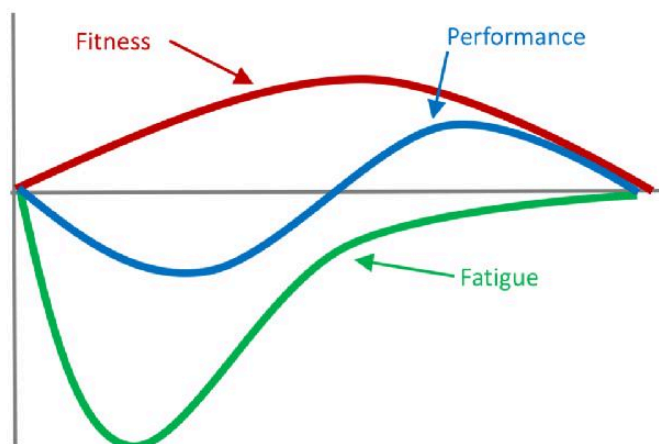


Periodization II – Specificity, Adaptation & Reversibility

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This article is a follow on from my previous post, that of Periodization and in particular the training principle known as Progressive Overload.

We established that to continue to improve your performance (Whatever that metric might be), you have to continue to overload the physical attribute that you are keen to improve (strength, power, speed, endurance, etc) and that as we age, we have to be careful that this continued overload doesn't lead to an over-trained state which can result in injury and illness.

Once you get your progressive overload program into place, then you need to start thinking about the other key training principles that will have an effect upon your desired outcome. These principles include:

Specificity - The principle of specificity states that training should be relevant and appropriate to the activity for which the individual is training in order to produce the desired effect.... Essentially, specificity training means that you must perform the skill in order to get better at it.

Adaptation - The principle of adaptation refers to the process of the body getting accustomed to a particular exercise or training program through repeated exposure. ... This reinforces the need to constantly vary the exercise and training routine if you want to maximize your results.

Reversibility – Reversibility means that an athlete can lose the effects of training when they stop, and can gain the effects when they begin to train again. Detraining occurs within a relatively short time period after an athlete ceases to train but is dependent upon training history.

SPECIFICITY



Endurance v's Sprint training Adaptation

Specificity for 50+ trainers can be a two edged sword. As an example:

I have a client whom is an avid gym goer – he hits the gym 4-5 times per week, includes interval training (typically on a bike or orbital stepper) and has gotten himself into very good shape (his conditioning is specific to the demands that he has placed upon himself over the past few years).

Unfortunately, very little of his training is impact oriented which has resulted in his inability to handle impact loading – even a small amount of running or jumping results in him breaking down with soreness and tendon/joint microtrauma.

It becomes very important to decide what is the required outcome of this training that you are looking to undertake? Is it purely for general fitness, or do you want to take this improvement in physical conditioning and apply it to every day activities that you like to partake in (eg tennis, golf, running, etc)?

From an earlier article on [bone density](#), I would recommend that all exercise programs include some form of dynamic/impact loading (be it running, skipping, jumping, boxing, etc) as this type of training when incrementally introduced into your training routines will lead to the best adaptation/robustness of musculotendinous junctions (muscles and their associated tendon attachments) for dynamic activities outside the gym.

ADAPTATION

Adaptation and progressive overload are closely linked, if you don't regularly progressively overload your training routines, your body's adaptation cycle will plateau with no further improvements in look or function.

I often tell people:

