



## **Speed Training ----- A Prelude**

The History of the Wing Chun Speed Training Straps dates back several generations. I first learned of this “secret” as a full-time, live in student training at the Sydney Wing Chun Kung Fu Association run by Rick Spain.

As a full-time student, my daily activities, other than participating in all training sessions, required me to maintain the cleanliness of the School i.e. sweeping & mopping the floors, cleaning the bathroom, cleaning the mirrors & general maintenance. I was also required to set time aside to diligently practice drills & techniques along with doing traditional conditioning drills to enhance my Kung Fu training. This period of my life was a very special time for me. It was me ‘living a dream’ much like the fabled characters in the movie “Kung Fu” starring David Carradine (?).

Anyway, my Kung Fu training progressed & I was simply just enjoying & being grateful for every day that I was on the mat. One evening after a hard training session, Rick Spain said to me *“I am going to show you something that I was shown by my Si-Fu (William Cheung) that will give you the edge”*. I didn’t comment, but just nodded my head & said *“yes Si-Fu”*.

Twelve months elapsed (or what seemed like 12months) & I hadn’t given much thought to what Rick had said to me. Reflecting back on that Friday evening, I now realize that I was being ‘observed’ & ‘watched’ on a daily basis to see if I could ‘keep a secret’. Obviously I was eventually shown the Wing Chun Speed training drills behind locked doors. I was sworn to secrecy & to only train the Wing Chun Speed Training drills behind ‘closed doors’ & to never reveal this ‘secret’ outside of the School, or for that matter, anyone else inside the School.

Looking back at ‘key’ figures in the Wing Chun fraternity, we can see Grandmaster William Cheung breaking the world speed punching record of 8.3 punches per second. Understand that these are not ‘fairy-floss’ punches. To hold the record, each punch had to equal force equivalent to the body weight of the person executing the strikes. Grandmaster Cheung has told me how he also passed this knowledge onto Bruce Lee, & we know that Bruce was well known for being fast...without the aid of movie cameras ‘speeding’ up his on screen fight scenes. In fact, Bruce’s Wing Chun was ‘too fast’ for the cameras to see it & as a result, many of the fight choreography depicts slower, larger movement from other disciplines of the martial arts, that was more ‘user friendly’ from the producer & camera man perspective. When

Bruce was 'kicked' out of Yip Man's School, William Cheung was left with the task of 'completing' Bruce's training. This is where William not only showed Bruce the 'speed drills' but also the Nunchaku and Dragon Pole. William also orchestrated training drills and scenarios for Bruce, to make him 'look outside the box' of the 'Hong Kong' style Wing Chun training. This is one of the reasons why and how Bruce Lee developed "Jeet Kune Do" (the Way of the Intercepting Fist). It was not until Yip Man's death in December 1972 that William Cheung was able to confide to Bruce that he had learned a "Traditional" version of Wing Chun from Yip Man. Sadly, Bruce Lee died in 1973 before he was able to see William's "Traditional" Wing Chun.

I know that Rick Spain along with another 3 training partners, also full-time students of Grandmaster Cheung, used the Wing Chun Speed Training to prepare themselves for the 1982 World Invitation Kung Fu Championships in Hong Kong. This tournament was full contact. Only 2 rules...no grabbing/striking the groin & no poking the eyes...everything else was legal. Rick Spain won the Middleweight Division & Joe Moahenghi won the Heavyweight division.

Being married to a "Kung Fu maniac" (Si-Fu Rachel), I found it increasingly more difficult to train the Wing Chun Speed drills without her observing & questioning what I was doing. So, yes, I showed her...not because she was my wife, but more importantly because she had diligently demonstrated her passion & desire to train in the art of 'traditional' Wing Chun and her thirst for knowledge was teetering on 'unbearable' (LOL) ☺. Rachel practiced the Wing Chun speed training drills & entered the 1992 Australian Kung Fu Championships in Melbourne. Rachel defeated, in the final, a Wing Chun Kung Fu practitioner (10<sup>th</sup> level) who had a minimum of 10years experience on her & was the reigning women's titleholder. Rachel was only a 4<sup>th</sup> level practitioner!

The following year, Rachel entered the tournament again but found the middleweight division fighters had 'run scared' from her previous years annihilation of the competition. I would have to say, that Rachel had prepared herself better in 1993 than in 1992. Having no competitors in the middleweight ranks, Rachel was allowed to enter the Heavyweight division as a competitor who was seriously outweighed by girls who were close to 20kg heavier!!! On the day, I had several martial artists come to me to say they had only "*come to the tournament again to watch Rachel fight*". Anyway, Rachel cruised through the heavyweight division like a seasoned professional.

