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CrossFit
JOURNAL ARTICLES

Training for the Aged

Mark Rippetoe



I am very old. At this writing I'm 51, and in the grand scheme of things that's not very old, I know. But yesterday I did a relatively intense deadlift workout, and I feel more like 71 just sitting here typing, and about 81 when I stand up to get coffee. This is in stark contrast to my previous existence as a young man, one who could have done the workout I did last night as back-off sets after the actual training. This is because I have accumulated lots of injuries, I don't sleep well, and—since I don't sleep well, or possibly as a cause of not sleeping well—I don't recover very fast. This affects my training schedule, my “progress,” and my very purpose for training.

In short, I am a masters lifter, and maybe you are too. Or maybe you will be, if you're as boneheaded, tenacious, and afraid as I am.

Masters lifters are obviously different from their younger hard-training counterparts. We have accumulated injuries that have to be considered when training is programmed. And more importantly, our response to training is blunted by our age: the stress/adaptation relationship is a function of the hormonal milieu, and old guys have an old-guys milieu.

I am literally afraid to quit training. It is tempting sometimes, like right now, to settle in to a routine that doesn't make me hurt one way or another most of the time. But I have had some limited experience with layoffs, and I don't do well without training, physically or psychologically. After even a couple of weeks my back starts to hurt in the absence of some type of work; it has apparently adapted to the abuse, as a heroin addict has to the drug. My knees feel better when I squat: I actually think they keep the bone spurs ground down.

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I have grown fond of high-volume chin-ups, and I'm pretty sure that they are helping me stave off rotator cuff surgery.

I don't like the way I feel without the work, and I don't think I'd like the way I would feel about myself without the work. Most guys my age—the ones at my class reunion a couple of years ago, for instance—are just physical piles of crap, looking many years older than even me. I am still just vain enough that this is motivational. I am scared enough of looking like this, and feeling like this, that I did a deadlift workout last night that hurts me today, beyond the normal soreness that a younger, less-beat-up guy would experience.

So I suppose I'll continue to train until some horrible accident prevents me from being able to. I suspect that there are many others like me, because I know at least a couple personally.

Not every masters lifter is like me. The great Olympic weightlifter Fred Lowe continues to train pretty heavy and compete at the national level in open competition. Fred is smarter and better designed than I am. In powerlifting, Jim Lem squatted 600 pounds in the 181-pound weight class in the 60-64 age group in 1989 (before the modern era of squat suits that added 300 pounds to the lift). This qualifies as legitimate. Right here in Texas there are several magnificent specimens of older manhood still lifting well; Gary Deal and Bob Ward come to our meets every year, and the masters division is usually fairly busy. And all over the world there are examples of 50-year-old-plus masters athletes who compete at or close to the open division level.

But lots of masters lifters—maybe most of us—train hurt. It's either that or not train at all, so we train hurt. Wichita Falls Athletic Club's very own Phil Anderson is having both his knees replaced in six weeks and swears he's going to squat 405 this week, and I promise you the silly bastard will do it. This kind of thing is why he's having his knees replaced, and probably most of us think like him: so what if it hurts? We've been training so long that the idea of not training is worse than the reality of hurting. No, this is not especially intelligent, but it is the way we think.

This attitude does not lend itself well to sympathy for people who claim that "pain" prevents them from exercising. I have Phil's knee x-ray and my lumbar MRI up on the wall here; they are ugly. I'll bet you that the vast majority of people who claim a diagnosis of "fibromyalgia" (which is really a description of symptoms, not a diagnosis) are not retired powerlifters who still train.

Accumulating injuries are the price we pay for the thrill of not having sat around on our asses. It is common knowledge that training prevents injuries, arthritis, loss of bone density, and a bunch of that other fun stuff that often happens as people age. That's not what I mean here. Training hard for competitive athletics and living hard for whatever reason has the potential to hurt you, and it usually does. For me, motorcycle wrecks, horse wrecks, barbell wrecks, and overuse injuries have

produced changes that alter the way I train (and live), and that must be figured in to any training plans I make. If I wrote them all down here, it would sound like I was whining, and we can't have that. Everybody my age that's been active and had any fun will have their own story.

Injuries to knees, backs, elbows, wrists, and necks can all produce program-altering changes in the ability to perform key elements of barbell-based training, and often they restrict the progress possible because of the resulting mechanical inability to squat, press, or pull from the floor.

Knees take a beating from most activities that involve rapid changes in direction. Most sports available to recreational athletes—softball, volleyball, and most commonly and worst of all, soccer, the most dangerous sport in the world—carry a high risk of knee injury. Neck and back injuries are often work-related, and are avoidable only through the constant mindfulness of load handling skills; they affect a huge percentage of the population. Wrist and elbow injuries are less common, especially for non-athletes, and often of an overuse nature, and some are actually preventable with exercise, like carpal tunnel syndrome. Some are not; tennis elbow is thought by some to be a permanent condition once it is established, correctable only by surgery. Car wrecks are a common feature of modern existence, and can

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radically alter the function of the body and the course of a life. The lasting effects of such accidents must be dealt with, and training with them is perhaps the single best way.

