

Premium Blend

Premium Health Newsletter

How to become an efficient fat burner

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Can 'no pain, no gain' really be a thing of the past?

*In part II of this article about exercise, I'll discuss how to train to optimise health and prevent injuries, all while converting your body into a fat burning machine. Our culture loves to put forward this notion that we must proverbially kill ourselves in the gym or when working out to achieve success. Just take a look at any magazine article, TV documentary or reality show portraying overweight people being pushed to their limits in order to get results. Now this may be a powerful life-changing **mental** strategy for those stuck in a rut, but it isn't actually necessary to build good health or lose weight, in fact it's usually counterproductive - if not in the short term - always in the long run.*

In Part I, I touched on the powerful benefits of intense workouts done specifically in the form of the 'Sprint 8' interval training program. In Part II I want to share with you how developing a great aerobic base is the true key to not only success in fitness but actually is a major and powerful driver of good health.

There are four key points to learn and understand if you are to revolutionise your health and fitness using this philosophy.

1. Build a great aerobic base. This key principle is what will form the foundation of the physical and metabolic characteristics of a healthy individual and athlete. This is because it has the powerful effect of: preventing injury and maintaining a balanced physical body; it increases fat burning for improved stamina, weight loss and sustained energy; and it improves overall health in the immune and hormonal systems, the intestines and liver and throughout the body. This is discussed later in the article.

2. Eat well. There are specific foods that aid in developing the aerobic system and others that serve to hinder it. In general, all processed foods, grains, sugars, fructose and processed oils and fats will have a negative effect. And in contradistinction to this, fibrous vegetables, meats, nuts, olive oil, coconut oil and fruits in moderation serve to aid the aerobic system and help you become a fat burner. Healthy fats should make up a significant part of your eating. Adequate hydration is very important also.

3. Reduce stress. Training and competition, combined with other lifestyle factors such as busy home and work life can adversely affect performance, cause injuries and may lead to poor absorption of nutrients.

4. Improve brain function. The brain and entire nervous system control virtually all athletic activity. Improved brain function occurs from eating well, controlling stress, and through sensory stimulation which includes proper training and optimal breathing.

Some other important concepts for this type of exercise are as follows:

- Turn your body into a fat burner, instead of just a carbohydrate burner. This is accomplished through eating more fat and less carbs and by training aerobically.
- Consume a balance of dietary fats to help build endurance, reduce inflammation and improve brain function. Include avocado, olive oil, coconut oil, butter, nuts and seeds. Remove all corn, sunflower, and safflower oils and margarine. Processed foods are the biggest source of these bad fats.
- Train slower, enabling your aerobic system to improve so you can actually race faster.
- Don't use built up running shoes, instead use the flattest, least protective shoes to prevent foot and leg injuries. Learn to run on your forefoot or midfoot and never land heel first. *Make sure you transition slowly to this otherwise you may cause more injuries than you'll prevent.* I will be writing an article on this topic in the future.
- Don't stretch, instead you can obtain significant flexibility through an active warm-up and cool-down, without the injury risk associated with over-stretching.
- Eliminate refined carbohydrates that can reduce endurance energy, disrupt important hormone balance, and store excess body fat.
- Spend time in the sun without sunscreen to obtain Vitamin D which improves athletic performance.
- Recognise and correct overtraining in its earliest stage - long before fatigue, poor performance or injury occurs. This is accomplished with the simple MAF test explained later.
- Know that age is no barrier to performance and health. Its possible to go faster in your forties, fifties and beyond.

Here is some background information about the differences between the two forms of training that people may partake in.

Anaerobic exercise is characterised by:

- intense work rate
- higher heart rates
- more rapid breathing
- uses less fat and more sugar (glucose) for energy
- produces a lactic acid burn
- relies less on oxygen

Aerobic exercise is characterised by:

- moderate work rate
- moderate heart rate
- easy to moderate breathing
- utilises more fat as main energy source, less sugar
- relies on adequate oxygen supply
- will not produce much (if any) lactic acid burn

Heart rate is the primary determinant as to whether your metabolism is operating aerobically or anaerobically. Above what is known as your anaerobic threshold, you begin to reduce the utilisation of fat as energy and rely more on glucose, the resulting effect is lactic acid build up and increased heart rate and breathing.

