

TRAINING VOLUME FOR MULTISPORT

By Rob Maxwell, M.A.

I'm an Exercise Physiologist, so I've seen countless articles on training and endurance exercise. I've probably read most of the major "breakthroughs" in exercise science, yet I'm here to tell you that the statement *training is an art as much as a science* really comes true when it comes to the proper amount of volume of training for triathlons. There are so many different theories and even countless studies that contradict what the last person claimed. There are those that log so many miles that they must get paid for each mile they grind out (in some ways they do). Then you have the minimalist that gets it done with very little volume. I once spoke to a guy who raced the Ironman distance. He pretty much raced at a pro level, and I think for a while that was his classification. In any event, I'll never forget the day he told me he ran just 10 miles a week. Yup, that's it. And his marathons off the bike were pretty darn impressive! So again, it's as much an art as a science. What works for one may not work for the other. What I want to do with this article is just talk a little bit about what we KNOW about volume, and also talk about the difference between looking at it through exercise physiology eyes and looking at it through pure sports eyes. We have a unique sport along with other endurance sports, because we forget that this is exercise and falls under the microscope of exercise, so our sport is not only a sport, but exercise.

WHAT IS VOLUME?

Training volume makes up the combination of *frequency* and *duration*. The only component missing from this is *intensity*. The three combined make up the "training prescription". I must add here that they are all related. In other words, each affects how much you do with the other. It's all a symphony. Frequency is pretty cut and dry. It's how often you train. Duration can be measured in two ways: Time or distance. Both work fine, and I'd say are pretty equal. But if you pick one over the other, time is more objective than distance. For example, if an elite athlete and a beginner both go for a 30 minute run, they're both putting in an equal amount of duration—correct? But if they both go for a 5 mile run, the elite is putting in way less time. So 30 minutes is 30 minutes (your body understands time and intensity). The other down side to distance is it's easier to get obsessed and add on for the sake of adding on when it doesn't add to improving your fitness level. So that in a nut shell is WHAT duration is.

EXERCISE SCIENCE PERSPECTIVE VERSUS ENDURANCE SPORTS AS A SPORT

Endurance sports are very unique in my mind. Endurance sports are aerobic exercise, so all the rules, studies, and laws we know about exercise science apply to endurance sports. And it's a pure sport too. Take the exercise science out of it and you still have the technique work with swimming and strategies, you still have the technique work with cycling and the equipment which is all pure sport, and even running has its technique work that goes beyond exercise physiology. For this article, we'll put them all together and list the important variables and considerations regarding multi sport volume of training.

EXERCISE SCIENCE AND VOLUME

The American College of Sports Medicine is a good place to start. The volume guidelines for aerobic exercise, according to the ACSM, are a frequency of 3 to 5 days per week, and duration of 20 to 60 minutes to get results. Well, that's pretty short on the maximum end isn't it? This is because not TOO much more aerobic benefits (health and fitness wise) happen outside of 60 minutes of continuous exercise. What does happen is (say on long runs and long rides) is that your body does get more efficient at burning fat for fuel, which is important for our sport, and your joints, and saddle spots, and mind get used to being out there for long periods of time—which is important. But with regard to things happening such as increased heart and lung function, not too much happens outside of that hour—that's where the "sport" comes in. Because for general health, why would you go beyond that? Sure you're burning more calories, but I don't see the need to take calorie burning to that extreme. But for the sport, don't we need to go longer? Sure---if you're doing long course especially. But again, **MOST OF IT IS MENTAL**. But you do want to teach the body to become more efficient by burning more fat for fuel—this is a key to doing "better" at Ironman! And you **DO** have to get your joints used to pounding. That's so underrated. Yes, a fit athlete probably can go out and get through a marathon without doing much in the way of long days. And if they're genetically gifted, they might even do well, but they're taking chances with their bodies. What could happen is you may not get through the marathon or half-marathon simply due to your joints breaking down from not being accustomed to the pounding, and if you do, you'll most likely be way more sore than somebody that trained properly at the least, and maybe even injured. In short, your body needs to be used to the pounding with incremental increases of duration each week.