I have not taught the Wing Chun Speed Training Drills to my students, other than to Gold Belt achievers who have shown me the dedication & loyalty that I expect from every student. However, I feel it is now the time to share this ancient, yet very powerful, training to each and every student, with the right attitude and discipline, that walks onto my training floor. I feel that only the whole School and student membership can benefit from diligently applying this knowledge.

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I trust that you will all enjoy the results that you will feel and see over the next several months. It is not an 'overnight' fix & must be practiced, ideally, twice a week maximum. It may be several months before you or your training partners will notice the results. I also trust that students will not abuse this knowledge or 'give it away' to other practitioners involved in the martial arts.

In the how to section below, which was written by one of my students, a graduate of Human Movement from University of Queensland, Mr Joel Love. I was approached by a swimming club to help their young squad improve their times as these young athletes set their goals for the 2012 Olympics. So the article was written with swimming in mind, & exercises were 'modified' & tweaked to suit swimming training. Plyometric training was also shown, although I do not go into detail with this in the article below.

One swimmer that I keep in contact with through her father, a friend of mine has said that since training in the Speed Training drills that I showed them, she has been able to go from a state ranking of 20 odd down to one of the fastest 6 swimmers for her age group! And this was done in a 6-month training period using the shock cord both ways.

Sincerely

***Si-Fu Alfredo Del-Brocco***

### **Training for Speed**

#### **Introduction**

Speed of movement in sport can be limited by neural speed and coordination, ratio and utilisation of type 2 and type 1 muscle fibres, fatigue, external resistance, internal resistance (body/limb segment weight).

One of the limiting factors in improving speed, particularly in more experienced athletes, is that the athlete's nervous system learns a top speed. In training for speed we need to help the athlete to teach him or herself to move faster than the speed barrier they have imposed on themselves.

Depending on the type of speed required, contributors to speed may include; reaction time, maximal strength, speed-strength, speed-endurance, flexibility, coordination, technique and endurance.

There are three basic conditions for speed exercises to translate into improved speed in competition:

- 1) The technique of the exercise, in its perfect form, must allow for maximal speed of movements.
- 2) The technique of the exercise must be sufficiently mastered so the athlete doesn't need to pay attention to executing the technique. All focus should be on achieving maximum, or near maximum, speed
- 3) The duration of the exercise should be such that fatigue does not cause a drop in speed.

Types of exercises used to develop speed can be broken down into three categories: General exercises, Directed exercises and Sport Specific exercises.

### **1) General Exercises**

General exercises are those that are not specifically related to the sport. While generalised speed training will not have much, if any, crossover to directed or sport specific speed, these exercises are intended to develop all systems of the body and prepare for future specialisation. In the first stages of athletic development (ie: children or inexperienced adults) these exercises should make up the majority of training. Included in this category are ball games, gymnastics, track and field and the like.

### **2) Directed Exercises**

These exercises have a similar external and/or internal structure to all or part of a technique required in a given sport. They are more specialised movements that further prepare the specific systems and anatomy that will be required in highly specialised sport specific exercises and in competition. An example of a directed speed exercise with similar external structure to freestyle swimming would be near straight-arm pull throughs using a high-low pulley weights machine. The external form of the movement closely mimics the underwater phase of the stroke. The internal structure of the exercise would differ because of the slower velocity of muscle contraction due to greater external resistance than that experienced in the water. An exercise with similar internal structure might be a plyometric pulling movement that places similar demands on the power and velocity of contraction of muscles involved in the underwater phase of the freestyle stroke. The external form of the movement, however, would not directly mimic that of the stroke in question.

### **3) Sport Specific**

These speed exercises are very closely related to the techniques used in competition. As such the resistance applied cannot be too different from that encountered in competition or the internal structure of the technique will be too dissimilar to provide the greatest improvements possible. An example of this category of exercises would be using bungee cord attached to a swimmer's waist to either resist or assist the athlete as they do laps. Another example would be attaching bungee cord to the swimmer's wrist to resist or assist parts of the stroke in land or water based training.

### **The use of Bungee Cord to improve speed**

As mentioned above, bungee cord can be used in two ways to help athletes break the speed barrier.

#### **Resisted Movement**

The first, which is quite widely used among athletes of various sports, is achieved by attaching the cord to a fixed object. The cord is attached to the athlete and the athlete orientated in such a way that performing the required technique will stretch the cord in order to make the movement harder than it is in competition.