The threshold is different for every individual and must be calculated regularly to keep it up to date and relevant for each person at any one time. Key factors including age, health status and exercise history will determine what your threshold is. This also tells you the most important piece of information; what your aerobic training zone is.

These formulas have been developed by Dr Phillip Maffetone, world class clinician and coach to world champion athletes including six-time Hawaiian ironman Mark Allen. Using hundreds of individuals in a clinical setting and lab experiments he was able to map exactly at what point athletes and patients were most efficient at burning fat. This was the research that led him to develop the formulas below.

How to calculate your anaerobic threshold and your aerobic training zone.

Step 1: 180 subtract your age.

Step 2:

subtract 10 - if there is a major illness or recovering from one, or if on medication

subtract 5 - if just beginning to exercise, recently injured or sick, going downhill in training program or competition, or frequent colds, flu or allergies.

subtract 0 - if exercising up to two years without any real problems, and have not had colds or flu more than once or twice per year. (if you don't confidently fit into this category then you fit into the subtract 5 category)

add 5 - if exercising more than two years without any problems, while making progress in competition or training without injury.

Your Aerobic Training Zone now becomes the range of 10 Beats Per Minute (BPM) below your anaerobic threshold. E.g if you're age 30 and in the subtract 5 category your anaerobic threshold is 180-30-5= 145. Therefore your Aerobic training zone is 135-145 BPM

It must be noted that the old '220 minus your age' formulas were based on very thin science and broad generalisations. Inevitably the result is people miss the perfect zone for fat burning and aerobic efficiency and jump straight into the anaerobic zone, eventually leading to overtraining and missing out on all the benefits of aerobic metabolism.

How to change your metabolism

To train aerobically, we simply pick an exercise that suits us. This could be anything such as swimming, walking, hiking, jogging, cycling, treadmill etc. The goal is to bring your heart rate up to your anaerobic threshold (145 in the example above) and keep it there for at least 30 mins 3 times per week. A good warm up is essential and non-negotiable in this form of exercise. You want to bring your heart rate up to your max aerobic rate *slowly over about 10-15 minutes*, and keep in your zone for 30 minutes or more. To finish you will slowly bring it back down to almost resting rate over another 10 minutes.

If you have been exercising for some time, and maybe you have experienced some level of plateau or injury, or even if you have not, you will most likely notice that when you initially begin exercising this way, you may find it is a very slow pace compared to what you're used to. This is indicative that you were previously simply training too high in your BPM and sending your body anaerobic.

This is the time when I'll tell my patients who need to do this form of exercise that they need to leave their egos at the door. Yes, your pace will be much *slower initially*, but don't distress. It is of extreme importance to note that over time, your pace will absolutely increase as your body becomes more efficient at metabolising fat in the aerobic zone. You will need to work harder and harder as time progresses to get your heart rate into the aerobic zone. Now we are really talking about training the body to change it's primary (and preferred) fuel source, fat, and this process takes time. Depending on how far out of balance you were when you began

will determine the time taken to see good improvements. A period of 6-18 months is not uncommon with some severely overtrained athletes. However most people will see and feel improvement within 3-6 weeks. Stick with it, it will happen.

By this point you've probably realised the importance of heart rate monitoring during exercise to accurately know how our bodies are metabolising. Therefore it is essential to get yourself a priceless training aid; a heart rate monitor. Manually measuring pulse rate with your fingers is far too inaccurate and time consuming and just wont work in this context.

You can picture the aerobic and anaerobic systems as balanced on a seesaw. When they are in balance from side to side and there isn't more weight on one arm of the seesaw then we can generally be considered to be balanced in this system. A very important concept to understand is that *our bodies require far more aerobic stimulation than anaerobic stimulation*. Generally it is either too much anaerobic stimulation OR a lack of *any* exercise that will create an imbalance.

