
Practical Pro for Strength

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"The Iron never lies to you... The iron will always kick
deak. The iron is the great reference point, the all-knowing
perspective giver. Always there like a beacon in the p
have found the Iron to be my greatest friend. It never
me, never runs. Friends may come and go. But two hu
is always two hundred pounds."

-Henry Rollins

Foreword

Any project such as this is not the result of any one ground breaking theory of training, it is the result of experience and education. The quote "I see farther as I stand on the shoulders of giants" is particularly apropos here. Dr. Bob Kraemer and Dr. Chris Beardsley stood on their shoulders and showed me that my practical experience as a competitor was valued and useful in experimental design. I have always thought about practical applications and about asking the right questions. Similarly my practice in the sport of weightlifting as an athlete was greatly aided by standing on the shoulders of silent giants. Guys no one would ever think much to teach helped me understand why things work in the gym.

There is nothing in life that could have prepared me for my professional association with Mark Rippetoe. Rip is a unique character whose influence on anyone he meets. His experiences, education, and knowledge of better and more efficient ways to train and do business, his absolute generosity have been essential in making this flatland book possible. In Texas we know as Wichita Falls a bastion of doing weightlifting the way it is to be done. He is one of the few coaches, personal trainers, and strength coaches that have truly bridged the gap between science and practical application. A wordsmith and gym practitioner and has made the past two years of my book projects with him one of the most intellectually rewarding experiences of my academic career. To me Rip is the "Iron" that Rollins

Moreword

I have had the good fortune to be associated with the weight room field, ever since I wandered into the weight room in the summer of 1979 and met Bill Starr. He and his friends and associates, who introduced me to the program, taught me many things. Over the years since then, I have become my Wichita Falls Athletic Club I have learned from me many other things, all the while thinking that

A few need specific mention: George Hecox, Tommy Suggs, John Pettit, Hal Koenig, Tom Treva, Cardell Hairrill, Angel Spassov, Lon

I have also been fortunate enough to be associated with Pendlay and Dr. Kilgore for the past decade or so, due to Lon's realization that our synthesis of a program of programming was working well, and that it needed to be polished if it was to be truly useful to other coaches and athletes. It is polished it is, but I promise it works.

"Does history record a
--Robert Heinlein

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Massive & powerful. Huge &

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1 - Introduction

Do we know what we know

"The most erroneous stories are
—and therefore never so

The ability to effectively
implement training programs is
success in all areas of exercise: pe
education, health and wellness, a
have been written on programmi
variety of populations. They are
with practical experience in aéro
research specifically addressing th
guidelines exist for programming

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but the best of intentions. The end result for the coach, clinician, gym member, or athlete whose performance is very poorly served by his program in weight training and inadequate programming.

Professionals, both practitioners and researchers in weight training seem to avoid addressing the variety of reasons. With little or no available evidence providing strong evidence in favor of a particular programming, a practitioner can never justify his programming for a client, athlete, patient, or child. The program stays reasonably close to the status quo position. And if it is close, he cannot be held liable in terms of professional liability. Even if he achieves optimal results for his trainee, he is being criticized in his approach. As a result, there is reluctance to get out of the boat, find out what really works, and implement more rigorous standards of practice.

Practitioners without education

Do we know wh

ability, and motivation? How many
back to functionality and then be
clinical rehabilitation runs out? A
conditioning professional must be
and competition, through experie
the contributions and underpinni
training specialization is to active
competent professional.

Many texts have also been
they typically lack a sound scienti
there is a text written by a PhD th
only experience can provide. Virtu
organization within the weight tra
the gap between theory and practi
the profession. There is no questio
from the field have not been forth

The training of academics i

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strength coach will likely spend more on an athlete than any other coach during the season. If we send an untrained, unmentored, or inexperienced coach to run a season of practices for a football team, it is obviously not. Just because someone has played Division I football does not mean they are qualified to coach the sport. Playing and coaching are different skills. This same applies to weight training. An individual exercised with weights while in school does not mean that they are qualified to coach or any other sport. It takes training, mentorship, and (either formal or practical) experience to become a certifiable knowledge and practical ability. Disregarding an athlete's or team's physical readiness or a system of hiring strength and conditioning coaches. Further, this system of hiring limits the growth of professionalism and public recognition.

Do we know what

education programs should begin to
area of instruction.

Educating Practitioners

The root of the problem can be a
sense of identity within physical education
physical educators? Just look at what
programs in universities across the
academic department frequently get
coaches, trainers, fitness trainers, graduate
administrators, recreation workers, physical
specialists, exercise rehabilitation specialists,
physiologists, biomechanists, and sports
Programs are typically general in nature
trained students intended to occupy
professional jobs. The names of the
offer what are considered traditional

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time produce a strength coach. A reth
physical education is warranted. Witho
professionals capable of contributing
and exercise will be a rarity. Graduates
low level *jobs* subservient to some othe
group, one that is actually less qualifie
program exercise, will be the rule.

