

Martial Arts & the Components of Fitness - Six General Principles of Training Part 1

By Chris Denwood

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Most of the martial arts, similar in some ways to sports are by and large both physically and mentally demanding. Although I personally have my own reservations about the linking combat arts to 'sports', I nevertheless appreciate that to be martial artist or to be physically prepared for even a superficial level of combat, one must have a reasonable level of general and specific health and fitness. If nothing more, this allows you to align your martial art to help combat some of the greatest threats for the human race. These threats being of course self inflicted stress, disease, poor health and mental sloth.

In addition to my martial arts background, I'm also a fully qualified fitness trainer and thus I am conscious of the general principles, which bring about an increased development of the 'components of fitness', i.e. strength, endurance, and flexibility. I can also appreciate the specific relationship that these have within martial arts and the obvious positive benefits that this enhancement would provide. In this two-part article, I'd like to briefly go over six of these fundamental principles of training so that if your cross/attribute training (martial and physical fitness) does not already have a structured plan in place or is somewhat unrelated in nature, then these words may help to set the ball rolling or at the very least, help in some way towards appreciating how these components can fit together in whatever physical pursuit you decide to embark on.



(Training should be varied to cover all aspects)

Principle (1): Overload

This principle dictates that for any positive adaptation to occur within the body, we must first present it with a demand that is greater than what would be considered as being normal. The best way to describe this would be to use the example of a weightlifter or strength trainer who is performing a standard bench press exercise. For the sake of argument, if this person was conditioned to lifting 80kg for let's say 10 repetitions and this is all that was performed each week, then the body would eventually plateau so that no further significant adaptation would occur beyond what would be considered normal at that particular intensity. If this person then increased the intensity by attempting to lift 85kg for 10 repetitions then the body would have to adapt in order to cater for the extra load placed upon it. However, just remaining at 85kg over time would again put that person against yet another plateau. This is known as the de-training effect, where the body becomes used to the new 'norm' and is generally accepted to be in the region of around 4 to 8 weeks of regular continued training, depending of course on the individual in question and their current fitness level or goals.

In martial arts, the same type of effect can and does occur. For instance, if I haven't hit the heavy bag for a while, I'll undoubtedly feel it after my first session back! After a while though, my workouts become less challenging as my body adapts to the regular current level of stress placed upon it. Although it's quite a comfortable experience to let your body plateau, it can lead you into a real false sense of security. Personally, I believe that if a workout doesn't either end in some form of positive failure (be it technical, physical or mental) or hasn't in some way been progressively harder than the last then it really hasn't created an environment for constructive growth. This failure need not be catastrophic; it simply has to be enough in order for the growth mechanisms in the body to be stimulated. In weightlifting terms, it may mean only a couple of extra pounds, or an extra repetition. In the martial arts, an extra ten punches from each hand or an extra round on the bag may do the trick. The key lies with being consistently progressive and having the hunger to perform better during the next workout.



(Although not very practical, repetitive high-level kicking drills are very demanding)

The principle of overload relies on the ability to sensibly increase the intensity placed on the body. Altering one or a combination of the so-called 'five R's' can achieve this:

1. The rate or speed: For example performing more techniques in an allotted period or running at a faster pace over the same time period etc.

2. The range of movement: This could mean performing your kicks at a higher level, incorporating more developmental stretching or increasing the effective range of movement for a particular weight training exercise (i.e. decreasing partial repetitions).

3. The rest or recovery phase: As the name suggests, this would mean to cut down on the rest intervals in between sets, exercises or in fact sessions.

4. The resistance or workload: As discussed above, this could mean increasing the weight or the adaptation of commonly performed bodyweight exercises in order to make them more intense. An example of this could be performing decline push-ups instead of the regular type. For a martial artist, increasing the resistance may mean performing punches against a progressively harder solid object or incorporating the use of small hand weights etc.

5. The repetitions or number of movements performed: This could mean lifting a weight 15 times instead of 10, running 5 miles instead of 4 or performing 10 rounds of sparring instead of 8.

When altering the intensity of your workout, please bear in mind the other principles listed in this article, in particular specificity, overtraining and recovery. Increasing workout intensity should always be done logically, progressively and consistently so that you provide the best possible environment for success.

Principle (2): Overtraining

Just as we need to provide a progressive stimulus for future growth, we also need to be aware that it's possible to overdo things and end up in the vicious circle that is overtraining. It's a harsh fact that the majority of people who undertake a regular long-term physical exercise end up overtraining at some point. I've personally been on the receiving end of this battle many times and I can tell you that it's no fun. Because there's a need to push slightly beyond our limits during training, it becomes very easy for us to push a little too far. This isn't too bad now and again as it can provide a test for our progress, but by making this a regular occurrence you can end up spiralling downhill rapidly. Not enough people place the right importance on overtraining – I believe that this is the single most popular reason why many people fail achieve their goal, despite training so hard for it.



