not that all of the fibers of a given muscle contract a little bit. No, only that percentage of the muscle's total fibers which are required, and these contract with 100 percent of their momentary ability, ie, all or none. As Arthur Jones pointed out, the only position where potentially 100 percent of a muscle's bulk could be activated is in the fully contracted position. Here is the logic: since muscles perform work by contracting, the only position where a muscle could be fully contracted would be in the fully contracted position, but only if sufficient resistance were imposed in the fully contracted position. A fin de que Page 41

achieve optimal growth stimulation, a muscle would have to undergo a maximum, high-intensity contraction. This could only be achieved as a result of providing a muscle with a resistance sufficient to cause a full contraction of the muscle in the fully contracted position, such as at the top of a Curl, the straightleg, lock-kneed position of a Leg Extension, the contracted positions of the Pulldown or Pec Deck, etc. It is not cast in stone that a bodybuilder must limit himself merely to lifting weights. Remember, the skeletal muscles all have three levels of ability. El

primero es el positivo, or lifting of K 1 i\*A 96 HEAVY DUTY | the weight from the fully extended position to the fully contracted position, and it is the weakest of the three. The second level of ability is the static, or holding of the weight at any point in the range of motion such as the top, fully contracted position; static strength is considerably greater than positive strength. El tercero level is the negative strength, or the muscle's ability to lower the weight. Negativo strength is by far the greatest. An individual who could curl a weight of 100 pounds for a maximum of one rep might be able to "hold" 130 pounds at any point in the range of motion, and lower under strict control 160 pounds. The degree of growth stimulation is related to the degree of inroad into functional capacidad. When a person trains to positive failure, it might be said he made only one third of an inroad into functional ability; therefore, he stimulated one third of possible growth. By holding a weight in the fully contracted position to static failure and then finishing with a single negative, the degree of inroad into functional ability would be greater, with greater growth stimulation. However, the greater the degree of inroad into functional ability, the greater the inroad into recovery ability; therefore, a decrease in the number of sets may be required to compensate for that greater inroad. Several months ago I began experimenting with static contractions. I had my in-the-gym clients shift the focus of their efforts from lifting the weights to failure to "holding to failure" in the fully contracted position, then lowering under strict negative control. I reasoned: since the fully contracted position is the only position where a full contraction could be achieved, and the weight that one can handle there is limited by how much his weaker positive strength can get into that position, let's eliminate the lifting of the weight entirely. I'll help my client into the contracted position with a weight heavier than he would handle for positive reps, and he'll hold to failure, ie, until his static strength is exhausted. Then, as he notes his static strength is about to go, he starts a slow, controlled negative lowering of the weight. One of my regular gym clients improved his ability on the Nautilus Leg Extension such that in a very short period of time he went from 190 pounds for seven positive reps to 250 pounds (the entire weight stack) for 14 positive reps. He then remained stuck for three workouts at 250 pounds for 14 reps, whereupon I had him do three leg workouts in a row of only holding the weight stack of 250 pounds Page 42

in the straight-leg, lock-knee position to failure and, then, lowering slowly. His first "static" workout he held the stack for about 15 seconds in the lock-knee position, the second workout for 22 seconds, and in the third workout he held for about 30 segundos. The next leg workout, I had him do conventional positive reps to see if there was a carry-over, and he performed 20 full-range positive reps! **Quite an mejora. Ahora tengo la mayoría de mis clientes en el gimnasio, así como mi consulta telefónica los clientes realizan "retenciones" totalmente contratadas al fallo seguidas inmediatamente por un negativo en aquellos ejercicios que lo permiten, y los resultados son impresionantes, por decir, menos. Atribuyo el mayor progreso de mis clientes recientemente, en parte, a las bodegas que hacen una Mayor incursión en la fuerza existente que los positivos. Jones fue el**

primero, yo cree, para describir la importancia de hacer una profunda incursión en la capacidad existente Como la causa de la estimulación del crecimiento. Con el entrenamiento convencional de alta intensidad, donde un conjunto se lleva a un fracaso positivo, la entrada a la capacidad existente es nominal en comparación con un conjunto llevado con un peso mayor a "falla de retención" - Incluyendo un negativo. ¿Por qué? Porque como dije antes, lo positivo es su La habilidad más débil. Entrenar al fracaso positivo deja considerable estática y Fuerza negativa intacta. Los ejercicios donde esta técnica puede ser empleada con más éxito son el aislamiento. ejercicios, es decir, aquellos que involucran movimiento giratorio alrededor de un eje articular, y que Proporcionar resistencia en la posición totalmente contraída. Por ejemplo: el Pec Deck; Aumento lateral de la máquina; la extensión de la pierna y la pierna F Rizo; y la crianza de terneros. El ejercicio compuesto que he usado presas estáticas with is the Close-Grip, Palms-Up Pulldown. Las mejores máquinas para usar son Nautilus, ya que fueron diseñados para proporcionar una resistencia variable de rango completo, con Cerca de la resistencia perfecta en la posición totalmente contraída. En la mayoría de los ejercicios donde tengo a mi entrenamiento, los clientes tienen "reservas" totalmente contratadas, selecciono un peso que es lo suficientemente pesado como para que puedan mantenerlo en la posición totalmente contratada para una máximo de aproximadamente 8-12 segundos para ejercicios de la parte superior del cuerpo y 15-30 segundos en los ejercicios de la parte inferior del cuerpo; entonces tienen que bajarlo bajo estricto control. Al principio hice que mis clientes realizaran dos bodegas con dos negativos. (bajadas). Ahora he encontrado que les va mejor con un control y negativo, y en veces, en lugar de hacer que realicen las bodegas sin los aspectos positivos, varío su entrenamientos y hacer que realicen una serie de fallas positivas seguidas inmediatamente por un asimiento al fracaso. Y esto funciona muy bien. ¿Qué es posible? Con un programa de entrenamiento de alta intensidad conducido adecuadamente, el individuo crecerá más fuerte en cada entrenamiento, sin ninguna brecha en tal progreso, hasta que haya Alcanzó el límite superior de potencial. He tenido clientes que eran principiantes. mejorar la capacidad funcional de sus cuádriceps en tan solo dos meses a partir de 170 libras para siete repeticiones al fracaso en la extensión de la pierna de Nautilus, al conjunto Pila de 250 libras para hasta 10 repeticiones. Eso es un aumento fenomenal. He tenido un cliente que realizó hasta 33 repeticiones con 250 libras en la misma pierna Máquina de extensión. Y eso fue un increíblemente bien desarrollado, avanzado culturista llamado David Paul, uno de los gemelos del famoso dúo de actores conocido como los hermanos bárbaros. David es un fenómeno genético, con una 99 Potencial muscular muy por encima del individuo medio. Cuando David entrenó con hace un tiempo, realizó 15 repeticiones en la Extensión de Pierna con 250 libras, Página 43

y luego se dirigió de inmediato, en forma de superconjunto, a Nautilus Leg Press, donde realizó 18 repeticiones con el stack completo, 510 libras, y esa fue su primera etapa **workout with me as trainer. One week later David performed 27**

reps on the same Leg Extension machine, and 38 reps with 510 pounds on the Leg Press. Uno week after that he performed 33 reps on the Leg Extension with the stack, and 70 reps with 510 pounds on the Leg Press. No, this is not a misprint. David improved his Leg Press from 18 reps with 510 pounds to 70 reps with 510 as a result of two leg workouts that lasted 15 minutes each! That represents an improvement of 388 percent in the functional ability of the legs of an already advanced bodybuilder! In one month David gained seven pounds of muscle, a considerably greater rate of progress than he had experienced the previous five years while on a six-day-a-week, two-hour-a-day-plus program which resulted in a zero strength or size increase. If David was capable of such a phenomenal rate of improvement, imagine what the beginner might achieve on a proper program. If a beginner can improve the Leg Extension from a starting point of 170 pounds for seven reps to 250 pounds for 10 reps in under two months, he only has 20 or so reps to go before he achieved the enormous functional ability of a super genetic freak. Of course, if the beginner wasn't a genetic marvel himself, he would most likely never get close to 30 reps. But with a properly conducted high-intensity program, he would be able to actualize his muscular potential in under a year. Bear in mind here that a prerequisite for growing age muscles is that they grow *más fuerte*. Since the individual I just described would cease growing stronger in less than a year, his muscle growth would also cease soon thereafter.

t yo 100 HEAVY DUTY || The Exercise of Restraint If you have been training recently without any layoff prior to the time you intend to start this program, take a break from training entirely for at least two to three semanas. Having been overtrained, you made a deep - too deep - inroad into your recovery ability. It is important that the inroad has been overcome, so that when you start with a properly conducted high-intensity routine, your body has recovered all of the biochemical resources necessary for optimal growth producción. When I suggest this to my phone consultation clients, many balk, and say in effect: "But, Mike, I'm addicted to exercise. I don't know if I'm able to stay away from the gym that long." And I respond rather firmly, "You have to make a decision. It's either/or. Either you are mindlessly addicted to exercise and the gym, or you are consciously, intelligently committed to achieving optimal progress, your life's goals, which requires the application of the necessary knowledge." On a lighter note, I conclude by stating, "If you are addicted to exercise, then exercise your free will, exercise your power of choice, exercise your knowledge, exercise restraint, but don't exercise your muscles for at least two weeks." Several months ago a young man called to inform me that he had bought my books, but had made no progress in the three months since he'd started HEAVY

Página 44

DUTY training. I told him that there is a reason for everything in this world, including lack of bodybuilding progress, and that the number of possible explanations is not infinite. As it turned out, he had been training literally nonstop without a layoff for two years while working out two hours a day, six days a week. I told him

that he not only dug a deep hole for himself, but that he had dug a hole to China! Y that a layoff of at least one month was necessary before he could expect to make progress with HEAVY DUTY training. Recently there have been studies conducted at major universities which revealed that overtraining can be PRAXIS 101 es • | • t; . ^-" ■ : - .1 yo 1 1 / -J 102 HEAVY DUTY || so severe it takes up to six months to fully recover. After your layoff, I suggest you start training once every four days, every 96 hours, in the fashion described below: SUGGESTED ROUTINE #1 Monday: Chest 1. Pec Deck or Flat-Bench Dumbbell Flyes, superset with... 2. Incline Press (preferably on a Smith machine). Espalda 1. Nautilus Pullover or Dumbbell Pullovers, superset with... 2. Close-Grip, Palms-Up Pulldown. 3. Regular (not stiff-legged) Deadlift. Friday: Legs 1. Leg Extensions, superset with... 2. Leg Press. 3. Standing Calf Raise. Tuesday: Delts 1. Dumbbell Laterals (preferably Nautilus Laterals). 2. Bentover Dumbbell Laterals (preferably Pec Deck). Brazos 1. Standing Barbell Curl (preferably Nautilus Curls). 2. Tricep Pressdowns, superset with...