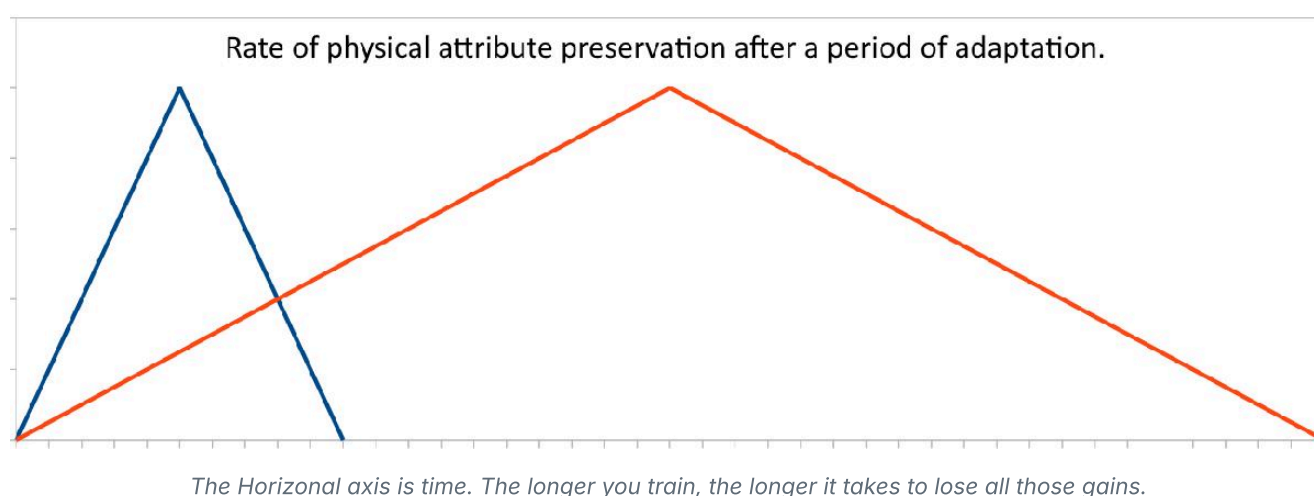
"What you look like today is the result of the stimulus you have placed your body under in the recent past. If you want to change this look, then you must change the stimulus".

I wrote an article about [homeostasis](#) some time back and what this article highlighted was that your body doesn't like to change, it will at all costs try to stay the same where possible. I would say that lack of adaptation is the NO.1 mistake made by clients who attend my gym. They don't look to progressively overload their training routines and as such the body has no need/stimulus to change.

As a personal example, I have been training hard in the gym for many years now with minor changes in muscle size. I would like to increase my muscle size but I just don't overload my muscles on a regular enough basis to stimulate this required muscle growth.

If you don't get your programming right, you can quickly lose motivation as you see little results from all your hard work (it may be that the hard work you are doing isn't correct for the adaptation that you are after).

REVERSIBILITY



Reversibility is what happens to any physical attribute AFTER you cease applying a stimulus to the body.

This principle of training highlights two key elements to training:

1. If you only train for a short while and then stop, your body is very good at quickly going back to your pre-exercise physical status. (Blue graph above).

This is what happens when you try to lose weight fast (the reverse of this graph) – your body fights against the weight loss often resulting in you putting all the weight back on just as fast as you lost it in the first place.

2. If you spend a long time training (years if possible), if you have to stop for any time period, your body will resist returning to an initial state (red graph above).

This capacity to maintain a training state over time is important for all clients to understand so that they don't feel bad if they miss a session or two (or decide to take a week or two off over any holiday period).

I worked with an athlete many years ago whom had 15+ years training background and when he needed to take several months off due to an injury, we were all amazed at just how little conditioning he lost when he was finally able to resume training. He regained full strength in just a few weeks allowing him to continue on his athletic journey with minimal disruptions.



Andreas Cahling) – he has been bodybuilding since his teens and now in his late 60's has one of the best 60+ bodies in the world)

If you are a 50+ athlete, then trying to replicate the red graph is absolutely vital for long term physical health. The sooner you start a regular routine, the sooner you will get the required adaptation and the longer you are able to continue a regular training routine, the greater the resistance to physical reversal you will develop which will be vital in older age.

SUMMARY

- What we look like is a reflection of the physical stimulus we apply to ourselves.
- We need to ensure that the exercise routine we undertake and the resulting adaptation is representative of how we want to perform physically outside of the gym environment.
- The longer you train, the larger the physical reserve you develop, which you can draw upon if you need to take time off without worrying about losing fitness.

For more details on the basics of Periodization - click here ([Sports Periodization](#)).