

# Sinewave in ITF Taekwon-Do - my journey and understanding of relaxation between movements

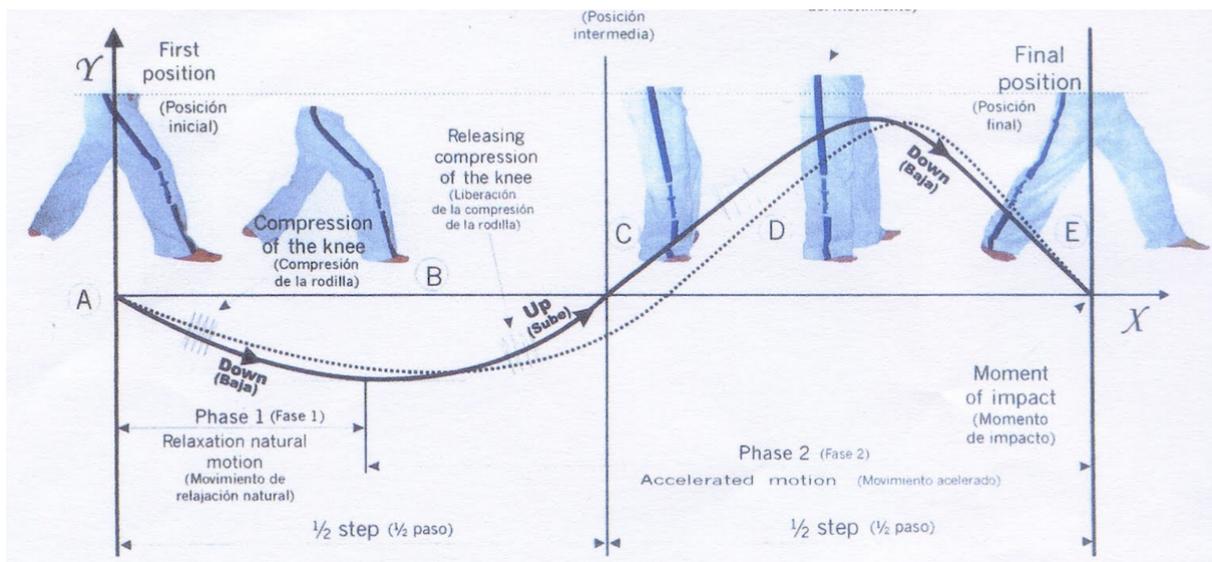
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## Introduction

This essay focuses on the relaxation during sinewave, and how my journey and understanding has evolved throughout my Taekwon-Do career.

To clarify when I am talking about relaxation in sinewave, I am talking keeping relaxed throughout the entire Sinewave movement, and not just limited to phase one in the diagram below:

**Figure 1 – illustration from The Art of Taekwon-Do**



The relaxation phase has been something that has always eluded me, not through lack of trying. I have either been too relaxed (which is because I have had to back off the power in the technique, which also makes the movement look weak), or end up too tense (which reduces speed and decreases power). For a long time I thought part of the problem was solely due to being big, both in size and weight. Granted, while losing weight did help improve some aspects of my movement, it was not a silver bullet.

After taking a long hard look at my own performance, I have slowly worked out the root cause for not being relaxed enough has been related to issues with mobility (which has also been the cause of many of my ankle/calf injuries over the years). It is amazing how a few simple faults in the kinetic chain can put everything out of order.

## Inhibitors for relaxing the body

- Calf mobility (my main problem)

With calf tight muscles the compression stage can make the movement of the legs look jerky, which has a flow on effect upstream to the rest of the body (making the movement of the entire body look tense). As a result many people experience sore knees during training, or heel pain, like walking on glass. Both of these can be as a result of an issue with the calf being knotted.

- Ankle mobility

Similar to calf mobility tight ankles can lead to plantar issues, and also injuries with the heel cord (also known as the Achilles tendon). The most common issue with a tight ankles is that the initial dip can look awkward, and when people land a technique can look awkward.