Chronic injuries also tend to screw up the hormonal milieu by causing the production of excessive levels of cortisol. Injuries always involve inflammation, because healing involves the repair of injured tissue and inflammation is a part of that process. Cortisol is a hormone secreted by the adrenal cortex, perched on top of the kidneys. Among its other functions, it acts as a catabolic, or “tearing-down” (as opposed to anabolic, or “building-up”) hormone. Its catabolic function is—at the right point in the process—to tear down inflamed tissue to help it heal, and in this way it acts as an anti-inflammatory. But large amounts of inflammation, as might be experienced with continually aggravated chronic injuries and new acute injuries, can cause larger-than-normal amounts of cortisol to be released, causing problems with its other functions—insulin antagonism, immune system regulation, electrolyte balance, and the regulation of various other hormones and neurotransmitters—as well as turning loose its catabolic capacity on healthy tissue. Injuries must be managed carefully for this reason, but training hard enough to force progress and light enough to keep injuries at bay is a tough juggle.

But progress is possible, and the amount of progress that can be made is a function of where you are in your training progression. There are many, many examples of fine competitive athletes who started their careers later in life. And if you start lifting when you’re 55, you’re still a novice, just like the kid who starts when he’s 18.

You won’t have the same progress trajectory as the kid; you have just as far to go to reach your genetic potential, but you won’t get there as fast—if you have the time, the dedication, and the desire to get there at all. Both of you have to pay the same attention to programming variables and lifestyle choices (nutrition, sleep, recovery, etc.), and both of you will go through the same stages of advancement as those variables are controlled to produce an adaptation to the stress of training. But masters lifters have a blunted response to physical stress due to the sad, rotten, unfortunate, and irritating fact that we have far lower levels of the anabolic hormones that aid in recovery and adaptation. And this, as much as your list of injuries, has the potential to limit your progress.

As we age, men rapidly lose the advantage we have over women when we are younger. Testosterone levels peak in our mid-twenties, hold relatively steady for another decade, and then begin to fall like women’s clothes at the kinds of parties we don’t get invited to any more. By the time we’re in our late forties, lots of guys are quite literally running on hormonal fumes. This is not good because, if you think about it, we are really not designed to be in our late forties; when human physiology was developing a couple of million years ago, nobody lived to be any older than about 25, and the unforeseen consequences of the artificially-enhanced longevity provided by society had no way to get planned for, what with hyenas eating everybody so careless as to get to 26. These same friendly hyenas rendered Cave Guy free of concern for Alzheimer’s, melanoma, prostate cancer, and the need for reading glasses.

Growth hormone drops off the same way, and it is less sexist about it. As we age, both men and women lose the ability to produce GH in response to stimuli that would normally cause an increase in its level in a younger organism. Growth hormone aids in recovery by stimulating the secretion of insulin-like growth factor I (IGF-I), the stuff that actually causes repair and recovery to occur. GH secretion declines with advancing age, and there is a linear relationship between GH and IGF-I levels, and therefore a linear relationship between age and the ability to recover from heavy work. Since they are always blessed with low testosterone levels, women primarily rely on GH for their endocrine response to training, which leads us to the rather inescapable conclusion that the older men get, the more like older women we become, hormonally speaking.

The reduction in level with age of both of these hormones is, of course, totally and completely a function of the histology of the tissues secreting the hormone, since 1) humans did not live long enough to develop a physiology adapted to low levels of anabolic hormones, 2) significant aging always takes place after reproduction and therefore has no bearing on human evolution, and, even if it did, 3) there is no adaptive advantage to be obtained from losing the ability to recover efficiently from heavy work. The human body does not intentionally lose the ability to secrete the hormones it needs to recover; it’s just one o’ them rotten deals, the effects of an aging endocrine system.

Weight training helps in that it keeps the hormone stimulus/response system functioning much better—

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and deteriorating much less slowly—than that of an aging sedentary person. Both testosterone and growth hormone secretion are pulsatile and diurnal, meaning that they vary in amount and level during the course of the day. They also vary in response to stress; a manageable, beneficial stress event like a workout causes a short-term increase in good hormone levels. Training maintains higher total average hormone levels, greater sensitivity to those levels, and the continued ability to produce an increase in response to stress.

But it's still not the rosy scenario we'd like it to be. Many things can contribute to a less-than-perfect anabolic response to training in the masters division. The main problem is that we generally don't sleep as well at 50 as we did at 18. This is because 18-year-old kids don't know what a mortgage is, have never really worried about their hemorrhoids, haven't been in a significant argument with a taxing authority, have never unwillingly slept on the couch, do not react that badly to isolated instances of excessive alcohol consumption, have not gotten subpoenas, never sunburn their bald spots, do not refer to ibuprofen as "Vitamin I," and very seldom wake up twice in the middle of the night to pee and then have trouble falling back asleep because they are worrying about remembering to change the oil in the car. Between those stressors themselves and the sleep disruptions they induce, we're in for a double shot of cortisol cocktail.