There are more than 300 differ
available to exercise professionals, with
businesses and organizations offering t
has nearly 40 entities offering some typ
an unregulated industry, and as such t
certifications" that can be obtained by
company, receiving some course mater
mail, taking a test at home or online,
certification in the mail in a second en
become a certified weight training pro
some extra letters after your name. On

Do we know who

Although credentials from organizational membership other than an advisory seal certificate is, may serve a public purpose in certain contexts, they should be considered as certification has been obtained (National Conditioning Association] and US in particular for strength training, AOC. Even these certifications have their limitations. The best currently available. A good rule of thumb: a certifying agency does not have an advisory seal, professional membership, does not have a clear education agenda, and does not provide a clear path, it is likely that the merit and value of the seminar, symposium, or workshop is limited. Short-duration educational experiences are often used for professional development, but their value should not be considered evidence of expertise.

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Specific to the task of programming, we should consider the concept of periodization and its application in research. Periodization has been called "one of the core principles" in the preparation of athletes (1). A very simple idea: the athlete trains very hard for a short time and then trains less hard for a "period of recovery." This is a core principle such as this to be heavily emphasized in scientific literature. After all, a joint conference between the ACSM and the United States Olympic Committee concluded that the primary reason athletes are overtrained is that they fail to periodize. The fact is that Western periodization is sparse. There are more interpretations of how to use periodization to support its use. A search on the Medline database using academic search engines reveals only a few studies that can be characterized as controlled experiments on periodization. In fact, one of the "hallmarks" of periodization, written in a very scientific style, has pages of more than 120 references to support its use.

Do we know what we know?

Bud Charniga (fig. 1-1) did a great service to sports scientists when he translated a series of Russian works into English in the 1980s. However, the information in those works must be applied cautiously because sports science literature is very loosely and



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all populations without regard to their o
and intended target populations.