(Isometric contractions provide different elements to training)

Overtraining generally occurs when we inaccurately assess the intensity required to produce a positive adaptation and end up fatiguing over time due to this excessive and persistent stress placed upon us. There are many factors that can contribute to overtraining and these may not be solely dependent on our time in the dojo or gym. For instance, indulging in too many late nights or alcohol fuelled marathons can have a detrimental effect on your training output, in some cases even up to weeks after the event. Simply put; 500 punches against a makiwara will become more 'negatively intense' if your sleep time the night before (one of the five R's – Rest) is both halved and alcohol based!

Generally speaking, not getting the required amount of sleep per week can really affect your overall mental and physical performance, whether drink is involved or not. Lack of sleep is personally something that I tend to suffer from, especially during the regularly busy phases of my life. Don't get me wrong; this is not to say that I also manage to abstain from the occasional indulgence too! However, I'm fully aware of its negative effects on my performance and I make sure that for the most part, this part of my life is planned around my training (rather than the other way round). For those who wish to excel, you tend to find that their life is heavily based around their training and indeed their training goals. This inevitably becomes a playground for overtraining to strike and without noting that this has even occurred; you can literally go on to either force yourself through your training (with little enjoyment) or end up quitting altogether. The classic signs of overtraining to watch out for include:

- * A marked and consistent decrease in your usual performance.
- * A vulnerability to illness i.e. colds or flu's etc.
- * Uncomfortable headaches, progressively tired eyes or insomnia.
- * An elevated pulse on wakening.
- * The regular inability to complete a training session that was earlier deemed probable.
- * Excessive aches or pains in your muscles or joints.
- * A developing lack of motivation either in training or to accomplish other everyday tasks at home or work.

Overtraining can and has been the silent killer of many a prospect in both martial arts and fitness circles. Remember that as well as challenging, training needs to be both enjoyable and productive. When subjecting yourself to new workouts, make sure that you keep an eye out for those signs of overtraining just as attentively as you would look towards new heights and aspirations. The combination of both of these will give you the greatest experience of achievement.



(Keep to simple reaction drills against close-range attacks)

Principle (3): Progression

So far we've discussed that to develop we need to apply positive overload so that the body can adapt. We've also mentioned that too much intensity can contribute to overtraining and actually become counterproductive. The next principle, progression, suggests that now that we've selected the right amount of overload, this intensity is not set in stone forever. In order to continue to develop, the systems stressed need to be subjected to a progressive overload. In other words, sooner or later the new intensity that you've set for yourself will become the 'new norm' and therefore your body will require new challenges in order to improve further. Progression helps to 'shock' the body into making further adaptations or to break free from those annoying plateaus that everyone faces at some point in their lives.

A great example of structured progression within the traditional martial arts would be an approved grading syllabus. This should serve as a planned method of training, whereby long-term progress can be achieved by breaking down all that's required to be studied into smaller, structured, more manageable chunks. It's just the same as having a series of stepping-stones across a wide river or pond, where each is slightly further away than the last. Every step is then progressively more challenging and allows the practitioner to focus on the journey rather than becoming too obsessed with the overall destination. Similarly, any series of training sessions can be organised in such a way. All that's required is for you to firstly be clear of your objectives and then to produce SMART (Specific, measurable, achievable, realistic and time bound) targets towards the ultimate goal. Usually all you'll need is a pen, a piece of paper and hearty chunk of honest determination.

As a basic example of how to implement progression, please consider the idea of a typical training strategy for a half marathon. First of all, there's no point in attempting 13 miles if you've never ran before. This would be an example of negative overload, will lead to overtraining and possible injury. Instead, start with a run that's maybe slightly uncomfortable and challenging, even if this is only 1 mile to start. Then increase this in small intervals every couple of weeks so that you allow your body time to positively adapt to the new challenge and prepare for the next. Monitor your progress against the signs of overtraining and adjust if necessary. If this training is based on SMART objectives then, over a period of time, your body will be accustomed to running a much greater distance than at the beginning. Eventually, it will be possible for you to monitor your progress to such a degree as way as to plan your 'performance peak' to occur on or around your intended race day.

In respect to martial arts training, a great example of applying sensible progression would be during traditional conditioning practices. This idea is based upon the human body's restructuring of bone and surrounding tissue in proportion to a slow but consistent and progressive application of physical stress. When receiving controlled blows on a particular area of the body, the tissue and bone will develop over time and become more dense and strong, whilst simultaneously reducing the number of active pain receptors. Repetitive and appropriate practice of this will eventually lead a much stronger, well-conditioned body. Like any form of progression, it has to be applied in a safe, fitting and effective manner, especially when undertaking advanced training exercises such as body conditioning. The results of overtraining in these areas are only too obvious.



(Close-range sparring is just as mentally taxing as it is physical)

So far in this article I've introduced the requirement to employ a structured method of attribute training whereby the general principles according to the components of fitness are observed and then introduced three of these six principles for consideration. In the next part, I intend to look at the remaining three principles (recovery, specificity and reversibility), provide practical examples where appropriate and conclude how these may be brought together to construct a sensible training regime based around sound judgement.