Página 45

3. Dips. PRAXIS 103 Saturday: Legs 1. Leg Extensions, superset with... 2. Squats (preferably in a Smith machine). 3. Calf Raises. Wednesday: Start the four-workout protocol over with chest and atrás. ■;\* .# 104 HEAVY DUTY || Important Points 1. Number of Sets: Perform only one set of each listed exercise. If you're having a difficult time with the idea of one set, think of it as 100 units of intensity. Remember, only one sperm from your father was required to stimulate the growth of your mother's ovum into a fully fashioned human baby, it only takes one bullet to kill you. It only takes one set to failure to trigger the growth mechanism into movimiento. Any exercise carried on beyond what is required to stimulate growth is overtraining, your worst enemy. 2. Superset: There should be no rest, or very little, between exercises listed as a superset. And seek to minimize the rest between sets not listed together as a superset. Do not, however, allow the workout to degenerate into a race against the clock. At the same time, don't malingering either. Rest just long enough so your breathing slows down to the point that you may resume training with maximum efficiency on the next set. If, in the beginning, you find that the supersets are too demanding with no rest in between, take a 30-second break before moving to the compound movement, as with the Leg Press in the Leg Extension-Leg Press superset. Over a period of time, as your anaerobic endurance improves, progressively decrease the rest time between all sets. 3. Number of Reps: Perform 6-10 reps to failure on all of the exercises listed above except the following: Incline Presses, do 1-3 reps (to failure); Dips, do 3-5, and if you can do more than five with your bodyweight, add weight; Standing Calf Raises, perform 12-20 reps. Use static training in the manner described previously. 4. Frequency: Train once every 96 hours, or four days. Monday's chest and back workout is listed as workout #1; Friday's leg workout is listed as workout #2; the next Tuesday would be workout #3, and Saturday is workout #4. Four days after workout #4, start over with chest and

back, and repeat PRAXIS 105 the fourworkout protocol. Whenever a scheduling conflict makes it impossible to get into the gym on that fourth day, wait one more day - go to the fifth day instead of the third. 5. Proper Exercise Performance: For the best results, perform all of the exercises through a full range of motion in a reasonably strict manner. Initiate each rep deliberately, with no sudden jerking or yanking, proceed under strict muscular control through the positive range of motion, pause, and lower under control. Dos Página 46

major exceptions here are the Bentover Barbell Rows and Dumbbell Laterals. Because of the physics involved (disadvantageous leverage factors), use a slight hitch, or snap, to get the weight moving, but muscle it up thereafter. A slight hitch, or cheat, may also be employed on the last rep or two when doing Barbell Curls. With the vast majority of exercises, the rule of thumb is: lift, hold, and lower under control. 6. Training to Failure: Many bodybuilders fail to achieve optimal results due to their reluctance to train to a point of momentary muscular failure. Contrariamente a widespread opinion, the last rep of a set carried to failure is not the most peligroso. In fact, it should be the safest, because by the last rep you are actually at your weakest, barely able to generate enough force to complete it. Es the first few reps, when you are strongest and able to generate more force than required to move the resistance, which are most dangerous. 7. Proper Weight Selection: It is suggested that you select a weight for each exercise that allows for the performance of the number of reps advocated, and in the manner described. Never terminate a set, however, just because a prescribed number of reps has been completed. The range of 6-10 is offered merely as a guideline, because fewer than six will not tax your reserves sufficiently, and more than 10 could cause you to terminate the set prematurely due to cardiorespiratory insufficiency before muscular failure is reached No one can even begin to state with any certainty just how much weight should ideally be used in static "hold" training | have been seeing worthwhile results in the upper body exercises by selecting a weight that allows the individual to hold the contracted position for 8-12 seconds, and in the lower body a weight that allows for a hold of about 10 to 30 seconds. The weight will vary, of course, depending on whether you do statics alone or at the end of a set of positives. 8. The Pre-Stretch: Try to pitch a baseball from chest level without the usual windup. Observe how high you can jump vertically without the preliminary quick drop into the crouch. You will see your baseball land but a short distance away, and your upward leap will get you barely off the ground. The essential factor missing in these examples, accounting for substandard performance, is the pre-stretch. Known technically as the myotatic reflex, the pre-stretch can be used effectively in any exercise where a full extension with a slight additional stretch can be achieved safely. Examples are Preacher Curls, Nautilus Curls, Dumbbell Flyes, most Presses, Dips, Squats, Leg Presses, Pressdowns, etc. To use the pre-stretch, lower the weight under control, and then, suddenly, a couple of inches away from full extension, pick up the speed through to the fullest extension you can safely reach; whereupon you quickly reverse the direction of the movement upward. This extra stretch, accompanied



by a quick contractile effort to move the weight in the opposite direction, sets up a strong neurological impulse that will make for a more intense and, hence, more productive contraction. 9. The Intensity Factor: Carrying a set to a point where you are forced to utilize 100 percent of your momentary muscular ability is the single most important factor in increasing strength and size. Working to a point of momentary muscular failure, where another rep is impossible despite your greatest effort, ensures that you pass through the "break-over" point, or that point in the set below which

Página 47

growth will not be stimulated, above which growth will be stimulated. Some ask the question whether it is actually necessary to train to failure, where 100percent intensity of effort is required to complete a rep, in order to stimulate an increase. They say that maybe only 62-percent, or 87-percent, or 92-percent intensity of effort is all that is required. The problem here would be in measuring intensity. The fact that there are only two accurate measures of intensity - 0 percent, when you are at complete rest, and 100 percent, when you are exerting yourself maximally - makes it necessary that you train to failure. So long as you're exerting yourself 100 percent, you have passed through every possible break-over point. This is true whether you are training in the conventional fashion to positive failure, ie, lifting to failure, or with static training, where you are holding to failure. 10. Pre-Exhaustion: With many conventional exercises, it is not always possible for the muscles involved to exert 100 percent of their contractile ability because of the involvement of "weak links." When performing Incline Presses, for example, the working of the pecs is limited due to the involvement of the smaller and, hence, weaker triceps. The triceps would give out and a point of failure in the Incline Press would be reached well before the bigger, stronger pecs are exhausted. Weak links such as this can be overcome by performing an isolation exercise prior to a compound exercise. Carrying an isolation exercise, such as Dumbbell Flyes, Cable Crossovers or Nautilus Pec Deck, to failure while the pecs are still preserving much of the strength of the triceps. By the time you get to the Incline Press, the situation will be temporarily reversed. Now the triceps, instead of being weak links have a temporary strength advantage and will serve the pre-exhausted pecs, which can now exert 100 percent of their momentary ability in the Incline Press, and thus achieve full growth stimulation. Pre-exhaustion is merely one technique which, while effective, doesn't necessarily have to be used all year around. Most important is that you never deviate from the fundamental, guiding principles. I have found that performing the Pullover-Pulldown superset for the lats doesn't work well when done every Day #1 workout. Perform the superset one workout and the next time do just Close-Grip, Palms-Up Pulldowns. 11. Rep Modality: As described earlier, in the section on static training, the skeletal muscles all have three levels of functional ability - positive, static and negative. It is not cast in stone that one must merely "lift" weights (positives). A bodybuilder can mix positive training with static training and

negative training. Or, at times, he may do one to the exclusion of the other two. The type of rep modality a bodybuilder chooses will depend on a number of factors, including age, existing condition, time training, and goals. I would suggest that beginners start on a bare-bones, baseline program, using the routine listed earlier, of "positive only" training where they merely carry each exercise to a point of positive failure, then cease the set. After a few months of regular training, they might consider adding static/negative training as outlined. Advanced bodybuilders may consider adding some "negative only" training on some exercises. Foregoing the positive and static work entirely, start the exercise in the contracted position. With the help of spotters, raise a weight into the contracted position that is about 25-40 percent heavier than you could handle for

Página 48

6-10 reps to positive failure. At the top, have them transfer the weight carefully so you don't injure yourself; then lower slowly to full extension. The lowering should take about six seconds, and don't perform more than five or six reps. Be especially careful, and don't attempt to go to full negative failure. Terminate the set one or two reps shy of failure. It was discovered, in research conducted by Arthur Jones in the early 1970's, that negative training could be very productive. I have found with my personal clients, however, that including forced and/or negative reps at the end of every positive set leads quickly to overtraining. So I have my clients use them on a random basis. On some sets they'll do one or so forced reps at the end of a set of positives; on other sets, they do one negative at the end of a set of positives, or static holds. They are best employed when feeling particularly well rested - with motivation and energy at a pinnacle. Do not forget that static and negative training are more productive than positive training because of the greater inroad they make into functional ability; sin embargo, el greater the inroad into functional ability, the greater the inroad into recovery ability, making overtraining a greater likelihood. Use them with care, and don't make the stupid mistake of attempting to integrate static and negative training with the blind, non-theoretical volume approach.

12. Warming Up: Make sure that you spend some time warming up the muscles that are to be trained each workout. It is not necessary, however, that you stretch all the major muscles, perform aerobic work, or engage in any more exercise than is minimally required to limber up and increase the flow of blood to the specific joints and muscles you're working on a particular day. It is impossible to prescribe a universal, sure-fire warm-up prescription, one that will fit everybody. Warm-up needs will vary according to the individual's age, existing physical condition, and, of course, the temperature of the gym. Use as a guiding principle, however, that will serve everyone. Perform any amount of warming up that you believe to be minimally required so that you may proceed to the heavier, more intense portion of the workout without hurting or injuring yourself.

13. High-Intensity, Low-Force Exercise: The workout routine suggested above is very safe. There have been a number of allegations leveled against Heavy Duty training especially with regard

to safety, claiming that it is dangerous to the joints and risks muscle tears. This is not a typical powerlifting program involving the use of very heavy weights permitting only 1-3 reps to failure. That would be a high-intensity, high-force program. The level of force imposed on the joints and connective tissue would be very high; if extreme caution was not exercised, and any bouncing, jerking or yanking occurred, the impact forces (G-force) could multiply several times beyond that of the actual weight itself. The program suggested in this book is a high-intensity, low-force bodybuilding routine which involves a weight that, in most of the exercises, allows for up to 10 reps to failure. With such an approach, the forces involved are low to moderate and, thus, quite safe. In addition, the first of many reps of a set of 10 reps to failure would serve as a further warm-up. Having trained close to 2000 clients over the last six years, there was never once an injury! So much for the issue of the safety of Heavy Duty. 14. Keep a Progress Chart: Do not evaluate your workouts by the standard of

Página 49

"feeling." Achieving a muscular pump or soreness are not indications that you had a successful workout. Everyone I see training at Gold's Gym in Venice, Calif., (where I conduct my personal training business) gets pumped every time they work out. And I've seen some of those people in there every day for years. So achieving a pump was a sure-fire indication that growth was stimulated, many of them would have 25-inch arms by now since they get pumped every workout. And regarding soreness, the only time I ever got sore was upon resumption of training after an extended layoff. If getting sore was necessary, somehow, to build big muscles, I never would have been Mr. Universe. Feelings, as such, tell you little or nothing about the success of a workout. Especially soreness, which is still a mystery - no one knows what causes it, or what significance it may have, if any other than it hurts. And what if you thought that getting sore was necessary, and you didn't get sore? What would you do - try to get sore? We didn't send men to the moon on the basis of feelings or gut hunches. As my good friend John Little responded when he read an editorial in Muscle & Fitness by Tom Deters about the alleged superiority of "feeling" and gut hunches over theoretical science: "I think that in cases like Tom Deters, the feeling he gets from a gut-hunch is most likely trapped stomach gas." A gut feeling, whatever its cause, would have to be conceptually identified, so it becomes an intellectual matter of theory and science anyway. Feelings, or emotions, are not tools of thought; concepts are. Emotionalists, people who rely on their feelings to guide them in reality, are in a bad way because an emotion does not provide the individual with independent intellectual access and understanding of reality. An emotion is merely a psychosomatic response to something in reality. It tells you nothing about reality other than that something made you feel something. Therefore, they are not reliable guides. Emotions, for the rational individual, are his means of enjoying life. The only proper way to gauge the success of any workout is by the standard of strength increases. If you're stronger the next workout, obviously there is a

positive change taking place in the muscle. And as you continue to grow stronger and eat adequately, you'll grow larger. Keep a progress chart: record the date of each workout, list the exercises, the weights used, and accurately record the number of reps. Be conscientious regarding that last point. Accurately record the number of reps, since even a one-rep increase may be significant. Let's say, for instance, you can presently curl 120 pounds for 10 reps, and you increase "only" one rep every other week for a year. By the end of the year, you'd be curling 120 pounds for 34 reps, something probably few in the world could do! And don't judge progress solely in terms of linear number increases, but also by percentage. If you go from 25 pounds to 30 pounds in the Dumbbell Lateral, for instance, that would be a considerably greater increase than going from 100 pounds to 105 pounds in another exercise. It would be a 20-percent increase as opposed to only a five-percent increase, and that's how it should be assessed.

