



# THE NEWSLETTER FOR MASTERS ATHLETES.

Vol 1. Issue 1. Nov/Dec 2006.

## Function and flexibility.

A week or so ago I was at a conference in Las Vegas. Vegas is a great place to just sit and watch people, and unlike most places, you will observe all types, ages races and sizes of folk. And one thing you notice: many of them move differently or in what I'll call a non-standard way. In many cases, for example a person who is quite obese walking, what one sees is the body's adaptation to an inability of the body to work in the most efficient way it can, but sure as heck, it will find a way to get the job done.

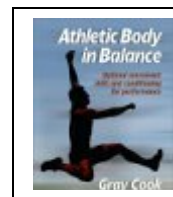
These little neuromuscular accommodations are common in athletes too, particularly endurance or ultra-endurance athletes who bear a heavy training load. Add to this the typical degeneration in flexibility and range of motion (ROM) that occurs progressively as Masters athletes age, and we can see that a problem, or problems, might arise.

To my dismay, this has recently become true for me. I have developed a stiffness in the hips that I am now working to correct. I noticed it first while doing some one-armed dumbbell snatches, and seeing that I rotated my body slightly when doing reps with my right arm.

Other indications that you too may be developing improperly compensated movement patterns are notable disparity in right and left strength or flexibility, new stiffness after workouts, or

unilateral soreness or stiffness. One writer has described soreness and stiffness like this as evidence of an "energy leakage" in the body and it's a great term. Because certainly if your body has had to adapt improperly to do whatever it is you want it to do, almost certainly it is doing it inefficiently. As a Masters athlete, you should attempt to operate in as efficient a way possible. The off-season or Winter is the ideal time to identify any problems and remedy them.

It's sometimes difficult to identify these issues in oneself. A skilled physical therapist who's experienced in sport could do it, and skilled coaches might,



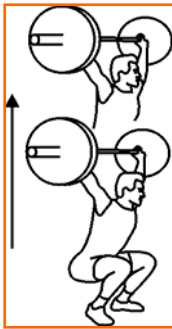
but in many cases you will be left to your own devices. One resource that's extremely affordable and VERY effective is Grey Cook's book "Athletic Body in

Balance". This book has a few simple routines that will help you identify improper movement patterns, strength inequalities and deficiencies in flexibility.

And then, it demonstrates how to progressively work on fixing the problems. About all the assessment work can be done at home, and the exercises that require a gym are generally limited to pretty basic equipment. The book is available from our Web store for less than \$14.

If you believe that you have no flexibility or movement issues, I have one test that is quite simple, but, in my

experience, very telling. Arm yourself with a dowel (aka a broomstick) and try an overhead squat [CAUTION: If this is your first time with an overhead squat



DO NOT use a barbell, loaded or otherwise. I almost guarantee that you will drop it.] Our picture shows the squat with a loaded barbell, but it's just the same with a dowel. Note how the body is upright, heels firm on the floor, dowel

behind the head. Can you squat down fully with your heels on the floor, body not leaning forward and keeping the dowel behind your head? Oh, and does the dowel stay level on the way up and down? If the answer to any of these questions is “No”, then you have a little work to do.

Frankly, a lack of flexibility and mobility – or muscular imbalance -- is an issue that's very easy to overlook, ignore, and just plain hope will go away. But it won't. In fact, if you are suffering thus, the problem will likely get work and become significantly performance limiting over time. Identifying and fixing any problems will certainly aid both your performance and athletic longevity.

### Job #1 for Masters athletes?

If we research the physiological changes that occur in the bodies of most Masters athletes, we will most likely read about declines in speed and strength, maybe flexibility and range of motion. But probably the most important decline is in the capacity to recover. And that's not just the capacity to recover from strenuous matches, racing or training, but also injury.

A conversation with a Masters athlete usually turns up that recovery from injury is the one thing that everyone notices takes longer as we age. Acute injuries, that is, trips, falls, crashes, etc., may be avoided by diligence, but sometimes, well, they just happen. But chronic over-use injuries, for example tendonitis generally don't just happen. We worked very hard to make them happen. And sometimes, even though I know you'll find this hard to believe, folk keep training with an over-use injury and hope that it will just go away. Or that they'll “train through it”. Well, of course, in most cases, the injury doesn't go away. In fact, often, the injury gets worse, and the athlete has to sideline themselves. You probably know someone this happened

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to. Maybe intimately ☺? So we encourage you to think of avoiding over-use injuries as Job #1. For the most part, they are self-inflicted, avoidable, and gave you plenty of warning before they deteriorate into the wince-generating sore spot that you ended up with. Although the phrase is rather tired,

listen to your body and rest when a sore spot starts to build that can't be explained away by delayed onset muscle soreness or some other *normal* post-exercise issue.

### Sleep. The most powerful legal ergogenic?

Ultra-endurance athletes train a lot. No, they *like* to train a lot. Multi-sport athletes are possibly the worst cases in this regard. They often have to cram training for three or more sports, plus strength & conditioning into a week that also has to accommodate work, school, family commitments and a host of other demands on their time.

Note what was **not** included as a priority in that week. Sleep. I'll lay good money that many, if not most ultra athletes are sleep-deprived. And it's a huge mistake. Forget athletes, even businesses are beginning to learn the value of sleep.

