

## **Seven Rules To *Lift* By** **By Diego Schmunis - CPT**

Ski season is almost over, and that means that spring is just around the corner, which signifies... you guessed it: another triathlon season is fast approaching. It is this time of the year where most triathletes start coming out of their long winter "hibernation" and get ready to focus on designing another successful and fun filled racing season. Our first stop is, if you follow most training plans, the *base* period. A period to start working on our aerobic engine, a period to start getting the body ready for the stress of training and racing. It is during this phase of the training plan where most athletes start heading back to the gym to work on their muscular development and conditioning to allow them an increase in power and endurance for the races to come.

However, this article is not about weight training routines, plans or exercises. No. In these pages I want to share with you seven simple and practical rules to help you avoid some of the most common mistakes, potential injuries and at the same time allow you to maximize your time in the gym. These are the same seven rules I give all my clients:

### **Breathe correctly**

There is no arguing that breathing is an essential part for staying alive, but most people fail to realize how important proper breathing is while exercising, especially while lifting weights. A common misconception is that you need to hold your breath while lifting weights. I don't know where this belief originates from but I will give you two good reasons for not doing so: 1) Holding your breath increases intravascular pressure, which in turn puts your vascular system, including your lungs and heart, at risk. 2) If you hold your breath you do not allow for the exchange of gases to happen. A byproduct of breathing, at the cellular level, is the production of carbon dioxide which is toxic to your body. Your arteries carry oxygen rich blood from the heart to the muscles and your veins carry the carbon dioxide to your lungs for purification. If you hold your breath the exchange of gases cannot take place and you are, basically, asphyxiating and depriving your muscles of the oxygen that they need in order to produce ATP for a muscular contraction to happen. You would think that something as simple as breathing will come natural when you are lifting weights, but for a few people having to coordinate their breathing with the repetitions is an exercise in itself. Ideally you would want to inhale on the eccentric part of the repetition, that is the part of the repetition where you relax/stretch the targeted muscle (i.e.: lowering the platform towards your chest on the leg press station), and exhale on the concentric one, that is when you contract the targeted muscle (i.e.: extending the legs on the leg press station). If you have trouble coordinating your breathing with the repetition then try doing the exercise with very little weight so that you can concentrate on correct form and breathing. This will help you build muscle memory (like riding a bike). Another part of breathing correctly is that you want to breath down by your stomach, using your diaphragm. As you exhale, contract your abdominal muscles slightly and breathe out with force. I tell my clients to imagine a cake with 100 candles in it and that they need to blow them all out at once. You will notice that as you get your breathing in sync and start breathing a little bit more energetically that the exercise will start to feel easier, lighter and you will feel more powerful.

### **Lower back support**

One of the most frequent ailments that I hear about from my clients and other people in the gym is about lower back pain problems. Fortunately there is something that you can do to help avoid lower back strains and injuries: whenever you perform an exercise that provides back support (i.e.: leg press, bench press, etc.), make sure that your lower back is flat and is being pressed against the chair, bench, etc. Here are two simple things that you can do to help provide your lower back the support that it needs: 1) When you get on a piece of equipment, first notice if your lower back is pressed against its support or not. If it is not, notice where your back arches away from the support, roll up a towel along its long side and place it



on that area. 2) Readjust your sitting position so that your hips are tilted slightly forward (as if you were trying to contract your lower abdominals). If you are laying down on a bench, try bending your legs at 90 degrees and lifting them so that your thighs are perpendicular to your torso. Including abdominal exercises will help too but it will take some time to build them so that they can support the lower back. If you choose to go this way, make sure that you hit the four core parts of your abs: upper/lower abs, obliques and lower back.

### **Never lock a joint**

This rule applies mainly to your lower body (i.e.: the knee). Here are two good reasons why you should never lock a joint: 1) When you "lock-up" you are transferring all the pressure of the weights away from the muscles and right into the joint. That compresses the bones close together and with repetitive use, or should I say "abuse", could cause a number of injuries. 2) When you transfer the tension and pressure to the joint the targeted muscle relaxes because now the joint is supporting the weight. Your muscle is taking a "mini-vacation" and that means that it is not getting its share of exercise. This is not to say that you should not fully extend your limbs, just stop short of a full extension that would lock you up. An addendum to this rule is: stretch after each weight training session, especially around the joints.

