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# 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*

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# Foreword

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Any project such as this is not the result of any one ground breaking theory of training, it is the result of experiential education. The quote "I see farther as I stand on the shoulders of giants" is particularly apropos here. Dr. Bob Kraemer and Dr. Chris Rippetoe stood on their shoulders and showed me that my practical experience as a competitor was valued and useful in experimental design. I now think about practical applications and about asking the right questions. Similarly my practice in the sport of weightlifting as an athlete was learned by standing on the shoulders of silent giants. Guys no one would expect 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 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 researchers 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

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# 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.

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"Does history record a  
**--Robert Heinlein**

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*Do we know what we know?*

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*A question of balance.*

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*Massive & powerful. Huge &*

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*Basic stuff you need to know.*

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*The nuts and bolts.*

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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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## *Practical Program*

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

Professionals, both practitioners and researchers in weight training seem to avoid addressing the wide variety of reasons. With little or no available research providing strong evidence in favor of a particular programming, a practitioner can never justify his programming for a client, athlete, patient, or child. If the program stays reasonably close to the current 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

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*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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## *Practical Program*

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 college 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. An athlete's or team's physical readiness is not a system of hiring strength and conditioning coaches. Further, this system of hiring limits the growth of professionalism and public recognition.

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*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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*Practical*

*Program*

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

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*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 effectiveness should not be considered evidence

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## *Practical      Program*

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 principles" in the preparation of athletes. It is 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 scientific literature on periodization is sparse. There are more interpretations of how to use periodization than there are to support its use. A search on the Medline database using academic search engines reveals only a few articles that can be characterized as controlled experiments on periodization. In fact, one of the "hallmarks" of periodization, written in a very scientific style, contains pages of more than 120 references to support its use.



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*Do we know what we know?*

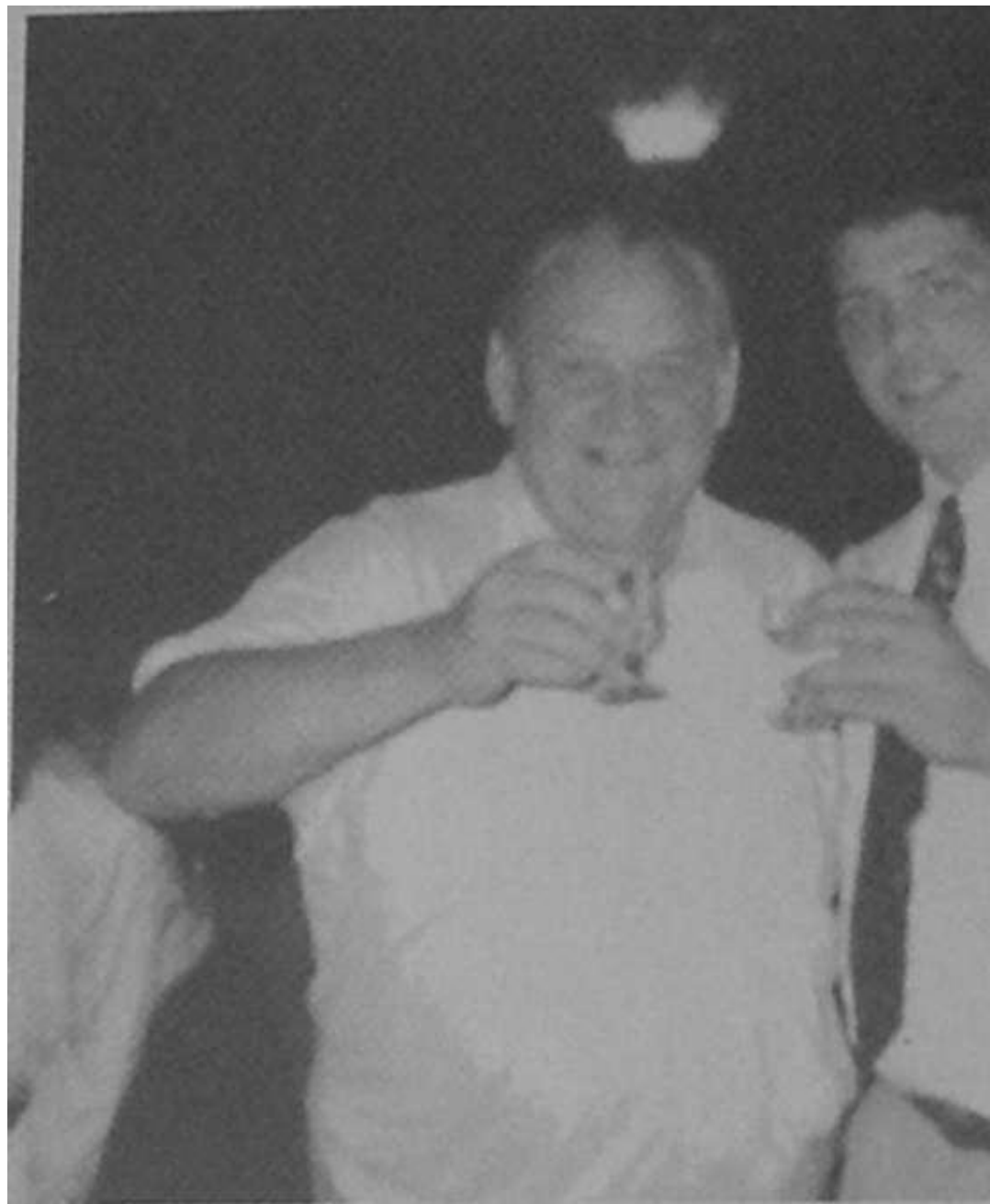
Bud Charniga (fig. 1-1) did a great service to sports scientists when he translated a series of Japanese works into English in the 1980s. However, the information in those works must be applied cautiously because sports science literature is very loosely and



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*Practical      Programm*

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

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*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  
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 exist inherent in communist systems, programs were learned how to move effectively and fitness at age 6, long before they entered elementary school PE programs in the U.S. are underemphasized and understaffed. Education is best done in small groups with adequate educational literature supports this concept. One instructor, sixty students, and 45 minutes. "Roll out the ball" physical education teacher operates in the context of overwork, poor administrative support, and inadequate resources. Now that physical labor (farm chores, household responsibilities, etc.) has been largely eliminated from the life of a child, an incoming high school

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*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 for the sport became inadequate for preparing athletes for the 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 of limited broader application.

Even in the absence of science to support the use of 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 best way to periodize for an athlete or team, and

programming, including periodization is used. We have made every attempt to turn 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-

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*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 excellent training progress. But it is important that recovery processes can always be exceeded with 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 marked by a performance plateau or



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