“You must increase stress to produce gains.” —Hans Selye

This Selye quote holds true at any age, but the irony of getting older is that increasing stress gets harder and harder and so too the “gains”. Joe Friel published Cycling Past 50 two decades ago. In a soon to be released book Joe will update the aging cyclist with the latest research offering new insight into this age old question. The following Q and A session offers insight for coaches in dealing with this ever increasing demographic client base. We hope you enjoy this important update. - Ken Kontor, publisher, Performance Conditioning Cycling

PC: What inspired you to write a book on the 50+ cyclist and what are your goals with the book?

JF: I turned 70 last December. None of my previous big-candle birthdays—40, 50 or even 60—got my attention. 70 did. I had been thinking about it for the better part of a year. So six months prior to the Big Day I decided to read all of the aging athlete research. The last time I read it was in the mid-1990s when I wrote Cycling Past 50. There wasn’t much research on aging available then. But with the Baby Boomers now entering their late 60s I found that this has changed considerably. In the last 15 years or so there has been a tremendous amount of aging research done. I’ve read these studies almost daily from June through September of last year. So last fall I decided to write a blog on what I was learning. That turned into a dozen blogs or so over a three-month period with great feedback from my readers. That convinced me that I then needed to write a book on the topic to reach a bigger audience.

I’d like to help senior athletes understand what the research says about our performance and what can be done to improve it.

PC: What is the latest research coming out on the aging process and their implications for the senior cyclist?

JF: The common thread of most of the research is that the major contributors to the decline in performance are 1) a loss of aerobic capacity, 2) a loss of muscle mass and 3) an increase in body fat. Increasing body fat doesn’t necessarily mean increasing body weight since muscle mass is declining. These probably aren’t great revelations for older athletes. I think most understand these are happening. But there are also a lot of other possibilities for the athlete to consider when it comes time to train. So what I want to do is narrow the field of what needs our focus as we age.

The research indicates that lactate threshold and economy of movement, the other two definers of endurance fitness besides aerobic capacity (VO₂ max), are seldom problems that need to be addressed by experienced senior athletes. That’s not true for novices, however. They still need to devote a considerable amount of training time to these.

Also of interest I found that the trend is now for those who study aging athletes to believe that most of the loss of performance due to these three changes can be explained mostly by lifestyle, which includes training, and much less by genetics. In other words,
perhaps 60% of the changes that impact performance are due to “nurture” and only 40% to “nature.” The bigger portion has to do with what we do rather than what happens to us. In other words, performance can be improved significantly by focusing our lifestyle and training on the Big Three—aerobic capacity, muscle and body composition.

**PC: What are the common errors senior cyclists make in their training and recovery process?**

**JF:** As athletes move beyond their 50th birthday they increasingly gravitate toward longer, slower workouts done at a steady state—long, slow distance. That “lifestyle” change contributes to the loss of performance that happens naturally. It’s just the “use it or lose it” principle. For example, if the athlete seldom or never challenges his or her aerobic capacity with high-intensity efforts it will decline. Older athletes also tend to avoid the weight room. More use it or lose it. And their diets which worked well when they were young now begin to contribute to a slow increase in belly fat.

The nature aspect of the total decline is speeded up by these lifestyle decisions resulting in an average 1% loss of performance per year. So by their 70th birthday an athlete living and training this way may expect a 20% loss of performance since he or she was 50. Several longitudinal have shown that the loss can be reduced to less than a 0.5% per year by changing training and lifestyle.

**PC: Can you provide a list of priorities 50+ cyclists should establish in their training and tips on how to manage each priority?**

**JF:** I recommend that the senior athlete do three things to shift their lifestyle and training in favor of a higher performance capability, as follows.

1. Include aerobic capacity intervals in training. The key to these workouts is their intensity. On a 1- (low) to-10 (high) perceived exertion scale the intensity of an aerobic capacity session is a 7 or 8. With a power meter that’s zone 5 (Coggan zone system). How long the durations of these sessions are and the frequency of their inclusion in training are the keys to getting started if one has not done such intervals in some time. While a young athlete may be able to start with a workout such as 5 x 3 minutes at zone 5 with 3-minute recoveries, the senior athlete who has not done such training in sometime might start with 10 x 30 seconds at zone 5 with 30-second recoveries. The younger may do this workout once a week or perhaps even twice. The older probably needs more time between these sessions and so may include it once every 9 days, or for some, perhaps twice. That implies changing the periodization microcycle with the seasons. I explain how to do that in the book. Also, aerobic capacity training needs to be done year round by the senior—not just in the Build period. All that changes seasonally is the session workload and how often the workout is done. This is a rather lengthy discussion that is explained in detail in Chapter 6 of the book.

2. Regularly do strength training for the primary mover muscles. In cycling that would be something such as loaded step-ups, which is probably much safer for the senior athlete who hasn’t done squats in years. Loaded ankle-knee-hip extensions should be complemented by core strengthening so that the torso and hips are stable during high-power episodes such as aggressive climbing and sprinting.

3. Adjust lifestyle, including diet, if needed to reduce body fat. If a senior athlete is not adding a little more fat around the belly every year then this probably isn’t an area of concern.

   There are a few physiological reasons why we gain belly fat with age, but they all have to do with changes in our bodies. Changing one’s lifestyle with a few adjustments may help. I’ll discuss two of them here.

   Increasing belly fat may have to do with one’s sleep. I’ve known many older athletes who sleep very little at night—perhaps 6 hours or less—because they don’t think they need it. There are many studies showing an association between low-duration sleep and body fat gains, especially when your aging body is primed to store fat. Most senior athletes should get at least 7 hours of sleep each night. During sleep the body releases hormones that help to produce anabolic changes—the body grows fitter and perhaps leaner as a result. If sleep duration is reduced hormones are not available to produce the adaptations from aerobic capacity intervals and strength training. All of that work is then somewhat wasted.

   Lifestyle changes may also concern diet. Including more protein in the diet than is common may assist with muscle building in older cyclists. This is also the time in life to replace some of the junk carbohydrate that we ate a lot of when we were young with fruits and vegetables. The biggest dietary challenge most senior athletes experience, as with most Americans, is eating way too much added sugars. When we were young it didn’t present much of a problem due to our hormonal levels. But now that those are in decline the sugary food you eat is highly likely to become belly fat. Eliminating sugar from the diet is a very difficult change to make. It has been shown to be more addictive than heroin. And it’s found in almost all packaged foods. It has no nutritional value, but helps to add unwanted fat to the body due to the insulin spikes that accompany eating it. Nearly all athletes could lose a significant portion of their unwanted fat if they simply made this one change. A number of athletes are finding success with removing belly blubber by replacing sugary foods with dietary fats.

**PC: What is your single best piece of advice you have for the cyclist to cheat the aging process?**

**JF:** Train regularly with high intensity—aerobic capacity intervals and heavy loads in the gym. This holds the promise of greater
performance on the bike if you have not been doing such training. The key for the senior cyclist is to be quite cautious with starting such a training program. The workouts must begin at an easily manageable level and progress conservatively. Rushing into high-intensity training is dangerous for the older athlete who has been doing primarily LSD. Moderation is the key to avoiding injury.

**PC:** When will the book be released and how can coaches get a copy?

**JF:** Fast After 50 will be on the bookshelves, including in electronic version, around the end of the year. It will also be available through my website (www.joefrielsblog.com) and VeloPress’ (www.velopress.com). It will be published in both English and German.