15. Regulating Volume and Frequency: As an individual grows stronger week to week, and lifts progressively heavier weights, the stresses grow progressively greater, too. If he doesn't do something to compensate for the ongoing,

Página 50

increasing stresses, they will eventually reach a critical point and constitute overtraining; progress will initially slow down and, ultimately, will cease entirely. That's when you hit what is commonly referred to as a "sticking point." There was a time when I thought that reaching a sticking point in training was inevitable. I was wrong. If you keep in mind all the while the point made above - that as the weights grow greater, the stresses grow greater, and you must periodically compensate for them - a sticking point won't be reached. This is rather simple to do. Before any signs of overtraining ever become manifest, periodically drop a set from a workout. For example, every third workout or so for the arms, you could drop either the Pressdowns or Dips for the triceps - and do just one or the other of those two exercises. While some may be tempted to say that a one-set decrease can't make all that much difference, consider that when doing an abbreviated workout of only 3-5 sets, one set less represents a major decrease in volume - and that much less of an inroad into recovery ability. You may also periodically substitute a less demanding, ie, less stressful, exercise for a more demanding one. For instance, periodically drop the Deadlift, a very demanding exercise, and do Shrugs instead. The Deadlift is probably the most stressful exercise of all, because it involves more total muscle mass than any other exercise. Doing Shrugs occasionally will help conserve your recovery ability. Most important of all is that you periodically insert added rest days. Every other cycle of the four-workout protocol, randomly insert an extra rest day or two so that there are five rest days instead of four. And over a period of 3-4 months, start adding the extra rest days more frequently until you're eventually training only once every five or six days. After 6-9 months, depending on individual genetics and previous training history, you will be training only once every 6-7 days, or even less frequently. (Don't worry about decompensation for the reasons explained in Chapter Four.) If the program suggested above doesn't yield

significant results within 4-6 weeks, you may be a "midget of recovery ability" requiring a more abbreviated routine, such as the one suggested on page 129. Ultimately everyone, no matter what the genetics, will have to reduce the volume and frequency of training to the point where you're training only once a week, or less, and using only two to three sets of primarily compound movements. Employing such measures will prevent a sticking point, and see you on the way to actualizing your full muscular potential within a relatively short period. As I stated before, the science of exercise is not infinitely complex, but it is not so simple that you can semiconsciously select routines at random from a muscle magazine and expect any worthwhile results. Don't leave your life and the achievement of your goals to chance. Use your newly gained theoretical knowledge, consciously control your life, and achieve your full human stature. 16. The Purpose: This program was designed for the exclusive purpose of marshalling all of the body's energy and resources to achieve maximum growth in your major muscle groups. Any exercise conducted beyond what is suggested will compromise your progress, resulting in less-than-optimal development. 115 When I outline this program for my phone consultation clients, some comment on

Página 51

the fact that Leg Curls are not included, or Seated Calf Raises, or Bench Presses or Concentration Curls - to name a few. And I point out that doing so many exercises was one of their major training mistakes and the reason why they made no progress. Just because an exercise exists, doesn't mean it has to be performed all year round. I tell them they should first achieve their goal of maximum mass, then worry about the details. Besides, it isn't really necessary to worry about doing Leg Curls for the hamstrings since the Deadlift, Leg Press and Squat stimulate them sufficiently. And remember, Curls aren't the best exercise for biceps; Close-Grip, Palms-Up Pulldowns are. 17. Aerobics and Abdominal Training: Aerobic training has been inordinately emphasized in the media because more people are willing to do it than weight formación. Aerobic training does not develop total fitness, which is comprised of several elements, including skeletal muscle strength, flexibility, anaerobic endurance, maintenance of lean body mass, speed, and the improved self-esteem from having achieved all of that. In fact, aerobic training can detract from total fitness as it not only doesn't develop uniform skeletal muscle strength, it actually creates imbalances in the musculo-skeletal system by overworking certain muscles to the exclusion of others. This can lead to a reduction in flexibility and the increased likelihood of injuries. If your goal is to develop maximum muscle mass in the shortest possible time, eliminate aerobics - at least por un momento. Dropping aerobics for six months to a year will not result inevitably in a heart attack. And if you've been overtraining for months or years by doing both aerobic and anaerobic training, dropping aerobics entirely for a period of time is the best thing you could do for yourself. In my previous book, I made the point that the human body has 100 units of adaptive energy available, period.

Its not as if there are 100 units available for adaptive increases in strength and size on one hand, and 100 units available for increases in aerobic endurance on the other. There are only 100 units; if you divide it between the two, you obtain mixed results at best. And most bodybuilders, knowing nothing about the need to precisely regulate the volume and frequency of both, overtrain in both areas, and end up failing to achieve either increased muscle or endurance. Ellos grow weaker and are chronically fatigued. Training guided by mixed premises is not nearly as productive as adaptive-specific training. Speaking of adaptive energy available, let's talk for a moment about abdominal formación. Most of the people I speak with daily have been training for some time - years and decades. Their abs are already in decent condition, even if covered by a layer of fat. In such cases, I suggest ab training be dropped for a while as the exercises listed in this program provide the abdomen with considerable indirect training stimulus. Many of my in-the-gym clients, for instance, complain of sore abs after doing Tricep Pressdowns. The program I've recommended will at least maintain, if not improve, existing abdominal condition. Conserve the body's energy and resources you'd otherwise use in ab training for greater growth in the major muscle groups. If you are particularly concerned about the condition of your abs, or have a contest coming up, then train them. Remember, however, that the abdominals are skeletal muscles just as the pecs, lats, biceps, etc. Therefore, they respond to the same type of stimulus - high-intensity. Train abs only on leg day, doing one set of Incline Bent-Knee Situps for 15-25 reps to failure. Una vez tú can do 25 or more, hold a weight at your chest so you're back to 15-25 again. 18. Choice of Exercises: The exercises listed were chosen for specific reasons.

Página 52

This does not mean they can't be substituted by others periodically. I would do so, however, methodically. Start with the program as listed, and continue with it as is for 2-3 months. After a time, you may switch exercises, as long as you remain true to the basic principles. Por ejemplo, PRAXIS 117 with pec training, the first exercise should always be an isolation exercise such as Dumbbell Flyes, Pec Deck or Cable Crossovers. Never start a superset with a compound exercise. The second exercise in the case of pecs should always be a compound exercise such as Incline Presses, Bench Presses, or Dips. If you start with Dumbbell Flyes for the isolation exercise, substitute Cable Crosses or Pec Deck after a while. And if you started with Incline Presses, go to the Bench Press later on. If you started with Close-Grip, Palms-Up Pulldowns for lats, try Bentover Barbell Rows eventually. Or if you have a shoulder problem and you can't do Pulldowns at all, start with Rows of some sort, either some type of machine row or the Bentover Barbell Row. Use common sense and your best judgment. 19. Equipment: Several months ago, a young man was watching me from a distance as I trained my clients. He seemed intent in his observing, and when I'd finished with the last person, the young man walked over and said, in a slightly derogatory tone, "Well, Mentzer, I see you like machines." And I quickly replied, "Yes, as a matter of fact,

I arrived here in a machine called an automobile. And this morning, I had my coffee from a coffee machine. I love my big screen television, electric lights, the dentist's drill, the surgeon's tools. You may have heard, we had this thing called the Industrial Revolution. Scientific technology and mechanization have benefited man in every aspect of his existence, including resistance training. I have been a longtime advocate of Nautilus. Compared to just about every other piece of equipment in most gyms, the Nautilus Machine is a precision, scientific instrument. Machines in general have received considerable bad press usually from the concrete-bound, Neanderthal types paid to denigrate them by the purveyors of free weights. Such a shabby camouflage designed to furtively ^J"^\Z Nautilus. After all, when was the last time you heard someone question the use of the conventional eg Ex^n Mach je. Pulldown Machine, Calf Machine, etc.? Honesty is- F are two virtues that few in the bodybuilding/fitness market have spent any meaningful time identifying and integrating. As good as some machines are, they aren't absolute requirements for achieving bodybuilding success. Look at the number of great physiques that resulted from free-weight training. Nor are all machines better than free weights. Over the past decade, so many new manufacturers have entered the market, it would not be possible to provide an exhaustive analysis of machines here. With my phone consultation clients, I advise that wherever a Nautilus Machine is available for a particular exercise, use it. For instance, if the Nautilus Pec Fly is available, use it rather than Dumbbell Flyes; if the Nautilus Leg Extension is available, use it rather than any other machine; or if there's a Nautilus Deltoid Lateral Machine in your gym, use it instead of doing Dumbbell Laterals. And even then, of course, it's alright to periodically substitute freeweight exercises for variety and a different estímulo. I don't advocate the use of any other machines except the Hammer and

Página 53

MedX exercise machines, since most of the others are grossly inferior. Si tu have any of the Nautilus, Hammer or Medx Machines available in your gym, utilize them as they are the only ones that provide full-range resistance. Cuando recommending exercises for people, I usually suggest free-weight exercises since free weights predominate in most gyms around the world. 20. The Role of Genetics: While the fundamental principles of high-intensity training are applicable to all, there does exist a wide range of individual response to such training. Individual response is determined largely by genetics. (Motivation plays a key role, too. More on motivation shortly.) While potential can only be assessed accurately in retrospect, there are certain indices (genetically mediated, physical traits) that will provide a strong suggestion what an individual's potential might be. These include bone size, length of muscle belly, efficiency of recovery ability, and muscle fiber 119 densidad. Also important, but less amenable to visual scrutiny, is the individual's array of genetic/physiologic traits that serve to regulate the rate and degree of response to exercise. I am referring to those traits whose specific

task is to temporarily shut off the process of muscle growth that occurs in response to singular bouts of intense exercise, and then permanently once individual potential has been fully actualized. These regulatory traits, like most genetic traits, are expressed across a broad continuum, which helps explain why there exists such a wide range of variation regarding individual response to intense ejercicio. Every now and then, one of my clients will complain about his or her "poor genetics." Often they will grumble on and on, as if reading a list of metaphysical complaints to the Omnipresent Deity, hoping for a redress of grievances. "Oh, my terneros. The muscle bellies are so short. If only I had calves like so-and-so. Y my biceps. Oh, woe is me. My poor biceps." My typical response is that if they persist in their complaining, I'll gladly take them to the Venice Beach Strand and introduce them to my acquaintance named Jerome. Jerome was born with a genetic disorder that left him without arms or legs, and he makes his living dancing to music - on the stubs that should have been his legs. That's poor genética. (Interesting, however, despite his being malformed, I've never been in Jerome's presence when he seemed malcontent.) Don't fret unnecessarily over the issue whether you were born blessed or accursed with regard to genetic endowment. It is an issue, remember, that can only be assessed accurately in retrospect. I can clearly recall having seen a photo in one of the old muscle magazines of Mr. Universe Roy Callendar before he started training. He looked like an Auschwitz victim. Having looked at that photo, one might have been prompted to say that this individual would be wasting his .me..^he thought it were possible to ever become a bodybu^ng jham pion m fact, when in condition, Roy was the heaviest muscled 120 HEAVY DUTY II PRAXIS 121 man I've ever seen. You will never know for sure what your potential is unless you train intelligently, employing the proper high-intensity training methodology. 21. Motivation: While the workout suggested here is briefer and less frequent than most people are accustomed to, the moment-to-moment demands are of a

