

Sinewave in ITF Taekwon-Do

I never had the opportunity to train with General Choi Hong Hi our Founder and Father of Taekwon-Do. I was booked onto the course he was to do in 2002 in New Zealand but unfortunately the General passed away so I did not get the chance to hear from the great man regarding sinewave in person.

There are many video clips around that have the General explaining sinewave as well as books and of course the many Master's and Senior Dan black belts that have attended the many courses that the General had run. I will explain sinewave as I understand it and have interpreted it from my instructors and from my training books.

These are the subjects regarding signwave I will be looking at;

- Brief history into Sinewave.
- What is Sine Wave?
- Sinewave in Patterns and how it relates to the different Motion's.

As I start researching Sinewave, I find that the Taekwon-Do condensed Encyclopedia (1999 fifth edition), as well as the full 15 Volume Encyclopedia set (2008 eighth Edition) do not mention a lot of information regarding sinewave. While there has been the knee spring action since the early beginnings, it was not until the 1980's that the General instructed all students to start using sinewave with the rising of the body and lowering at the end. It is also written that the change to Sinewave was given to the North Korean's as a gift, and that by doing the new big sinewave that this was true Taekwon-Do.

I remember starting my Taekwon-Do journey in the 90's and doing sinewave. It was a bit different than what is done today, it had more of a bounce in the middle (up down up down), but that may have just been my interpretation!

So **what is Sinewave?** One of the training secrets of Taekwon-Do is to create a sinewave during the movement by utilizing the knee spring properly. This is done by doing a down up down motion as we move from one technique to another. Sinewave is one aspect which makes Taekwon- Do different from the other Martial arts, such as karate which has more of a flat movement from one technique to the next. General Choi in a seminar referred to sinewave as "low, high, low", although I have found with my students that they respond more to the down up down motion.

The reason for sinewave is to provide power to techniques as well as to help with balance and to generate speed. Sinewave can be used if we are stepping into another stance forwards and backwards, it is also used if we are in the same stance, or are changing techniques or direction, as well as being used after every kick. Sine wave is used after all techniques with only a few exceptions.

The way I demonstrate the power of sinewave in club is by getting one of our taller more solid students to stand in a parallel stance with their arms crossed. I then demonstrate first with no sinewave, moving from a walking stance forward and pushing with both arms onto the

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student. I then do the same thing but this time using knee spring with the down up down motion. We do this several times so our students grasp the idea, the outcome of this simple exercise demonstrates the power that is generated from the dropping of the body on the last downward motion. This is an example of the increase in potential and kinetic energy that can be obtained by using sinewave.

In the Art of Taekwon-Do ITF 3rd edition the Author's talks about Muscular Energy, Potential Energy and Kinetic Energy. If I break this down to the down up down motion it would be.

- A. First downward motion which is very slight would be Muscular Energy, this is the compressing or bending of the knee. We must go down before we go up. This is normally done naturally without the student being aware.
- B. The upward motion is Potential Energy. As we go up the energy is gained from the knee spring and the muscles in the legs pushing up. The highest point is reached past our middle position. Middle position for example would be the front foot in a walking stance if I was standing upright.
- C. With the final downward motion, you have Potential Energy turned into Kinetic Energy as we reach our final position in a stance, with attacking or defensive technique arrive at the exact same time.

When looking at signwave in patterns we need to look at the different motions we have.

Normal motion contains a full sinewave, down up down.

Natural motion contains a full sinewave, down up down.

Fast motion contains a $\frac{1}{2}$ sinewave due to having to perform the techniques fast. A good example of this is movements 15 and 16 of Do-San, where two fast punches are performed after a front snap kick. There is a full sinewave for the first punch, but the sinewave for the second punch is up down. No downward action first in fast motion, just straight up then down.

Continuous Motion contains a full down up down motion. A Good example is Dan-Gun movements 13 and 14, where you perform a forearm low block followed by a forearm rising block. The forearm low block is performed with a full sinewave, as well as the forearm rising block in one continuous motion using one breath. This would be down up down, down up down. This is also a good example of two sinewaves in the same stance.

In the case of Po-Eun which has movement 6-12 and 24-30, the continuous motion will start with the first full sinewave, with the remaining movements using the natural knee spring up and down.

Slow Motion also contains a full sinewave of down up down, the only difference from normal motion is that it's slower. Slow motion is first performed in Joong-Gun movements 27, 29 and 30. There is a small amount of acceleration on the final downwards motion of the sinewave to offset the loss of balance.

Connecting Motion also contains a full sinewave. It will normally contain a natural and a normal technique. In this case only one sinewave for both technique's. A good example is

movement 16 & 17, and 19 & 20 of Yul-Gok. The middle palm hooking block is in Natural motion followed by a middle punch.

As demonstrated by the frequent use of sinewave in ITF Taekwon-Do, it is a fundamental and important aspect of performing patterns.

References

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