So, although most people and even most athletes may think they are performing aerobic training because their heart is pumping and they're breathing heavily, in reality most are well and truly into the anaerobic zone.

A very important aspect to this training is the MAF (Maximum Aerobic Function) test. This test has 2 purposes; it helps the athlete keep track of how they are progressing, and it also allows their practitioner to know if they have plateaued or regressed and therefore what needs to be done to remedy it. This is extremely important to prevent overtraining (very common!) as *a worsening MAF test will usually be the first sign*. Please don't think this only applies to high-level athletes.

How to perform the MAF test

The MAF test can be performed with any endurance activity, be it running, cycling, swimming, hiking, walking etc. The activity used for the test does not need to be the same as the sport or activity which one competes or participates in regularly. For example a tennis player can use a stationary bike and achieve the same basic information.

The test is done over a given distance at *your maximum aerobic heart rate* (calculated using the

180 minus method) or alternatively it can be done over a given time. Using your heart rate, determine some parameter such as *pace* (mins per km) or *speed* (km per hour) over time. All MAF tests should be performed following an adequate warm up period (as previously discussed). Simply, you perform your activity keeping your ***heart rate at or below (never above) your aerobic training zone over the given time or distance.*** Record the results and date them. Perform tests approximately every 3-4 weeks.

It is normal for you to observe a slowing in pace over each ensuing km. In general your first km will always be fastest and your last will be slowest. If this is not the case, it may be due to an inadequate warm up.

Subsequent tests should demonstrate faster times at the same heart rate - an indication you are gaining more aerobic speed. This is the cornerstone of improved fitness and therefore improved speeds for competition. Most importantly, if your tests show a plateau or worsening of times, then you need to address the issues causing it.

There are 4 main causes for a worsening MAF test;

1. *Overtraining* either in intensity or total hours per week (or not being honest and not calculating your HR correctly)
2. Physical or emotional *stress* such as that from work or home life
3. *Diet* such as too much carbohydrate or too little fat (or imbalance in types of fats)
4. Current *sickness or injury*, or a combination of all of four

Below is an example of a MAF test performed running on a treadmill over several months with good results showing fast improvement.

Dist	Dec	Jan	Feb	Mar
Km 1	7:57	7:30	6:55	6:33
Km 2	8:05	7:45	6:59	6:37
Km 3	8:33	7:50	7:11	6:46
Km 4	8:45	7:59	7:23	6:51
Km 5	8:54	8:07	7:46	6:58

The aerobic system has a very therapeutic affect on the entire body, a fact which has been widely recognised for a long time. This is evidenced by the fact that aerobic activity will activate the Central Nervous System when the anaerobic system doesn't. The result being a tremendous balancing effect of basically every organ system in the body. Of key importance, the Adrenal system - our stress handling system - is calmed and balanced under the influence of aerobic exercise. And this is also part of the reason why being overtrained in the anaerobic system will leave the person with the raft of negative symptoms they experience, the most common being tiredness and/or lack of motivation.

But now you have the remedy to these issues! It's not overly complicated, it just requires a few things: Change your eating habits, slow down in your exercise by training in your aerobic zone, reduce your stress, and importantly be patient and your better health will come.

On a final note I want to explain how part 1 of this article (sprint cardio anaerobic training) fits into this philosophy. Truth of the matter is, most people are in desperate need of much more aerobic activity. The benefits of aerobic exercise are so dramatic that this form of exercise should make up the biggest portion of your time spent training (i.e. > 50-90%). Anaerobic exercise can fit into this picture ***after*** a great *aerobic base* has been built, but never before.

Suggested Reading: I highly recommend grabbing yourself a copy of Dr Maffetone's book "The Big Book of Endurance Training and Racing". The information in this article has been adapted from his work and hopefully will serve as a starting point for further reading on the topic. His books contains some great information for achieving peak performance not only in your fitness or competition but also in health.

This is a big topic, and one of great importance to all people not just athletes. If you would like to find out how your aerobic/anaerobic system is currently functioning and would like more information on how to train to achieve these results, please set up an appointment at the front desk.

All of my past and present newsletters are available at www.premiumhealththerapies.com.au

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