A word on **FREQUENCY**: What does exercise science state about this? Most studies indicate that frequency is the number one correlate to injury. Yup, you read that right. Not intensity. And why? Simply put—it's running, riding, or swimming on tired joints or muscles, which increases your chance of injury. When joints and muscles are trying to recover from a hard day's work the day prior, and you hit them again—this is a recipe for overtraining. So, frequency needs to be well planned and well thought out. Which brings me to the big confusing points of cross training and multi sport. First, understand what cross training was originally brought out to do in the world of aerobic exercise. It was supposed to replace one mode with another so you can get as much cardio benefits and take a load off of a potentially overloaded mode. For example, you'll get the cardio benefits by swimming and give your running muscles and joints a break. And research supports that this works. But what about the exercise science of at least 3 times per week of frequency and the the rule of specificity, which states that in order to become a better runner you must run and in order to become a better swimmer you must swim? This is all true. So what has happened in many TRI circles is that rather than use "cross training" as the rule for frequency, many triathletes do all 3 modes with the frequency that they would do if they were just training for one sport. So what does research science state about that? I've seen many different studies, and they (as you might guess) contradict each other. In other words, some studies have shown that you can use the cross training philosophy and have success simply keeping the frequency down per sport, while other studies have shown that a greater degree of frequency per sport leads to ideal performances. I will say that the more you try to squeeze into your schedule, the greater the chance you have of overtraining. What does science say about total volume with regard to how much helps? It doesn't! The number one correlate to raising performance in all studies is raising the Anaerobic Threshold, which occurs by spending time in

and around the AT (speed work). The more volume you do does appear to be correlated with greater endurance, but exactly where is a mystery. And too much can lead to breakdowns. So with this issue, it's quite clear---there is no clear answer! And it shows that we are all individuals.

WHAT ABOUT LOOKING AT IT FROM A SPORT'S PERSPECTIVE?

Long Slow Distance (LSD) workouts and Over Distance (OD) workouts are two different things. Both of these are developed more in the "sport way" of looking at things, and both concepts have great value. But they are NOT the same thing. LSD workouts are simply easy. When you look at exercise science, this would be what is considered an aerobic workout. Typically this would be the intensity of less than 75% of your VO2 max. But the key is, distance is not the variable here. An LSD run can be as short as 3 miles or 2 miles or 30 minutes... What gets people thrown off is the "long" part of it. Over Distance workouts are great and they are what we would call a strategy. The thinking is that if you get used to a distance slightly longer in training than you're going to race, then racing a shorter distance with greater intensity is easier. The old standby formula that has done pretty well over time is taking 125% of the distance raced and use that as an OD workout during the week. So take, for example, the Olympic Distance Triathlon. The OD workouts for the 1 mile (roughly) swim, 25 mile bike, and 6.2 mile run would be roughly 1800 yard swim, 31 mile bike, and 7.5 mile run. So this theory has some merit, but where does it apply to long distance TRIs? I wouldn't recommend doing OD workouts for long course races, if you know what I mean!

Total volume in the "sport" theory is very debatable as well. Most would agree that it still comes down to intensity as far as getting faster and fitter goes, but many have different opinions on how much volume seems to create the most endurance and preparation. Again, I think this is highly variable. One thing to keep in mind is that the top pros who are putting in 3 to 5 hours daily during the week and even longer on weekends, are just that—TOP pros. And they typically don't have 9 to 5 jobs, and they do have people helping them with nutrition and recovery. So don't be misled by the PROs' training. I think it's more important to think about making sure EVERY workout has a purpose versus thinking of how much total volume you should do.

SO HOW MUCH DO I DO?

Where do we go from here? Let's start with Frequency. Number one, remember it's about trial and error, and you're simply going to have to find out what is the best frequency for you. Both studies and experience have taught me that the cross training method (replacing modes) works well, as does simply getting in at least 3 each of the 3 modes. You're going to have to determine what works best for you. If you know you are prone to overtraining or injury, then I would start with the cross training theory. If you're prone to lower body injuries, maybe keep your running frequency low, your cycling frequency medium, and your swimming frequency high. I've used low frequency (cross training) and higher frequency theories with myself and with people I coach, and it comes down to what seems to work best for one may be different for another. I can say that I had my best ½ Ironman bike split ever riding just ONE day per week. I'm not advocating that, but simply pointing out that different schedules work. I do suggest with frequency that you swim on one day and run, bike or both on the next. This does rotate back and

forth stress from upper to lower body, which appears to help prevent injuries. So a sample schedule could be: M-W-F swim, and Tues. run-Thurs. bike, and Sat. bike/run-Sun. off. This is just an idea.