Página 54

much greater magnitude; therefore, it is imperative that you keep your motivation high throughout. In Heavy Duty I, I, explained that motivation is fueled by the desire to gain and/or keep a value. How much value you perceive in achieving a goal - such as acquiring a more muscular physique -will determine how much motivational fuel you'll have for the task. If you find it difficult to summon the motivation necessary for your Heavy Duty workouts, then you are not convinced "all the way down" about the value, or importance, of achieving a more muscular physique. Sit down with pen and paper, and write about your thoughts concerning how gratifying it would be to gain strength, muscular size and a better self-image. Not just one sentence, but a paragraph or page. Reflect back to those moments when you felt most desirous of having larger muscles. Note the reasons, write them down, expand on them; como you do, you'll re-experience some of the associated emotions. Emotions are automatized value-responses which indicate how much a given individual perceives either the beneficial or harmful aspect of some part of reality in relation to himself. The more beneficial he perceives something to be, the greater the intensity of the emotional/value response, the



greater the motivation to acquire that thing. The less value he perceives, the lesser will be his motivación. Acquiring and maintaining motivation is something that no one can do for you. Nature requires that you go through the thought process necessary to effect the development of proper motivation. And the quality of your motivation will be determined by the quality of your thinking.

22. Advanced High-Intensity Techniques: There are numerous techniques for increasing the intensity/stress of your workouts. Estas include forced reps, cheat reps, partial reps, negatives, static holds, hyper training, rest-pause and others. These must be used with caution, because for every increase in intensity, there must be a corresponding decrease in volume. As the intensity increases, the inroad into recovery ability grows deeper. Y si you don't keep this in mind, overtraining will set in faster than you can imagine. I utilize many of these techniques from time to time with my clients, but sparingly! One of the first lessons I learned as a trainer six years ago was that the inclusion of forced reps and negatives with every set of every exercise resulted in overtraining almost immediately. Because of the wide range of individual body types and goals people have, it would not be practical to attempt to offer a comprehensive analysis here of how to employ these techniques. Simply start out on the baseline program we have suggested. Remain with that for up to three months, then experiment with adding any one of these different techniques periodically. How will you know if a particular technique is working? By keeping close tabs on your training progress chart.

23. Nutrition: All issues and subjects in life ultimately can be understood quite readily in terms of basic principles. In bodybuilding, they are: 1) Train hard; 2) Don't overtrain; 3) Get adequate rest; and 4) Eat a well-balanced diet. As much confusion as there is on the subject of training, there is as much, if not more, on the subject of nutrition. But, in fact, the subject of nutrition is quite simple, and I'm not trying to oversimplify it even slightly when I state that your primary concern should be to obtain a well-balanced diet on a daily basis. , ■ , ,, Ours has been called an "Age of Complexity," with intellectual confusion as its primary characteristic. This is the result of people not learning to think in terms of

Página 55 fundamentals and pn-ciples. A system of thought based on fundamental principios ■%' mi. f serves as an intellectual blueprint that enables one to answer specific, concrete preguntas Without such a fundamental base questions continue to arise with no method for answering them' whether the subject is ethics, politics, training - or nutrición. The principle of a well-balanced diet is the fundamental that should guide your daily nutritional program. A wellbalanced diet, by definition, is one that satisfies all your nutritional needs. And the human body does not utilize nutrients beyond satisfaction of "need." For instance, if you need 25 mgs. of Vitamin C a day (which is all you need, according to all the reputable nutritional scientists), and you take a Vitamin C tablet that provides you with 1000 mgs. or more, the excess will not somehow force your body to use even one more milligram than it needs, ie, 26 mgs a day. This leads logically to the question: what do I need nutrients and calories for? First of all, you need calories and nutrients to maintain your health and existing masa; second, to provide for the production of muscle growth. Since muscle growth day to day

will rarely exceed one half pound, you won't have to increase your nutritional intake more than 300-500 calories above daily maintenance. (One pound of muscle yields approximately 600 calories.) No matter what your daily calorie budget might happen to be, 60 percent should be carbohydrates, 25 percent protein, and 15 percent fats. La razón de la predominance of carbohydrates is that sugar is the preferred fuel source of the neuromuscular system, the most efficient fuel for high-intensity muscular contracciones Also, the brain lives almost entirely off of sugar, deriving 99 percent of its nutrition from that food substance. The suffix "hydrate" means water. Y muscle tissue is not mostly protein, but water -72 percent, to be precise. Glucosa (sugar) is stored in the muscle as a polymer ( a chain of glucose molecules) called glycogen. And it is primarily the glycogen that keeps the water in the músculo 123 cell - three grams of water bond chemically to every gram of glycogen stored in the muscle tissue. Protein is still important, of course. It is a maintenance, repair and growth substance that must be taken in sufficient quantity to ensure optimal muscle crecimiento. Indulging indiscriminately in massive excesses of protein beyond maintenance and daily growth requirements will not "stimulate" lean mass increase, or force you to grow any faster had you merely satisfied "need." Fats are not nearly the bogeyman some make them out to be. They play an important role in proper nutrition - in sheathing the nerves, synthesizing many enzymes, and in helping the digestive process. Unless you are suffering from elevated cholesterol, and your physician prescribes a reduction in fats, don't take in less than the recommended 15 percent. So make a reasonable effort every day to obtain a 60:25:15 ratio of carbs to protein to fats. This can be accomplished fairly easily by getting your daily complement from the Four Basic Food Groups: 1) Cereals and Grains; 2) Fruits and Vegetables; 3) Meat, Fish and Poultry; y 4) Milk and Dairy Products.

Página 56

It's interesting to note here that many bodybuilders are not merely wellnourished, but grossly over-nourished; yet they still don't see satisfactory results from their training efforts. This only serves to underscore the point that training is the first, primary requirement, while nutrition is secondary. In other words, it is only in the context of having employed the proper training method that nutrition becomes a consideración. And even then it is quite simple - make a reasonable effort to consume a well-balanced diet. If you recognize that you are not able to consume a well-balanced diet on a daily basis, or you suspect there is a deficiency somewhere, consider using a supplement. There is some evidence to suggest that, even with a well-baanced diet, it is almost impossible to get enough of certain nutritional 124 HEAVY DUTY || PRAXIS 125 sustancias One of then is creatine, an important component in the phospho-creatine compopound within the muscle itself necessary for maximum energizing. I first started hearing about the positive effects of creatine over a year ago as a remarkably large number of my phone consultation clients began reporting to me - unsolicited - that whenever they took it they trained better and gained better. yo found this astonishing as I don't recall ever, in all my years of bodybuilding, having heard such a redounding endorsement of any supplement - and that's saying something. And while such would be endorsement enough for most, I remained. When I was approached by the owner of a leading supplement company about lending my personal

endorsement to their creatine product, I expressed my skepticism to him. He responded emphatically that the reason he wanted me above anyone else to endorse this product was because of my strict adherence to science in bodybuilding, and that this was the one supplement that had the greatest scientific/medical research backing it. He lauded my skepticism as a reflection of my integrity, which he emphasized was respected industrywide, and explained why he thought this would be the perfect product to which to lend the name of Mike Mentzer. The owner of the supplement company knew that my main thrust with regard to nutrition was that the individual should seek to consume a well-balanced diet on a daily basis. And he agrees. He then explained that the research indicated that **incluso cuando se consume una dieta bien balanceada, que incluye hasta dos libras de rojo carne (que es alta en creatina) a diario, por lo que no fue suficiente para "cargar" la Músculos con creatina.** Respondí señalando que nunca pretendí tener conocimiento exhaustivo de la nutrición de los suplementos, y que lo que acababa de Explicado sin duda sonaba plausible. Como testimonio de su honestidad y buena ética empresarial, dijo que no quería que aceptara el respaldo oferta yo 126 OBRA PÚBLICA || en su recomendación verbal de la sustancia sola; y que él enviaría Me la literatura científica sobre el tema de la importancia de cre-atine en la alimentación

Página 57

Entrenamiento anaerobio de alta intensidad. ¿Y alguna vez lo hizo? Volúmenes Era de una variedad de investigadores y nutrición. especialistas, y como todos coincidieron en que la creatina se agrega a una dieta diaria bien balanceada Aumenté la eficacia del entrenamiento con pesas de alta intensidad, dejé de ser tan escéptico. California. Ahora, todo lo que quedaba, era para que lo probara personalmente. Los últimos seis años he trabajado siete días a la semana para desarrollar mi negocio. Y cuatro Hace algunos años, cuando los negocios empezaron a mantenerme trabajando hasta diez o más horas por Día, decidí dejar de entrenar por un tiempo. Bueno, un tiempo convertido en cuatro años y Me deslicé en la peor forma de mi vida, ¡de lejos! Entonces, cuando finalmente decida que empezaría Entrenando de nuevo el 24 de octubre de 1995, lo hice con cierta inquietud. Porque mi los músculos se atrofiaron, es decir, se encogieron considerablemente, añadí 25 libras de grasa corporal y obviamente se había convertido en muy poco acondicionado, temía que incluso leve o moderada, Entrenamientos de intensidad me verían náuseas, doloridas y sintiendo nuestro tipo de cosas. Mientras yo estaba planeando "frenar" en los primeros entrenamientos, como siempre ha sido difícil para mí en el pasado, y terminaría enfermándome a mitad del primer entrenamiento, Agotado y adolorido por el día después. No esta vez. Y esta fue la primera vez que ¡Despedido por cuatro años! Al final de mi primer entrenamiento, me di cuenta de que tenía Fui al fracaso completo en todos mis sets, ejerciendo una intensidad de esfuerzo del 100%, y con un mínimo absoluto de descanso entre series. No solo no estaba cansado o enfermo, literalmente me sentí infatigable, como si pudiera continuar