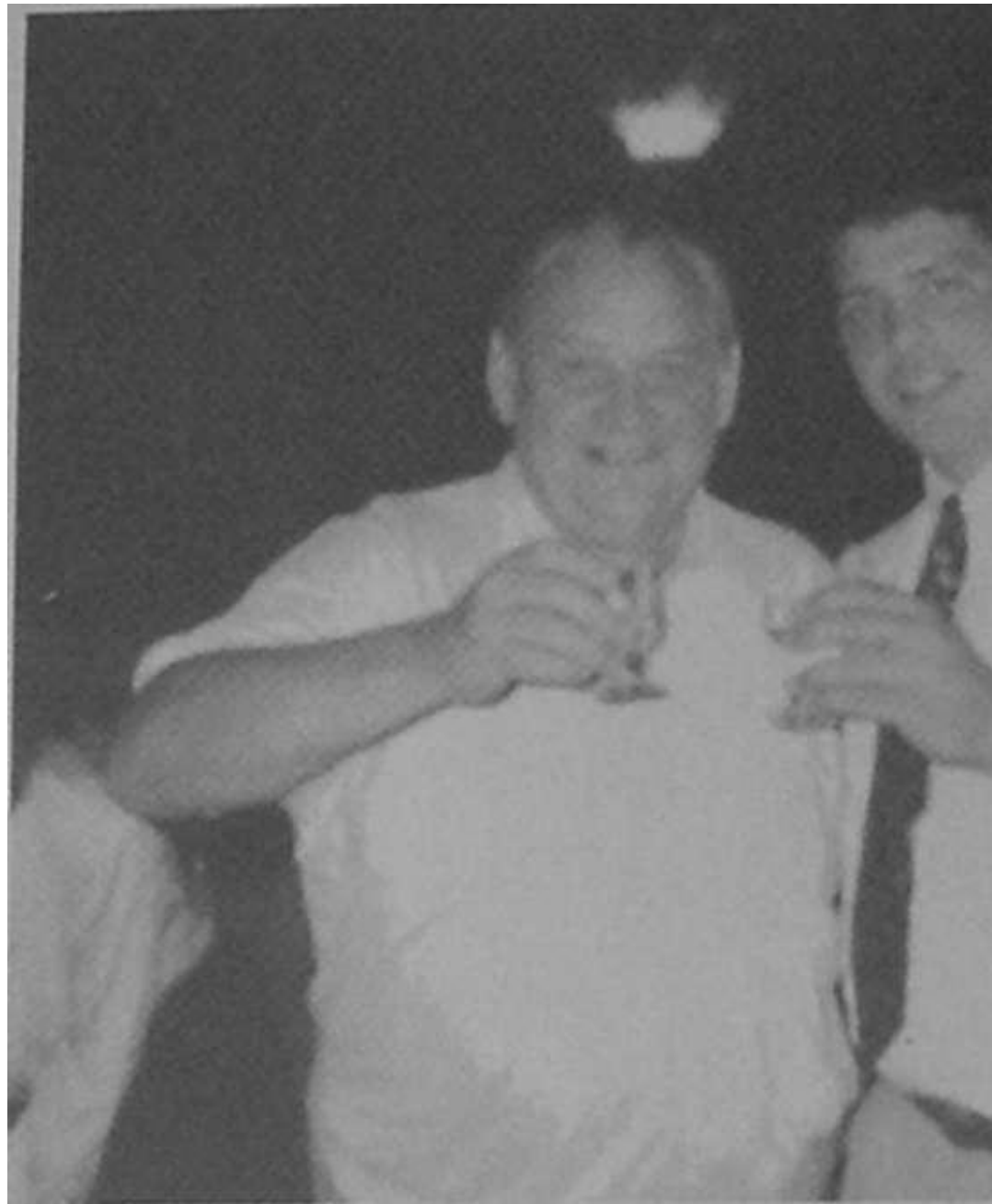


Figure 1-2. Don't be shy about asking "experts
mail them, meet with them; it's a rare expert wh

Do we know what v

who can't function within the training
the coach's particular periodization m
well in situations less tolerant of artifi
in the culture of American youth.

When evaluating communist-b
we must also consider which data may
while the subject athletes were taking
through chemistry" experiments. Tra
for chemically enhanced athletes are n
frequently tested drug-free athletes.

Communist-bloc countries ha
scale sports performance selection pro
young athletes into the most appropri
specific criteria. Once there, athletes
program or fail to achieve and are sent
pyramidal selection structure that elin
athletes. leaving only those who have
international success. In the United St

reflect two distinct cultures. Soviet methods were developed for and apply best to

The U.S. high school student general fitness and movement skills do not inherent in communist systems, programs learned how to move effectively and fitness at age 6, long before they enter Elementary school PE programs in the underemphasized and understaffed. Education is best done in small groups with adequate educational literature supports this context one instructor, sixty students, and 45 "Roll out the ball" physical education teacher operates in the context of over poor administrative support, and inadequate now that physical labor (farm chores responsibilities, etc.) has been largely life of a child, an incoming high school

Do we know what we

practitioners, such as Carl Miller in 1977 (American football) and Garhammer in 1979 (track & field), and (American football and sports) turned on the light for those who had previously thought that the practice of a sport itself was sufficient for preparing the athlete. The sport became inadequate for preparing athletes in many years ago. The early models of periodization and advanced strength and conditioning techniques were absolutely essential to sport development. Dr. Stone followed his early work with periodization by further examining the effects of periodization on performance. Research on periodization has been extensive and of great volume. What has been produced is narrow in scope and limited in broader application.

Even in the absence of science to support it, periodization has worked in the field, and the success of Western athletic success has earned it a place in the arsenal of training tools. But what is the optimal periodization for an athlete or team, and

programming, including periodization is used. We have made every attempt to take relevant science into a practical application for barbell exercise. It is derived from our combined 60+ years of experience and participation in more than 300 competitions in powerlifting and weightlifting, and coaching hundreds of elementary, middle school, amateur, and professional athletes. We are working with thousands of average people who are stronger.

Cooking Up Training Programs

This is not a typical program. There are many weight training books for sale at exorbitant prices—that lay out a program for a winning sports team or an individual (actor, model, etc.). These are "cook-

Do we know what w

ingredients might not be quite the same for a shitake mushroom, did you use a Maui onion. When the recipe called for Maui onion

If a coach decides to use a weight following are required: 1) the coach must use the same way as the original coach (the recipe), 2) the training equipment (coaching program) must be available, and 3) the ingredients must be exactly like the original program, the one that actually worked. Failure to meet these requirements will result in poor ideal performance (inedible mess). Following a recipe program is usually a recipe for failure.

Reading the training cookbook and following the process people solve the programming puzzle, but coaches and athletes must understand that successful programs are put together through trial and error. Athletes can develop their own programs speci

this trainee can recover from a single period of 24 to 72 hours. The novice on Monday and be ready to go heavy. These trainees are quite far away from and therefore lack the strength and to generate a stress heavy enough to improve them, "heavy" is not really heavy. As strength and power are improving, recovery is improving too. Recovery processes are a physical parameter, and this is an example of training progress. But it is important that recovery processes can always be exceeded with the application of training stress. Recovery progress can be made.

Simply put, a **novice**, as we use the term, is a trainee for whom the stress applied during a workout and the recovery from that single stressor is the primary adaptation by the next workout. The novice is marked by a performance plateau on

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