Sleep is critical to recovery. Nighttime sleep is the period during which hormone levels peak. Theoretically, at least. If the cycle is repeatedly interrupted, if it never achieves the level of depth that supports good levels of hormone production, or if it takes place during the daylight hours, the hormone response is less than optimal. A younger person is making enough testosterone and GH that their infrequent sleep abnormalities are not terribly significant, but for an older lifter bad sleep is like a shingles outbreak on a broken leg. We're not making enough anyway, and bad sleep disrupts the production of the tiny little bit we have left.

So when an older person starts a training program, their ability to progress is affected by these factors, and

a different set of expectations should be anticipated. Take for example the case of a 50-year-old soccer player who decides he's had enough of running around in silly-looking shorts and hurting his knees and now wants to train for strength and be somebody. This guy will make rapid initial progress just like a younger guy, but not as much, not as fast, and not for as long a period before he slows down. On a graph the curve of his novice period of linear increase will have the same general shape as that of the younger athlete, but it will flatten out faster and at a lower position on the graph. His progress will be linear in that he can add weight to every workout, but the increases will have to be smaller if he is not to get stuck quickly. And his injuries may prevent the use of important exercises: if his knee cartilage is too screwed up to squat, this will have a profound effect

on his progress since he will be unable to use the best exercise in existence for producing quantifiable, controllable, useful stress and adaptation. He will have to use more complicated, complex training programming much sooner than a younger lifter would, because he will exhaust his ability to rapidly adapt to linear increases in stress much more quickly

than a kid with a more cooperative endocrine system and no chronic injuries.

A 40-year-old mother of two active teenage girls who decides she's had enough of merely wanting to look and feel like she did when she was 25 might choose to start a program with competitive overtones, like CrossFit. She will immediately look, feel, and perform better, but not at the same rapid pace her kids would experience, assuming they had a decent coach. Under expert guidance and with grim determination, she can actually obtain the same fitness level as her kids, but in a year rather than six months. And with a couple more decades of the kind of experience provided only by life, she has the benefit of actually appreciating what she accomplishes.

It is likely that most people who start training later in life do it more for personal reasons than for the possibility of a professional sports career or a college scholarship. For this reason, most masters lifters will never need

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programming any more complex than that used by intermediate-level athletes. Some of us, like me and Phil, have long since left behind any possibility of lifting the weights we did twenty years ago. Personal records are reserved for brand-new exercises we either have never done before or have just invented. We are training to stave off death and further decrepitude, not to win competitions. As such, we are way out on the far right-side of the curve, the area of the graph that approaches the x-axis again. It's not as much fun as placing well in a meet you've trained hard for, but it is more fun than using a walker.

Masters lifters should follow a few common-sense rules, if they can stand it:

- Know where you are in your training progression, and try to act like it is important to you. If you are just starting out, aim for steady, constant progress every workout. If you are a retired competitor, resist the temptation to try to do things you think you "ought" to be able to do. Be realistic about this and things will go better.
 - If you're an older novice, you're not going to grow as fast as a younger person, and if you are a retired competitor, you sure as hell aren't going to grow as fast as you used to. Don't eat like you are. This is how people who are actually in pretty good shape get to look like they're not.
 - Don't be afraid to take a day, a week, or a month off if you think you need to. It won't kill you, but not doing so just might.
- Approach new exercises with respect. When adding a new movement to your program, don't ever go as heavy as you can the first time. Aim for about half of what you think you can do, and the second time go about 75 percent, saving the heavy effort for the third time or beyond. This may be the best advice in this whole sorry article. Please heed it.
 - Listen to your body. That is cliché, but things get to be clichés for a reason. If your elbow is pissed off, don't blame it—blame you, and don't just go ahead and press heavy anyway. This will be the most ignored advice in this article.
 - Training is supposed to be fun, at least most of the time. If it stops being fun, maybe you are doing something wrong. This is also not training's fault, it's yours. Take a short layoff and then change something.

Older athletes are some of our better people. They are responsible, structured, brave individuals with a strong work ethic and great intelligence, determination, and character, and we need more of them. Yes, more people like me and Phil. Save your Advil coupons for us.



Mark Rippetoe is the owner of [Wichita Falls Athletic Club](#) and [CrossFit Wichita Falls](#). He has 28 years experience in the fitness industry and 10 years experience as a competitive powerlifter. He has been certified as an NSCA Certified Strength and Conditioning Specialist since 1985 and is a USA Weightlifting Level III Coach and Senior Coach, as well as a USA Track and Field Level I Coach. He has published articles in the *Strength and Conditioning Journal*, is a regular contributor to the *CrossFit Journal*, and is the author of the books [Starting Strength: A Simple and Practical Guide for Coaching Beginners](#) and the forthcoming [Practical Programming for Strength Training](#).