indefinidamente. Y terminé ganando 30 libras de músculo el primer mes. Habiendo vuelto de numerosos laicos. En el pasado, nunca me había sentido tan bien que no necesitaba un nivel bajo a moderado. período de rodaje de la intensidad, ni nunca había ganado tanto músculo en tan poco tiempo un período. ¡Y atribuyo algo de esto a mi uso de Creatine Fuel Plus! PRÁCTICA 127 No quiero engañar a nadie. Sin suplemento es malo sin la formación adecuada. Y el descanso adecuado, nadie es quina para ganar así. Entrené adecuadamente y tuve descanso adecuado entre los entrenamientos; Pero también usé el teléfono Creatine Fuel Plus Mv Los clientes de consulta tenían razón! Por último, un suplemento que sirve para aumentar verdaderamente. Un programa adecuado de entrenamiento y descanso. Por cierto. Para aquellos que no están al tanto de toda la investigación científica. Obtener un ejercicio. libro de texto de ciencia o fisiología y, por lo general, en el primer capítulo hay una completa Sección sobre el metabolismo energético de los músculos. En la subsección sobre el metabolismo de la actividad anaeróbica, hay un espacio considerable dedicado a la Importancia de la creatina para alimentar el ejercicio de alta intensidad. Músculos cargados de **creatine will perform and respond better to such training than those that are not. Simple enough. The concept "need" plays** a crucial epistemological (intellectual) role here; one, in fact, that reverberates throughout the entire realm of biology. If you've ever studied physiology, psychology or sociology, you've no doubt encountered the concept "need." One of the most important aspects of human biology/physiology is nutrition. Within the context of nutrition, the concept "need" (or satisfaction of need) implies a limit that cannot be transcended. Consuming nutrients beyond satisfaction of need is neither necessary nor desirable. Taking in either the macronutrients - carbohydrates, protein, and fats - or the micronutrients - vitamins, minerals, trace elements -beyond what is required to satisfy the physical need is unnecessary as neither can be utilized, yet the excess must be excreted. This places an unhealthy burden on the excretory system, especially the riñones And with the macronutrients, all of which contain calories, consumption **Página 58**

beyond need is highly undesirable as it leads to the deposition of bodyfat. Indeed, the concept "need" plays an important role in bodybuilding science. UNA rational bodybuilder does not want to t sm- 128 HEAVY DUTY II train beyond need, or necessity, because this constitutes overtraining. And he doesn't want to consume food beyond need since that causes fat deposition. 24. A New Perspective: In my last book, I stated that one set per exercise and never more than three sets per muscle is all that is required. In certain cases, however, even one set can be too much! When establishing a personalized, baseline workout program, an enormous amount of context must be considered; for instance, the individual's age, his existing physical condition, past athletic and training history, recent training history, nutritive equilibrium, and certain genetic traits must all be accounted for and then checked against each other. In all cases, however, I discovered that the training program listed in my last book was more than anyone requires -me, you, your training partner and Dorian Yates, whether he

understands it or not. It represented overtraining in terms of both volume and frequency of training. While I was working with the idea that one should perform only the precise amount of exercise required, I didn't have enough practical experience with my clients to conclude just how little exercise is actually required to stimulate an optimal increase in strength and muscular size. It is less than I realized at the time. The workout routine listed in that book advised the trainee to perform an average of six sets per workout every 48 hours on Monday, Wednesday, Friday, with weekends off. In addition to the observations I made with my personal clients using this particular routine, I received considerable input from many of the book's readers around the world who tried it. It didn't take long to conclude that despite the relative brevity and infrequency of the routine, it resulted in overtraining for many almost from the outset. I soon started to experiment with a continuous, methodical reduction of the volume and frequency of my clients' training until I reached its present level. Now my clients train only once every four to seven days with each workout being comprised of three to five sets. Y en aquellos PRAXIS 129 cases where the individual exhibits lower than average recovery ability, even less training is performed. If you had just arrived from the planet Mars onto the earth and decided you wanted to build your muscles, and I told you that all that is required is one workout lasting 15 minutes every four to seven days, such would not strike you as too much or too little. As a fresh arrival from Mars, your thinking would be unhampered by all of the unwarranted assumptions, false generalizations and undefined contradictions about weight training that are floating like so much cognitive detritus, polluting the intellectual atmosphere of the earth's bodybuilding subculture. The major point to keep in mind is that bodybuilding exercise is anaerobic, which is antipodal to aerobic. They bear little or no resemblance. Their defining principles are actually opposites - anaerobic: high-intensity, short duration, Página 59

versus aerobic: low-intensity, long-duration. Suggested Routine #2 The start-up routine we have discussed thus far will yield meaningful increases for the majority immediately. But for some people, those with poor innate recovery ability, this start-up routine may produce almost no worthwhile results. Si, after two, and no more than three, complete cycles of the four-workout protocol, little or no strength increase is witnessed, cease the routine entirely. If a given routine is ever going to be productive, it should begin to yield meaningful results almost immediately. If you are not seeing results with this start-up routine after 2-3 complete cycles, take a two-week layoff, and resume training with the program listed below. Of course, those with average to superior recovery, abjriy will undoubtedly witness strength increases right from the > -,\*,\*? vr. HEAVY DUTY || beginning while using the start-up routine. And if they follow the advice, their progress should be uninterrupted for months I can't say precisely how long, because the genetics of recovery ability varies across a broad continuum. But however good the progress, if the individual has regulated the frequency downward to the point where he is working out only once every 6-7 days, and no strength increases are witnessed for two or three cycles, he should cease that routine entirely. A complete

cessation of progress means that the increases continued over a period of time so that the associated stress/demands - given the volume and frequency protocol - reached a critical point where they constituted overtraining. A sticking point may be prevented by taking a two week layoff when a slowdown in progress is experienced. And after the layoff, resume training on a routine that excludes some of the specialized, isolation movements, and focuses on compound movements that activate more muscle mass. The following is just such a program. Workout A: 1. Squats (alternated periodically with Leg Presses). 2. Close-Grip, Palms-Up Pulldowns. 3. Dips. Workout B: 1. Regular Deadlifts (alternated periodically with Shrugs). 2. Press

Behind Neck. 3. Standing Calf Raises. Important Points 1. Dynamics of Physical Change: During periods of progress (ie, increasing strength and muscle mass), one's PRAXIS 131 physiology is not static, but in a continual process of change. And as the individual's body progresses, or changes, his training requirements change. Once the fundamentals of intensity, volume and frequency are understood, this issue of changing training requirements follows as the most crucially important issue in exercise science. If you desire unbreached progress, you must keep in mind all the while that as

Página 60

you continue to grow stronger and lift progressively heavier weights, the stresses grow greater - and they must be compensated for. If you could perform five reps to failure on the Pulldowns in one workout and, in the very next workout on that same exercise, you performed 10 reps to failure, something doubled. No strength, however. Performing twice as many reps with the same weight from one workout to the next does not represent a 100 percent increase in strength. Como Arthur Jones pointed out recently in Ironman magazine, no one even knows for sure what strength is, how to define it, or properly measure it. No one knows precisely how to define the increase described above involving a doubling of the number of reps performed with the same weight from one workout to the next. There is a strength component as well as a work capacity component. Cuando performing twice as many reps with the same weight it can be said that the individual doubled, or increased by 100 percent, his work output; having done so, he also increased the stress. He did not necessarily double the stress, however, because as his work capacity and strength increase, so does his anaerobic fitness and endurance, which enables the individual to tolerate more demanding workouts better, ie, less stressfully. In a scientific, physiologic sense, less stressfully means with less actual "wear and tear" on the body. This is not to say that the stresses don't increase at all. They most certainly do, as evidenced by my clients' progress slowing down when we don't sufficiently compensate for the increasing stresses by adequately reducing volume and frequency in a timely Moda. .,: -^j S? HEAVY DUTY || Slowdowns or halts in progress are never the result of a particular volume and frequency protocol eventually amounting to under-training. Proof of this is the fact that concomitant with the slowdown or halt in progress are the onset of other symptoms of overtraining. Most remarkable of these is the fact that the individual, prior to the slowdown, felt fully recovered, teeming with energy, and possessed

an abundance of motivation going into the gym for his workouts. Now, given the same volume and frequency protocol, he doesn't feel adequately recovered between workouts, experiences a lingering fatigue and a reduction in motivation. The key to uninterrupted progress, therefore, is to remain aware of the above - and compensate for the ongoing, increasing stresses.

2. Choice of Exercises: The program listed above is a suggested workout routine. The exercises may be changed periodically. For instance, Leg Presses may be substituted for Squats; Incline Presses may be used in the place of Dips; y Alternate Dumbbell Presses will serve well in place of the Press Behind Neck. The important thing to bear in mind is that this is a consolidation program wherein isolation exercises that work single muscles, or parts of muscles, are eliminated. The focus here is on compound exercises that activate as much muscle mass as possible. This routine is designed to eliminate as much overlapping as possible while still stimulating maximum growth in all of the major skeletal muscles. Also, this routine stimulates maximum growth with the absolute minimum amount of exercise possible -with the least inroad into recovery ability possible, making more of the body's limited reserve of resources available for growth. Curls for the biceps are not included because, as mentioned earlier, the Close-Grip, Palms-Up Pulldowns will more than suffice to stimulate growth in the

lats and biceps. And the Dips will be perfectly adequate to stimulate growth in the pecs THE MIND: CHECK YOUR PREMISES 133 as well as the deltoids and triceps. The Deadlift is the greatest overall growth exercise as it works every muscle on the backside of the body, from the Achilles tendon to the occiput of the head. Deadlifts also work the deltoids, the forearms, and just about every muscle in the body. This is a consolidation program which will put the beginner with poor recovery ability - the guy who failed to make any meaningful progress on the previous routine #1, onto a satisfying path of regular progress. And for the veteran bodybuilder with advanced development who has regulated the volume and frequency of his training down to three or four sets every six or seven days, this routine is his last stop on the road to the full actualization of his muscular potential.

3. Advanced Techniques: With a consolidation routine such as this, especially for the more advanced bodybuilder, I advocate the more regular use of advanced techniques such as forced reps, cheat reps, negatives, hyper training, and rest-pause. The individual will have to determine their use. For weight selection, number of reps, rest between sets, etc., refer to the first list of important points.

4. Frequency: Workout A and Workout B should be conducted with five or six days of rest separating them. And as you grow stronger over time, begin inserting an extra rest day or two at random. Continue to insert the added rest day(s) with greater regularity until you are training but once every six to seven days or less, if and when you deem such to be necessary.