The October 2006 Harvard Business Review contains an interview with leading sleep specialist Dr. Charles Czeisler. In the interview Dr. Czeisler talks about many things pertaining to quality sleep, but some of the things you might want to consider are:

Four-five days with only 4 hours a night impairs you to the same extent as if you were legally drunk. Don't you have to wonder how much of a factor sleep deprivation might be in bike accidents afflicting triathletes and road racers?

Lack of sleep makes you fat. It increases appetite, reduces the body's ability to metabolize glucose and increases production of ghrelin, a hormone which increases carbohydrate cravings. The correlation between sleep deprivation and increased body fat is also noted in the US National Health and Nutrition Examination Survey and the US Nurses' Health Study. The latter study, which tracked 68,000 women for 16 years, found that those who slept an average of 5 hours a night gained more weight during the study period than women who slept 6 hours, who in turn gained more than those who slept 7. Remember the ghrelin? Well, sleep-deprived rats eat about twice as much as rested ones. As go rodents, so go men.... in those allowed only 4 hours' sleep for two consecutive nights, ghrelin levels rose 28 per cent, and the (human) volunteers reported they felt a lot hungrier.

We also know from numerous studies that sleep deprivation can negatively

impact cardiovascular performance, emotional stability, reaction time and cognitive ability. And, on top of all that, recovery. The body diverts resources to recovery while we sleep. For example, skin tissue multiplies at twice its normal rate during slow-wave sleep.

And remember that sleep loss is cumulative. Any deficit you incur doesn't go away. And, alcohol consumption makes the effects of sleep deprivation worse.

Sleep is important for all athletes, 8 hours seeming to be the magic number. But it's more important for Masters. At

and above 40 years of age, sleep becomes more fragmented, and hence issues that impact sleep quality are magnified.

So, we propose that sleep may be the most powerful, legal ergogenic (performance-enhancing) aid. Getting a full 8 hours a night, **every** night may do far

more for your performance than tacking on that extra swim, bike, run or lifting session.

### **Running form: speed and longevity.**

I remember being told – I think it was at a USA triathlon class – that athletes shouldn't run too much. Particularly on hard surfaces like concrete as it was wearing on connective tissues and cartilage, and thus reduced athletic longevity. I'm not sure how you hammer that lesson home to many died-in-the-wool runners, but I am fairly sure of one thing. **How** you run most certainly may have an impact on your athletic longevity.

If you are landing on your heel, in front of your center of gravity (sadly, how you will see many of the models in running catalogues – tells you they are models, not runners, and you shouldn't emulate them), you are almost certainly

### **TRAINING SAFELY**

Always train within your own capabilities and comfort zone. It is one thing to test yourself with a breakthrough workout. It's something else to push beyond your capabilities. If you ever feel out of your depth, stop the workout and tell your coach.

transmitting a lot more shock to all the joints from heel to hip than you need to. And you're almost certainly running slower than you need to, too.

Try experimenting with your running form so that you land on a full foot (on the ball but not up on your toes) directly under your center of gravity. Different "styles" of running that you might read about all teach this: Evolution, POSE, Chi and others. There'll be a lot less impact on the joints and you'll run faster as you won't have to stop and pivot over that extended leg.

Want to *feel* the difference? Find a convenient hill, warm and run down it at full speed leaning forward a bit. As you will be over-speeding you will feel out of control so be careful. Then slow down. How do you do it? By sticking a leg out in front of you, almost certainly. So if you run that way to slow down, why would you want to run that way in the first place?

#### **SAFETY: 360-degree awareness.**

It's been my misfortune lately to read of more than a couple of very serious auto-bike accidents. Some fatal, some not, but in all the cases there was at best, very serious injury to the cyclist. In none of these cases was the rider found to be at fault.

Is there anything more you can do to prevent yourself joining the ranks of these injured or dead cyclists? I think so. I call it 360-degree awareness and yes, it takes a bit of work. By 360-degree awareness I mean knowing what is going on *all* around you, *all* the time. It means buying a mirror for your bike or helmet and using it, even if they're not "cool". It means looking left and right, not just ahead. Oh, and while we're on that subject, you DO look ahead, don't you? That is, you don't ride with your head down focused on the tarmac six feet in front of your wheel.

Know, or try to predict what drivers will do. Is that slowing car coming from behind going to make a right and cut

you off? It won't kill you to slow down and be sure, but it might if you don't and they do. Is someone approaching an intersection from your left going to stop? Be aware and be prepared.

I know this sounds so basic, but maybe on a little less sleep than we should have, mulling over the pre-occupations of a busy life we aren't always as focused as we should be. Ride safely out there.

#### **Hills go down as well as up!**

Don't waste your hill workouts when running or on the bike. Too many athletes work hard going up, but then cruise downhill, to rest for the next uphill repeat. If you do that, you're leaving a lot of valuable training time on the table. If running, pick a gradient that you can run up and down in good form. When running downhill, let yourself overspeed a little and work your turnover rate. As you did on the way up, work on a light, quick footfall. Ideally you should hardly be able to hear your footfalls. Running downhill also conditions your quads for any downhill sections in races.

If you're on the bike, use the downhill to practice your speed skills and pedaling finesse. Build up speed and cadence until you are just starting to bounce in the saddle, then really focus on pedaling in circles and see how much faster you can pedal without bouncing in the saddle. You'll be surprised.

Please, literally and figuratively watch your step when doing these fast downhill drills. Don't let things get way from you and don't run into anything.