### **Perfect technique**

Do you see big guys at the gym lifting even bigger weights? Are they twisting and rattling in an attempt to do a few more reps? That is what is called "cheating" (i.e.: moving your elbows forward on the bicep curl, throwing your torso back on the seated row, etc). You are not performing the exercise correctly because the weight is too heavy and your body is trying to find a different angle or leverage point to complete the repetition. This is not good for two reasons: 1) You will not get the maximum benefit out of the exercise because you are not exercising the muscle with appropriate form and/or range of motion. 2) Sooner or later, and most of the times is "sooner", you will get hurt and have to stop performing that exercise or in the worst case scenario stop training all together. Remember, it is better to make small gains on a continuing bases than trying to risk it all in making big progress in just a few days. Only count the repetitions that you can do with perfect form. If you find that you are constantly doing fewer repetitions than your plan call for, lower the weight. If you are not sure about proper technique for a particular exercise ask one of your gyms' personal trainers.

### **Always lift in control**

This is an extension of the preceding rule. Basically, what lifting in control means is that the weight (whether you use free-weights or machines) should never be so heavy as to dictate the speed with which you lift and lower the weight throughout the repetition and/or forces you to lose perfect technique. I tell my clients that when lifting in control they should be able to direct the weight in the chosen direction and be able to momentarily pause the repetition at will. If they cannot, it is too much weight.

### **X+3**

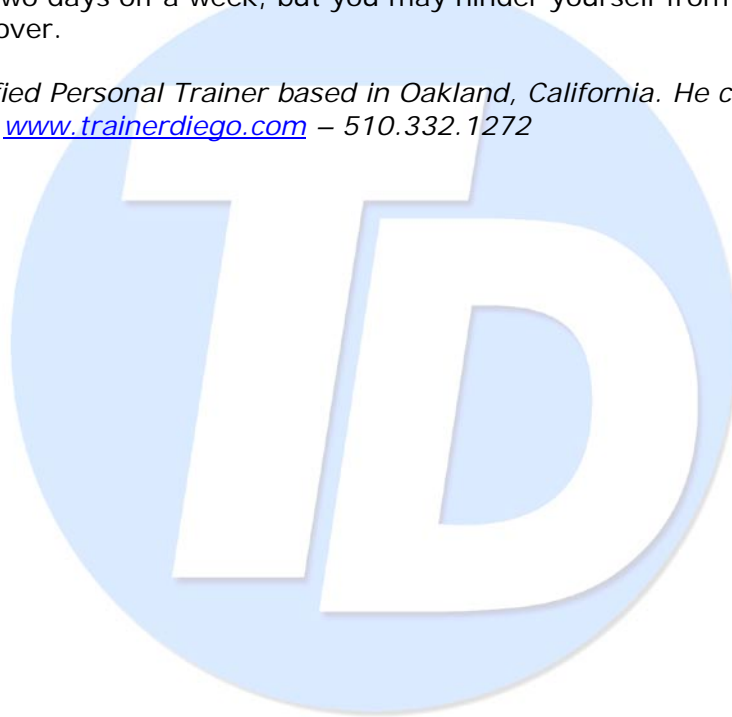
A common question that I get from my clients is: when and by how much should I increase the weight that I lift. To determine that I use:  $x+3$ , where  $x$  is the target number of repetitions. Here is an example to simplify: you do one set of bench press at 10 repetitions with 10 lbs. Keep using 10 lbs until you can lift it 13 times with relative ease. Once you get to 13 repetitions, add some more weight and go back to doing 10 repetitions per set, and so for. For upper body exercises increase weights by 5-8%. For the legs, given that they are bigger and stronger muscles, add 5-10%.

### **Rest**

Ok. So you have been going to the gym for a few days or weeks now and the preceding six rules have kept you injury free and making some good gains. Now comes one of the hardest parts. REST! Take a day off, go to the movies... even better: take a nap. Study after study has demonstrated that we make gains

in fitness while we rest and recover. In plain English this is how it works: while you train (i.e., run, bike, swim, weight train) you are imposing a stressor on your body and you are, at the cellular level, braking it down. Micro tears appear in the muscle fibers, usually associated with DOMS (delayed onset muscle soreness). Every time your body breaks down, it goes to work to repair the damage and reinforce itself, overcompensation. If you place a stressor (effort) on your body on a regular basis and let it rest, in time you will improve your fitness. However, if you tax your body day in and day out with no rest, your body will be playing a catch up game that sooner or later it will lose (read: get sick or injured). Getting sick is your body's way of telling you to slow down or take a break. Heed to the signs. If your car breaks down (too much training), because you drive it to hard (not enough rest), then you take it the shop (rest), for repairs (overcompensation/ improved fitness). If you drive your body to extremes every day and cannot take a day off because you are afraid of losing fitness, then you need to take a break. You won't lose any fitness if you take one or two days off a week, but you may hinder yourself from making gains if you don't let your body rest and recover.

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