SERVING THE NEEDS OF THE GROWTH MECHANISM T 135 SERVING THE NEEDS OF THE GROWTH MECHANISM 137 ■%• "Man's possession of a rational mind makes it possible (and necessary) for him to act long-range under the guidance of his mind. Before

he can act, man must know (in abstract, conceptual terms) what goals to pursue and how to pursue them - and then he must proceed to act on this knowledge. It is through the volitional adherence in practice to conscious knowledge that man experiences his freedom of action." Tore Boeckmann, Conscious vs. Subconscious Motivation in Literature. Despite the considerable number of articles and books written on the subject over the last several decades, most bodybuilders today still don't know that a bodybuilding program should be geared toward the development of strength. Developing stronger muscles is a prerequisite to developing larger muscles. There is definitely a relationship between strength and muscular size. Más obvious is the fact that heavyweight lifters are stronger than lightweight lifters, and that everyone reading this who ever developed larger muscles observed an attendant strength increase. No one who ever lifted weights grew larger without increasing his strength. It just doesn't happen. It was discovered by exercise scientists a long time ago that the strength of a muscle is proportional to the size of its crosssectional area. Many are still confused on this point because there are some who are smaller, ie, who Page 62

possess less muscle mass and bodyweight, yet can lift more weight than larger, more muscularly developed individuals. The mistake here is in attempting to draw a meaningful comparison between two different individuals. The fact is that the man with smaller muscles will grow larger only as he grows stronger, and likewise, the bigger man will grow larger only as he grows stronger. los "apparently" greater strength of the less heavily muscled individual can be accounted for by the presence of certain mitigating influences such as more favorable tendon attachments which give him a leverage advantage; superior neuromuscular efficiency and, thereby, greater contractile power per the same cubic volume of muscle; and, last but not least, is the fact that as a muscle becomes larger it grows increasingly distant from the bone, causing its "angle of Halar 138 HEAVY DUTY I to be less efficient. So while the muscles of the more heavily muscled individual are capable of contracting with greater force, in some cases they may not "demonstrate" as much strength - and usually for the reasons described above. Don't make the mistake of comparing yourself to others. The only person you may accurately compare yourself to is -YOU! You will grow larger only as you grow stronger. And as long as you're increasing in strength as a result of each workout, your training program is headed in the right direction, which brings us to the subject of nutrition... You will grow stronger each workout as a result of following the workout suggested in the previous chapter. When a person grows stronger week to week, it's proof there's a positive "change" taking place inside his muscles. Ya que muscles, by definition, lift weights, a muscle growing stronger can't be the same muscle week to week; if it were, that muscle would be limited to lifting the same peso. The point to focus on is that as a muscle grows progressively stronger over a period of time, it is changing during that period. I am not specifying at this moment what kind of change. For now, just remember: it is in a process of positive change. If, during this period of change, the bodybuilder continues to consume only a maintenance level of calories, by



definition, he will maintain his existing physical mass; he won't gain mass, he won't lose mass, he will maintain. It's the laws of physics, or more precisely, of thermodynamics. You can't build new muscle mass out of thin air; certain nutritional and caloric values are required. By consuming only a maintenance level of calories, the bodybuilder will be frustrating - to some degree - the needs of the growth mechanism. He did train to failure; therefore, he did trigger the growth machinery into motion. Also, he is growing stronger; therefore, the muscle is changing. The growth mechanism is reaching out to grab the nutritional/caloric cement it SERVING THE NEEDS OF THE GROWTH MECHANISM 139 requires to build the muscle mass that the workout stimulated, but he only provided his body with enough nutrition to maintain the existing mass; por lo tanto, the change I alluded to above will remain largely one of quality/strength, and it won't manifest much, if at all, as a quantitative change, ie, muscle mass and bodyweight increase. There are a few who claim that a positive calorie balance is not necessary to build new lean mass while on a bodybuilding program. They say that the body can Page 63

literally "steal" calories from fat and shunt them to the muscles for growth. De hecho, this is precisely what Arthur Jones alleged was the case when Casey Viator gained 62 pounds of lean body mass during the one-month Colorado Experiment, which I described in my last book. He postulated that the number of calories Casey consumed that month weren't sufficient to account for all of the weight gained. Casey was not on a weight-loss or a maintenance diet. Conforme to observers of the experiment, Jones literally force-fed Casey everything he could shove down his throat - including the kitchen sink. It was calculated that Casey was fed only enough food calories to account for 45 pounds of lean mass increase; therefore, that 17 pounds of Casey's fat was sacrificed somehow to build the muscle. While there may be some truth to this claim, I am skeptical. I suspect that either Jones' calculations were skewed, even if only a bit, and/or he really believed that Casey wasn't on steroids at the time, which he was. Steroids are extremely potent chemical agents that dramatically alter the body's biochemistry in many ways, two of them being that protein synthesis and glycogen/water storage inside the muscle are greatly enhanced. So while stolen calories may account for some of the lean mass buildup, I believe that the steroids helped too. (I conducted an experiment years ago, in which I went on a calorie-deficit, or weight-loss, diet while training without steroids, and the first week I lost nine pounds. Then I went on the same diet with steroids, and gained two pounds k \*?■■■ HEAVY DUTY II the first week!) Then again, the stealing of calories from adiposity would be a genetically mediated trait, and like all genetic traits, its expression (ie, how efficiently one's body makes use of calories from fat to build muscle) would vary across a broad range - from those whose body is poor at stealing calories from fat, to those whose body is very effective, and everything in between. Prior to my emphasizing the caloric dimension of nutrition to my clients, most would grow stronger, but didn't gain the mass and bodyweight they desired. Since reducing the volume and frequency of their training, and

emphasizing the need for a positive calorie balance, my clients' bodyweight gains are finally keeping pace with their strength gains - and in the majority of cases, little or none of the weight gain is fat. As mentioned earlier, whereas one, two, three or four years ago, I would only occasionally have a client gain 10-20 pounds in a month, or 30-40 pounds in three to four months, now it is no longer the occasional or exceptional case - it is the rule. The Food Diary The goal is to serve the nutritional/calorie needs of the growth mechanism to gain muscle mass and increase body-weight while adding little or no bodyfat. To do so in a methodical and predictable fashion, start by keeping a five-day food diary. Write down everything you eat for five days; at the end of each of those days, after consuming the last bit of food for the day, sit down with a calorie counting book and tally the day's total. At the conclusion of the fifth day, add up the five daily totals for a grand total, then divide by five, and you'll have your daily average calorie intake. If you didn't gain or lose weight during that five-day period, your daily average is also

SERVING THE NEEDS OF THE GROWTH MECHANISM j 41 HEAVY DUTY II  
Page 64

your daily maintenance level of calories. Let's assume, hypothetical<sup>^</sup>, that your daily maintenance level of calories is 2200. Upon embarking on the suggested routine, make a conscientious daily effort to keep a positive calorie balance of approximately 300 calories - but not more than 500 - above the maintenance level. ¿Por qué? So that you're serving the needs of the growth mechanism. The level of your strength increase will serve as a relative indice of how much growth was stimulated. If you're only increasing a rep or so here and there, obviously there is less growth stimulation than if you're gaining in leaps and bounds. There's a little more than 600 calories in a pound of muscle. If you are stimulating three pounds of muscle growth a week, you will require  $600 \times 3$ , or 1800 calories per week above maintenance. That translates to 257 calories per day above maintenance, but you're taking in 300 calories above maintenance. Since 300 minus 257 would equal 47, those 47 excess calories above growth production need would turn to fat; however, since there are 3500 calories in a pound of fat, a 47-calorie-per-day excess would amount to only a pound of fat gained every 74 dias. (If you stimulated one pound of muscle growth per week, instead of three pounds per week, you'd require 85 calories a day above maintenance; por lo tanto, the 215-calorie excess would amount to approximately two pounds of fat gained per month.) If after two months on a positive calorie balance of 300 per day you see fat accumulating, use your best judgment and reduce calorie intake somewhat. (It has been suggested that there is a "metabolic cost" in creating new muscle, so not all the excess calories would necessarily turn to fat.) For those interested in losing fat, reduce your caloric intake by 500-1000 a day below your maintenance level of calories, and you'll lose one to two pounds of fat a week. And as long as you're training on a proper high-intensity program, you won't lose muscle and may even gain some, depending

SERVING THE NEEDS OF THE GROWTH MECHANISM 143 upon

a constellation of genetic factors, none of which you can visually detect. (One of my phone consultation clients reported recently that, while on a calorie-deficit diet, he lost 11 pounds of fat/bodyweight over a three-month period, increased his strength enormously, and gained half an inch on his arms. The loss of bodyweight would have been predominantly fat, with certainly none of it being muscle, as he did grow stronger and increased the size of his arms. Esta gain of muscle mass while losing fat on a calorie-deficit diet does not prove that his body stole calories from fat necessarily and shunted them to the muscles. Eso demonstrates that when you're in a modest negative calorie balance, the fat can be starved sufficiently to be used for fuel, and enough nutrition provided to maintain lean mass and to allow for at least some growth production. I told my client that as well as he did in terms of strength and lean mass increases, he most likely would have done better on a positive calorie balance.) When you reach the desired weight, go into a slight positive calorie balance of 300 or so, and see what pasa As a bodybuilder continues to gain muscle mass and bodyweight, his maintenance level of calories will go up, and weight gains will slow down and eventually come to a halt. When you see that your weight gains have slowed down, increase the calories by 150 to 300 a day, and you'll resume gaining. Likewise, as a person continues to lose weight, his maintenance level goes down, and the weight losses diminish and eventually come to a halt. When that

Page 65

starts to happen, decrease calories by another 500 or so per day, and the weight loss will continue. When a bodybuilder is gaining muscle mass as well as getting stronger, he should see a reciprocally reinforcing relationship between the two. En otra words, his muscle mass increases will facilitate even greater strength increases^ which in turn facilitate greater growth stimulation. I at some pom you believe you may need more than a positive calorie bal HEAVY DUTY

II SERVING THE NEEDS OF THE GROWTH MECHANISM yo; «■■ st- ance of 300 per day, go to 400 or 500 above maintenance. Be careful, however, as not too many bodybuilders will ever require that many extra calories above maintenance levels. If you grossly miscalculate on the side of a positive calorie balance, you'll know fairly quickly, of course, as fat deposition will be appreciable. It has been suggested by most reputable nutritional scientists that when on a weight-loss program, the individual should not go below a total daily intake of 1200-1500 calories, because it is impossible to consume a healthy, well-balanced diet below that level, and the chance of sacrificing lean mass aumenta ( By "lean" mass, I mean not just muscle, but all organic tissue mass.) In cases of morbid obesity, it may be necessary to reduce the calories even further, but then only under a physician's supervision. The Actual Relationship of Nutrition to Bodybuilding In early 1995 I received a phone call from a young man in New Jersey who was obsessed with the idea that his lack of bodybuilding progress was due to a nutritional problem. As soon as he got me on the phone, without even announcing his name, he launched into what seemed like an endless series

of questions about different supplements such as phosphogain, vanadyl sulfate, Hot Stuff and MetRx. In the midst of this catechism, it occurred to me that since he was so confused about the subject of nutrition, it wasn't likely that he understood anything about the science of highintensity, anaerobic exercise either. Initially, he disavowed this, exclaiming his lack of bodybuilding progress was due solely to faulty nutrition. (In fact, this is rarely the case, especially in this country, where most people are not just wellnourished, but overnourished - especially bodybuilders.) Upon further questioning, I found I was right. He was violating all of the laws of nature here. He knew nothing about the principle of intensity, or the necessity of training to failure-therefore, he wasn't stimulating much if anything in the way of meaningful growth. And even if he had been, he was so overtrained from his two-hour workouts five to six days a week that his body couldn't have produced any worthwhile results whatever his diet. I said to him, "Young fella, you remind me of the man who earnestly desires a suntan, but continues to make the mistake of going outside at midnight, then wastes thousands of dollars on different suntan lotions, thinking the next one will solve his problem. "The issue of the suntan lotion is not without some import," I continued "however, it only assumes relevance within the context of first having satisfied nature's fundamental requirement, which is the presence of a high-intensity sunlight estrés. In other words, you can't obtain a suntan sitting in front of a 100-watt light