This is not an article about intensity, but as I stated above, it all works together. So you have to consider that when deciding how much volume to do. Naturally, you can do MORE if the intensity is lower, but you get faster with more intensity, so you have to balance that equation out. I've always used 1 to 2 days of quality (higher intensity/speed workout) per sport per week after the base building period. Again, there is no one magic bullet that appears to work well. Some people can get away with more with swimming, and that's fine as long as it works for you.

The final consideration is Duration. How long your workouts should be is really dependent upon what distance you are racing. I do believe in doing a long day OR over distance day on a regular basis. If you're doing long course TRIs, I do believe it's critical to do a long workout for each sport on a regular basis. Notice I didn't say weekly? This is because I've seen athletes rotate back and fourth their long days from cycling to running every other week while training for long course events. This works well and helps to avoid over training. How long? Again—that's a loaded question. Exercise science tells us that we do quite well with teaching our body to use fat for fuel in the 2 to 3 hour workout range. But is that enough to get the mind and body ready for 112 miles on the bike? I highly doubt it. But I also don't believe in giving absolute numbers. I believe more in adding time to your long workouts on a regular basis and monitor things as you go. Experience and trial and error will tell you exactly how long.

With short course racing (Olympic Distance and under), I do believe in the OD workouts for the "long day". This has less to do with the intensity, although I see no need in hammering these workouts. But doing them slightly faster than LSD pace is recommended because it does get the mind really ready to race. (Again—the sport way of thinking). Say you do Sprint Tri, and the bike portion of the race is 12 miles and the run portion of the race is a 5K. Then the OD for the bike would be 15 miles, and the OD for the run would be 7.5 miles. Say you go on a Saturday OD brick workout and ride the 15 miles pretty briskly and run 3.75 miles fairly briskly (maybe threshold pace)... Don't you have confidence in knowing you can race a little shorter, yet harder? This is a strategy that I've always believed in. Too bad we can't apply it to long course (please don't try!). This is not to say that you can do longer days for short course as well to build more endurance. This is a hot topic of debate. Many "experts" feel that LSD short or long duration does short course triathletes very little good since most of their races are just short of or just over the Anaerobic Threshold, while others advocate teaching the body to burn fat and doing a lot of volume of pure aerobic training as well. Again—trial and error. My philosophy is that regardless of the distance you're racing, I believe in doing a lot of aerobic volume in the base and build on time. Then focus on shorter, harder workouts in season when you're training for short course.

So we've got the OD and the long day covered. What about how long the workouts should be during the week? Once again, I believe in looking at it differently. I would rather have people focus on what they're trying to accomplish in a particular workout. What are you trying to accomplish that day? I don't see the point in doing really long workouts during the week unless your schedule is different and you don't have free time on the weekends. But if you're doing

your long work on the weekends, what is the point in doing long workouts in the week? I've always advocated doing your long days for endurance, and then doing your speedwork to get faster. Those two workouts will give you what you want—go farther faster. So workout volume during the week is highly individual. **HAVE A REASON FOR DOING EACH WORKOUT.**

PRETTY GOOD IS USUALLY GOOD ENOUGH

To conclude, I want to point out the value in understanding that if you're staying healthy and injury free and you're getting better, then your plan is good enough. Remember, there is not ONE way. This is why when I write, teach, and coach, I try to point out that there is more to all of this than what you "should" do. There are things to think about, things to learn, and then you have to cut it loose and have faith in yourself. If it's working, it's working. I've seen so many athletes pull away from what's working just because of something they've heard or read. Don't do that. There is proof in the pudding. If you're not happy with results, then do your own research and TRI again. There is more than ONE way to get to your destination.