The rationale behind this approach is that the extra resistance excites the nervous system to a greater degree than that in normal training. If the movement is then practised soon after with no resistance this increased excitation allows a faster movement. It also gives the athlete a feeling of moving very easily which helps them believe they can go faster than the limits they have imposed on themselves.

#### **Assisted Movement**

The second way is to attach the cord to a fixed object and the athlete in such a way that performing the required technique will allow the cord to shorten from its pre-stretched position. This decreases the internal resistance associated with moving the body segment through space. This in turn allows the athlete's nervous system to learn a faster movement pattern than previously possible by improving the timing and synchronisation of motor unit utilisation. By then performing the technique without the assistance of the cord the athlete can apply this modified movement pattern to increase the speed of this technique in competition.

#### **Guidelines:**

- Athletes should progress properly through general, directed and sport specific exercises. Progressing too quickly or skipping stages not only predisposes the athlete to injury but also limits the percentage of their speed potential that they can achieve. Sport specific exercises should be used to put the finishing touches on speed. If the athlete uses these exercises too early they will start and finish this training at a lower percentage of their potential. If they had raised their speed through proper use of the preceding stages, they start the sport specific stage closer to their full potential and are more likely to have reached it when the benefits of this type of training are exhausted.
- Speed exercises should be undertaken early in the workout and the micro cycle. Because the changes in speed are nearly exclusively neural for most types of speed, speed exercises must be used when the athlete is fresh. This means in a work out the speed exercises should directly follow the warm up or light technique practice. In a micro cycle they should follow the rest day or a day devoted to light technique. Not arranging the speed work in this way means that the athlete will not be able to maintain correct technique and will not have the resources to move at the faster pace required. This means that the current speed or an even slower speed will be reinforced, leading to a plateau or drop in performance.

- Speed exercises should not be mixed in a workout. This means the athlete should not perform resisted, normal and assisted techniques in the same work out. This places too great a demand on the nervous system to adapt. The motor units involved are effectively “scrambled” and limited or no improvement will be possible.
- Speed exercises should not be performed to fatigue. Performing speed exercises to fatigue results in a deterioration of technique and a drop in speed. Both will be learnt by the nervous system to the detriment of performance. An exception to this rule is when the athlete is trying to build speed-endurance in which case correct technique should still be maintained. This might not be possible using equipment such as bungee cord, particularly if the resistance applied is too different to that experienced in competition.
- Resisted and assisted exercises should be followed by normal performance of the technique. For the benefits of using bungee cord to be transferred to competition they have to become a part of the normal performance of the technique. Performing the technique without the resistance or assistance of the bungee cord should be done within 5-10min of performing a set with the cord. Care must be taken to allow as much recovery as possible of the energy systems involved without allowing the increased excitation of the nervous system to subside. Unfortunately this excitation will subside before the energy systems involved are completely recovered. This is another good reason not to perform speed exercises to fatigue.
- Speed exercises should not change technique. This means that performing speed exercises in training should not alter the technique used in competition unless they result in a stable increase in performance. The internal structure of the technique should change slightly, as motor unit firing patterns change, but the external form of the technique should remain the same, just faster. If technique is being altered for the worse by speed exercises then they need to be modified. They may need to be done with less volume, less resistance or assistance or the form of the exercise may need to be changed in order to allow correct technique. A combination of resisted, assisted and normal exercises may need to be employed (the only exception to the rule above) to restore the desired technique or more work specifically dedicated to technique may be required.
- Speed exercises should be performed slowly at first. When first undertaking speed exercises they should be done slowly to ensure correct technique and to allow the systems of the body to adapt to this type of training. Even when the athlete is ready to increase the speed that the exercises are done, the majority of exercises should be done at less than maximal speed. This allows the athlete to stay relaxed and in control of the technique. It also means that the athlete is less likely to form a new speed barrier by conditioning their nervous system to treat this new speed as their maximum.
- Speed exercises should be performed in small but frequent doses. The dosage should be small in order to prevent fatigue and poor technique. Speed exercises should also be conducted frequently in stages of training

dedicated to its improvement, as noticeable detraining can occur after 10-12 days.

- Speed exercises should not be overdone. Although repetition of technique at a higher speed leads to higher speed in competition, too much repetition can lead to the formation of a new speed barrier. For advanced athletes 6-8 weeks of speed training, preceded by 4-6 weeks of preparation, can elicit the greatest speed gains possible at the athlete's particular stage of training. Persisting longer than this at a given stage in the athlete's meso- or macro cycle will most likely lead to a plateau or drop in performance as a new speed barrier is formed.



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