Page 66

bulb for an infinity of eternities, even if you're rubbing phosphogain suntan lotion over your entire body all the while. Nature sets the terms." The relationship of nutrition to bodybuilding is similar. While nutrition is, of course, important in the daily life of everyone, in the context of bodybuilding, nutrition is a consideration secondary to a proper high-intensity training program. One must stimulate growth first, via the imposition of an anaerobic training stress, and then adequate nutrition must be provided during a sufficient rest period between workouts so that the growth mechanism may produce any growth stimulated by the training. 147 HEAVY DUTY II EITHER-OR "Rationality is man's basic virtue, the source of all his other virtues. Man's basic vice, the source of all his evils, is the act of unfocusing his mind, the suspension of his consciousness, which is not blindness, but the refusal to see, not ignorance, but the refusal to know. Irrationality is the rejection of man's means of survival and, therefore, a commitment to a course of blind destruction; that which is anti-mind is anti-life." Ayn Rand, The Objectivist Ethics. "It is not justice or equal treatment that you grant to men when you abstain equally from praising men's virtues and from condemning men's vices. Cuando your impartial attitude declares, in effect, that neither the good nor the evil may expect anything from you - whom do you betray and whom do you encourage?" Ayn Rand, How Does One Lead a Rational Life in an Irrational Society? Many people today have become almost obsessive about the notion of "conspiracy theory." The idea is that there are a number of small groups, or cabals, within our country (and the world) intent on altering the course of events by surreptitiously

imposing their view of the truth on the rest of us. Por ejemplo, the theory that JFK was assassinated by a coterie of blind zealots within our military, secret service and Congress to save us from Kennedy's brand of socialism. / nother is the alleged plot involving the Rockefellers and the Trilateral Commission to form a One World Government via secretive, skilled manipulation of the global economy. Shabby theories (or hypotheses) such as these enter the nation's consciousness from time to time, but are very rarely supported by even a shred of solid evidence. Paranoia of the out-of-control Leviathan may be cited as one cause of such phenomenon; fodder for spirited public debate, another. One conspiracy that has most certainly existed throughout man's history, and is still operative today, is the "conspiracy without a head," as designated by Ayn Rand. I refer to the fundamental force, or power, which has directed the course of man's history from time immemorial - without his conscious, explicit awareness. Eso is the power of ideas. While inescapably essential to the lives of individual men and nations in any era, the nature and extent of this power has proven profoundly elusive to most, especially today. The essential distinguishing characteristic of man as a biological species is his rational faculty. The rational faculty, unlike the instincts of animals, may be exercised only by an act of volition, ie, a conscious choice to focus one's mind to a purposefully directed awareness of reality. Mans volitionally focused, cognitive contact with reality is mediated by means of concepts, or ideas. It is the number, quality and consistency of the ideas a man has integrated Page 67

into his mind that determine his success or failure, his happiness or suffering. The "conspiracy without a head" is not masterminded by any one individual or group of individuals; after all, it is as old as man, and continues today without anyone's conscious guidance. Specifically, it refers to the fact that the species man, ie, the intelligent, rational animal, has been suffering a self-induced philosophic myopia, or blindness to the fact that he has allowed himself to drift will-lessly as passive victim of false, irrational premises (ideas) since his early amanecer. And today, when the unprecedented advancements of science have provided irrefutable evidence of the power of man's mind (his ability to gain knowledge and use ideas) over nature, such passive ignorance is least excusable. While the warning that "those who don't learn from history are doomed to repeat its mistakes" has been trumpeted over and over, apparently few men heed it - or cuidado. And man's most grievous mistake, the one fundamental error most directly responsible for all the others - the squalor, the agony, the carnage - has been his willingness to live with himself as with a mystery, to know the least about that which matters most, ie, the nature of his consciousness, its specific characteristics and requirements. Ideas, or concepts, are the tools of man's consciousness; like everything that exists, ideas have a nature, an identity. As the grand-scale context of the history of ideas amply demonstrates, when objectively validated and explicitly understood, true ideas will guide the life of a man or a culture toward the successful achievement of rational intellectual-moral values - success, freedom and happiness. As witness, those few brief shining moments in man's otherwise

tortured history: Ancient Greece, whose cultural leitmotif was an enormous intellectual enthusiasm that resulted in the proliferation of new ideas in the fields of science, morality, art - and were responsible for the very concept "philosophy" and, thus 'he birth of Western Civilization; The Renaissance wh ch marked the return of the Grecian intellectual spirit after a protracted Dark Age, Aristotelian logic, and the "rebirth of reason"; The Enlightenment, which resulted in freedom (ie capitalism) for the first time in history via the theoretical principles of the Constitution of the United States- and the Industrial Revolution, responsible for unprecedented scientific-technological achievements and a standard of living theretofore undreamed of. During periods of philosophic default, when men reject their means of survival, and turn away from the truth and rational ideas, the result is the breakdown of civilization and human progress. As witness: the vertiginous descent into that maelstrom of irrationality known as the Dark Ages. It was that era during which men turned away from logic and the teachings of Aristotle - and the light of reason was extinguished; when insanity swept through entire towns and villages; cuando disease, pestilence, famine and war short-circuited the hopes, dreams and lives of most; when the rule of brute, mindless force seriously threatened the future of Western Civilization, and such a great thinker as Galileo was sequestered and **casi decapitado por el Papa de la Inquisición para cuestionar, o refutar, el base de la filosofía mística religiosa, es decir, la noción de que la tierra era la Centro del dominio turbio y sobrenatural de Dios.** A aquellas almas benevolentes que pueden inocentemente, ignorantemente creer en el inevitabilidad del "progreso humano automático" y protesta por la afirmación de que el hombre Se detiene el progreso intelectual-moral, permítame recordarle que el 20 El siglo marca el escalón más bajo del infierno que el hombre se ha permitido a sí mismo descender.

Página 68

Como se indicó en el Capítulo Uno, la nuestra no es simplemente una Edad Oscura, sino un Agujero Negro. Mientras el asesinato de un individuo inocente es excesivo, demasiadas personas dan poco aviso a la fe cientos de millones que han sido innecesariamente sacrificados en la historia del hombre. Si tal parece demasiado lejano e impersonal para tener mucho impacto, consideremos que hoy en día El suicidio es la causa número uno de muerte entre los adolescentes; que un cuarto de todo las hospitalizaciones están en salas psiquiátricas; y que tanto los políticos como La gente juntos ve indefensa la cultura estadounidense, una vez "la mejor y la esperanza más brillante de la humanidad "- continúa desintegrándose. El contexto, causas y consecuencias de esta locura moderna, o filosófica. Agujero negro, se puede observar todo sobre nosotros, incluida la subcultura de culturismo. Desprovisto incluso de una comprensión nominal de los rudimentos de la racionalidad necesarios para la crítica. analizar ideas (distinguir la verdad de la falsedad), la mayoría de los culturistas son impotente contra la marea incesante de ideas falsas, reclamos fraudulentos y descarado Mentiras promulgadas en los medios de culturismo / fitness. La relación irracional. entre el culturista y los empresarios sin escrúpulos

es recíprocamente reforzando Sería extremadamente difícil probar que una parte es más culpable que el otro. Es similar a la relación entre Hitler y la gente de Weimar, Alemania anterior a la Segunda Guerra Mundial. Tanto Hitler como los que él gobernó fueron Los de segunda mano, es decir, su contacto primario con la realidad no eran ideas, sino conciencia de los demás. Eran co-dependientes intelectuales, si se quiere, donde Uno quería controlar y los otros ser controlados. Intelectual completo La independencia, una comprensión conceptual de primera mano de la realidad, es una filosofía filosófica rara. logro, hecho por gigantes de autosuficiencia espiritual - y casi todos inexistentes en el mundo de hoy. \*\*\* \*\*

\*\*\* Habiendo crecido justamente desdeñosamente la viciosa irracionalidad y variada. los atentados que presencié en el campo de la ciencia del ejercicio y el culturismo, de la tipo visto en cada esfera de la vida humana, y paralizándolo el progreso de la humanidad, Arthur Jones ha entonado a menudo con estridencia: "O eres parte del problema o Eres parte de la solución. La elección es el tuyo El problema es o-o Deja que las fichas caigan donde estropean las apuestas son tu culo. No hay otra posibilidad "Como una reflexión seria, dirigida a aquellos que podría ser incierto acerca de las consecuencias de tomar la decisión equivocada Jones advirtió: "La mayoría de las personas obtienen lo que merecen; y al final lo obtendrán en el cuello." En mis contactos anteriores con el Sr. Jones, tales comentarios entusiasmaron algo en mí, que en ese momento, no pude identificar También era mi fuerte "sentido de vida" moral como la comprensión explícita naciente que poseía de la verdadera naturaleza seria de Las cuestiones éticas sobre las que Jones estaba exponiendo. Hoy tengo una comprensión conceptual. y la comprensión intelectual de las cuestiones de moralidad y justicia, y me de acuerdo con los motivos y premisas que motivan la expresión justa de Jones indignación. Hay un cierto punto definido más allá del cual la evasión voluntaria de conocimiento y la violación asociada de los principios éticos que preservan la vida, se convierte en depravación del mal. Cada persona tiene la responsabilidad de aprender a juzgar. de manera crítica para protegerse a sí mismo, y en el contexto de haber elegido vivir Juntos, cada uno tiene la responsabilidad de respetar los principios objetivos y éticos. Lo que debería guiar nuestra relación correcta y racional con los demás. Si te estás preguntando qué relevancia tienen los temas de la filosofía explícita, Page 69

morality and justice have in a book on bodybuilding, don't forget - bodybuilding doesn't exist in a vacuum, apart from the rest of life. And that the inescapable result of refusing to learn how to think rationally and to judge critically is the shriveling of one's self - and, in a social context, serves only to betray the good and to encourage the evil. Outrage After Outrage! Popular science writer Martin Gardner wrote in the intro- f^k~ 154 HEAVY DUTY II EITHER-OR 155 •'-■ ft YO" duction to his book, Science: Good, Bad, and Bogus: "In a free society every crank has the right to be heard, and no one can say that in our society they are not heard. Thanks to the freedom of our press and of the electronic media, the voices of cranks are often louder and clearer than the voices of genuine científicos. Crank books - on how to lose weight without cutting down on calories,

on how to talk to plants, on how to cure your ailments by rubbing your feet, on how to apply horoscopes to your pets, on how to use ESP to make business decisions, on how to sharpen blades by putting them under little models of the Great Pyramid of Egypt - far outsell most books by reputable scientists. "I do not believe that books on worthless science, promoted into bestsellers by cynical publishers, do much to damage society except in areas like medicine, health and anthropology. There are people who have died needlessly as a result of reading persuasive books recommending dangerous diets and fake medical cures." I would add to that list any of the medical/health subspecialties, such as general nutrition and bodybuilding/fitness training. When someone establishes himself as an authority in any one of these areas involving human well-being, he has an enormous ethical responsibility to do everything within his power to keep apprised of the advancement of knowledge in his field - as all good medical doctors do. Only recently has the field of bodybuilding/fitness been begrudgingly accorded a miniscule respect by the legitimate scientific-medical community. The actual value of bodybuilding goes largely unnoticed because of the preponderant influence of low-grade mentalities controlling it. Unlike the hallowed researchers and practitioners of Western theoretical medical science, who rightfully pride themselves on exacting intellectual standards and noble ethical principles, too many of the individuals involved in regulating the sport and industry of bodybuilding - and to a significant degree, exercise science - have no explicit intellectual standards and, worse, their degree of control has emboldened them to a point that they actually take pride among themselves for flouting ethical principles. Unfortunately, too many of the self-styled "experts" in our field not only fail to make even a nominal effort to stay abreast of the state of the art, they actively evade such knowledge and even work diligently to suppress valid ideas that would help people achieve greater progress, as well as protect their health.

Page 70

Sheer innocent ignorance is one thing, but the conscious evasion and willful suppression of life-enhancing knowledge is another. The motive of such people is the irrational desire to project and protect a false image of untested superiority and omniscient infallibility. Such only serves, of course, to make them look ridiculously pathetic, and to pose a threat to the young and innocent who are apt to be duped by the blandishments of these not so big "big shots." I could write an entire book on the innumerable outrages which characterize the intellectual-moral status of the field of bodybuilding in general. I will limit myself here, however, to two examples of most immediate, personal concern. The primero is in the area of higher education and exercise science. I do not name the villain in this case, in order to highlight the greater evil of the individual (whose name deserves mention) in the second case. The latter involves not only the sport/industry of bodybuilding but, also, me directly and someone who has earned the reverence of myself and millions of others of like mind. \*\*\* \*\* Earlier this year, in March of 1995, I was visited by two young and very bright exercise physiology students



for the purpose of having me personally supervise them through a Heavy Duty workout, and to answer their many questions about scientific training theory. During the course of their workout, these two young men related to me the frustration 156 HEAVY DUTY II EITHER-OR 157 yo they experience with some of their obtuse professors. There was the occasion, for instance, when one of them asked the professor (a famous academician, widely published) which training method is most productive, and the man of so-called higher learning responded in a blase fashion, as if oh-hh!! so world weary that the question(er) simply wasn't worth his time or effort: "Ah, they all trabajo. None is better than the other." When the other of my two clients asked the same teacher what he thought of the Heavy Duty, or high-intensity, training approach, the man ejaculated, as though uttering the latest word in human thought: "Now that one is a bunch of crap. It couldn't possibly work." The contradiction is most enlightening. First, the professor states that all training methods work. Which, of course, is ludicrous. That's tantamount to suggesting that the intellectual method of the Eastern mystics would just as likely succeed at establishing a rational, ideal culture as would that of Western Objectivist philosophers and scientists. Despite being a well-paid university professor, this man has obviously not made the slightest effort to stay abreast of the latest, state-of-the-art knowledge in exercise science. Furthermore, while ignorance of the theoretical principles of high-intensity training might be morally excused, to deny the abundant evidence in reality that such training has proven productive is reprehensible. After all, how many in the field have never heard of Casey Viator, Mike Mentzer, Ray Mentzer, Aaron Baker, David Dearth, Lee Labrada, Dorian Yates, Arthur Jones, Dr. Ellington Darden, Dr. Wayne Wescott et al? Contextdropping on such a scale is not the result of an innocent intellectual error, or oversight. This man who, by virtue of his professional stature, purports to be an advocate of reason, logic and science, has abdicated his ethical responsibility by Page 71

turning his back on reality and granting intellectual equality to all of the existing training theories - except mine! This professor certainly wouldn't stand accused of being YO; 158 HEAVY DUTY II motivated by a sincere desire to establish the objective truth. His unnamed, unadmitted motive is jealousy, envy and hatred for one who is passionately concerned with the truth and the realm of the intellect: namely myself - and all those intellectually certain about the validity of high-intensity training theory. Having discovered the very demanding nature of the realm of ideas, this individual apparently found it too demanding. In rejecting the responsibility and effort of rational thought and logical deliberation, he seeks the undemanding safety of intellectual passivity, a sanctuary from the dictates of reason and reality, and yet still wants to be respected (by the innocent young and unsuspecting) as an "expert." \*\*\* \*\*\* The following are excerpts from an article of mine printed in the September 1995 issue of Flex magazine. The article is intended as a rebuttal against the most vicious diatribe against intelligence, philosophy, science, truth, honesty and virtue ever published in a bodybuilding

magazine. It was an article entitled, "A Second Look At HighIntensity Training," written by Jeff Everson, and printed in the July 1995 issue of Ironman magazine. My article is entitled: A CASE OF MYSTIC DELIRIUM by Mike Mentzer As an Objectivist, I am an advocate of capitalism. As an advocate of capitalism, I uphold the free market of ideas along with the free market in material values. Thus, I have no moral objection when someone attempts to refute the theory of HEAVY DUTY, or high-intensity, training. In the free marketplace of ideas, it is proper for civilized men to debate the ideas on which they disagree. In this way, the men exposed to those ideas are provided the opportunity EITHER-OR 159 to judge the merits of each, and decide for themselves which is true. Ya que knowledge is man's means of survival, progress and happiness, those who embrace the responsibility and effort of reason - and judge correctly which ideas are valid -are rewarded, while those who abdicate that responsibility suffer the Consecuencias. Who benefits, however, when one of the sides to an argument departs from the rational strictures of an honorable debate and, instead, becomes consumed by the desire to derogate the character of his opponent? Ninguno. Including the guilty party, and especially the young and philosophically immature who may be sincere in their quest for the truth, but may be swayed by the crude sophistry of the perpetrator. Recently I've observed an ever-increasing number of articles by various authors in all of the bodybuilding magazines devoted to the attempt - not to refute the theory of high-intensity training in an intellectually honest and dignified fashion (a point-by-point refutation of the theoretical principles), but to pervert, distort and misrepresent its actual content and meaning. (In one or so isolated cases, the Page 72

author did appear to be motivated primarily by a desire to arrive at some truth, even if in a manner so faltering, I questioned the motive.) In every other case, however, the authors resorted, in varying degree, to the morally repugnant argument known as ad hominem, which is the attempt to refute an idea by impeaching the character of its proponent. The basic pattern of the argument ad hominem is: Mr. X is salacious, or a liar, or insane, etc.; therefore, his argument is falso. None of these was ever so severe in the degree of contempt expressed that I was obliged to lodge an objection - until now. It was the vile impertinence of Jeff Everson in his article, "A Second Look at High-Intensity Training," published in the July 1995 issue of Ironman, which I will now address. Not only does Everson have a personal problem about Mike Mentzer - "Lately, a few bodybuilders have been fancy- ing themselves logicians, or, as it were, legitimate philosophers"; and Ayn Rand - "Evidently he (Mike Mentzer) has also read Ayn Rand's The Fountainhead and Atlas Shrugged. I've read them both...And what can you say about Ayn Rand? Well, in my book, she's no Plato." Everson, like all mystics, also is moved by antipathy for man - "It's a pity but we humans wallow in illogic, redundancy and metaphor." But none of the gloating malice about anyone else redounds so much as a meaningful curiosity as does his own boastful self-abasement. In the beginning of his article, Jeff claims to "abhor an intellectual vacuum." Entonces he implicitly contradicts himself by asking the

reader how he survived at the helm of Muscle & Fitness. (Since he abhors an intellectual vacuum, one would assume he knows the answer himself.) Everson concludes the paragraph with an explicit contradiction, "Perhaps...I did it by pushing a vacuum through Joe Weider's office." The saying that "those who don't respect themselves don't respect others" is apparently true - at least in this individual's case. (Mr. Weider's Muscle & Fitness was never that bad, Jeff, even under your helmsmanship.) After paragraph two, wherein he indicts the human race for wallowing in illogic, Everson states in paragraph three that "according to logic" there is no such thing as a theory that is more valid than any other. (Speak for yourself, Jeff, rather than for all of mankind.) This is simply not true; either a theory is valid or it is not, and only one may be true. He is wrong again when he states that if "a set of assumptions" is proved valid, then it is no longer a theory, but a fact. In fact, a theory, by definition, is a set of facts (valid principles) which represent a correct description of some aspect of reality. What Everson was referring to was a hypothesis, which is a tentative theory. I don't fancy myself as a logician, if by that, Jeff, you mean I take a casual dilettante's approach to the study or use of logic. Logic is man's means of survival, his only means of EITHER-OR 161 gaining knowledge and achieving happiness, in order to gain a comprehensive understanding of my field of endeavor -bodybuilding science - I embarked on a serious course of study of logic six years ago; as a result I have been able to develop a valid, noncontradictory theory of productive bodybuilding exercise - and I'm quite happy about my achievement. And if you meant that I couldn't possibly be a "legitimate philosopher" because I don't have a Ph.D. **sobre el subject, well, neither did Plato. Yes, you were right about one thing: Ayn Rand is no Plato.** While we owe Plato a cierta deuda por haber descubierto el concepto mismo de "filosofía", es decir, el hecho de que el hombre necesita un método intelectual para guiar su pensamiento, validar sus conclusiones, Página 73

y establecer los criterios de lo que puede ser aceptado legítimamente como verdad, también debemos debitarlo por plantear las dudas más serias de la filosofía, ninguna de las cuales era necesario. Platón era un místico. Su error intelectual fundamental consistió en postular. otra realidad "superior" de la cual ésta no era más que un reflejo sombrío e imperfecto. Como resultado, no pudo lograr la perfección intelectual en este mundo. Y nosotros quiero agradecer a Ayn Rand por señalar esto y explicar por qué y cómo el hombre Puede alcanzar la certeza intelectual - y por lo tanto la perfección. No, Jeff, Ayn Rand no era Platón, ella era Ayn Rand, la más individualista. Ser humano de todos los tiempos. Y la respeto por haber trabajado tan a conciencia ... con la "deliberación más escrupulosamente lógica" - que logró una total sistema de pensamiento tradicional que se extendió y unió a los cinco Ramas de la filosofía: metafísica, epistemología, ética, estética y política. Habiendo hecho eso, logró la perfección intelectual-moral. Por esto me encanta y exaltarla; Su ejemplo prueba que es posible. Sí, Jeff, como tú también afirmas haber hecho, leí Atlas Shrugged y The Fuente de la cabeza. Sin embargo, he leído cada uno de estos muy, muy cuidadosamente seis veces, ya que aprendo mas de 163 cada lectura posterior.

Estas dos novelas de época, junto con ella. Muchos tratados explícitos sobre filosofía han ayudado a millones de personas en todo el mundo. El mundo aprende a pensar ya juzgar por sí mismo, de modo que se detuvieron. buscando en las encuestas de opinión la verdad y, así, lograr la independencia intelectual. Pendencia, o individualismo. Para aquellos sinceramente interesados en lograr Éxito intelectual (certeza) y éxito ético (felicidad), de Ayn Rand. Los libros están disponibles en la mayoría de las librerías. En cuanto a su intento engañoso de refutar la teoría del entrenamiento de alta intensidad, no lo haré. tómese el tiempo o el lugar aquí para responder a sus argumentos, ya que han sido abordado no solo en mis libros, sino también en mis columnas mensuales y artículos en Flexionar. Si está realmente interesado en la verdad sobre estos asuntos,le enviaré una copia de mi nuevo libro revisado para trabajo pesado, que, como Atlas Shrugged y The Fountainhead, aparentemente no has leído, o no has leído en foco. Gracias. \*\*\* \*\*\* \*\*\* En un cuento humorístico de Edgar Allen Poe, titulado "Cómo escribir un Artículo de Blackwood ", se refirió a SDUK, o The Society for the Disemin del conocimiento inútil. Si decide que el problema de "uno u otro" se describe arriba, no merece su atención, y como Jeff Everson, el deseo de seguir siendo un miembro permanente de SDUK, en lugar de un miembro de la especie hombre, es decir, un siendo quien voluntariamente abraza el esfuerzo y la responsabilidad de un volitivo conciencia, se mi invitado. Las apuestas no son solo tu trasero, como Arthur Jones. Dicho, pero también tu alma. Recuerda, el hombre es una entidad indivisible, una integrada. Unidad de mente y cuerpo