- Thoracic spine mobility

Being slumped over a computer or mobile device during the day does not help the body be able to relax, with many people ending up with tense neck and shoulders as a result and a slight hunching of the shoulders. This issue will cause you to look like your shoulders are very tight when you try and lock out hand techniques, giving the impression of tension through the shoulders.

## Correcting the mobility issues that impede your movement

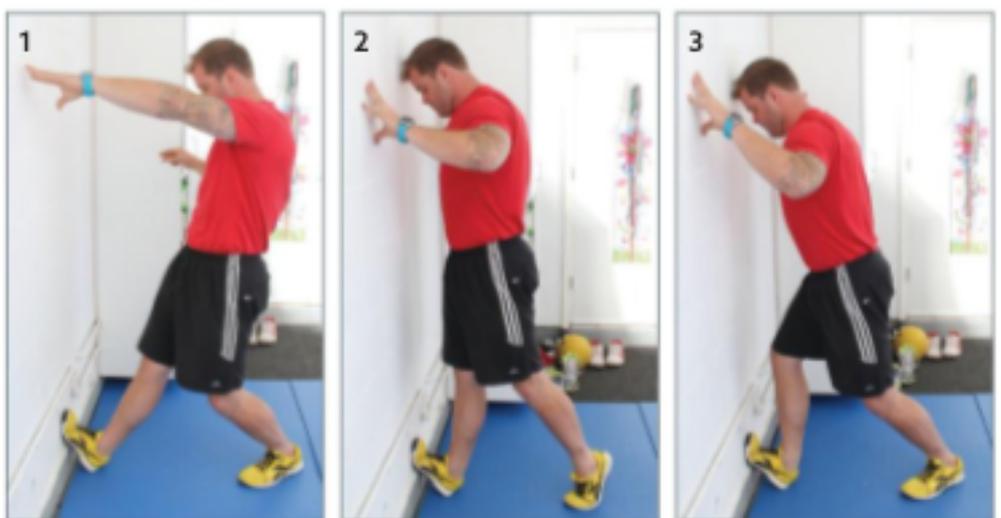
Like many mobility issues, there is no quick fix for this. It is an ongoing process that requires lots of maintenance, taking constant attention over days, weeks or even months.

As part of my daily mobility work, I try to incorporate specific mobility drills into my pre training preparation. An example would be to take 5-10 minutes before training to work on tight calf muscles as set out below. This has significantly reduced pain when training and improved my performance, including increased relaxation during movements (relative to my previous abilities).

### Calf specific exercises:

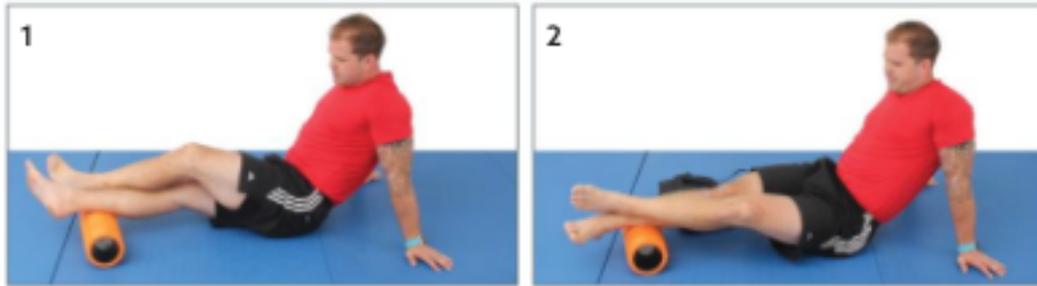
1. Classic calf stretch – (a stretch we have been doing for years at Taekwon-Do). This is good if you do not have any equipment available to do any of the other mobilization techniques.

**Figure 2– illustration from Becoming a Supple Leopard showing a classic calf stretch**



2. Roller Calf smash (can be done with a foam roller, or a large piece of plastic drainage pipe). This can be done by either rolling around until you find a sensitive spot and then using a mixture of contraction and releasing the muscles. An alternative method is to roll side to side when you find the sensitive spots.

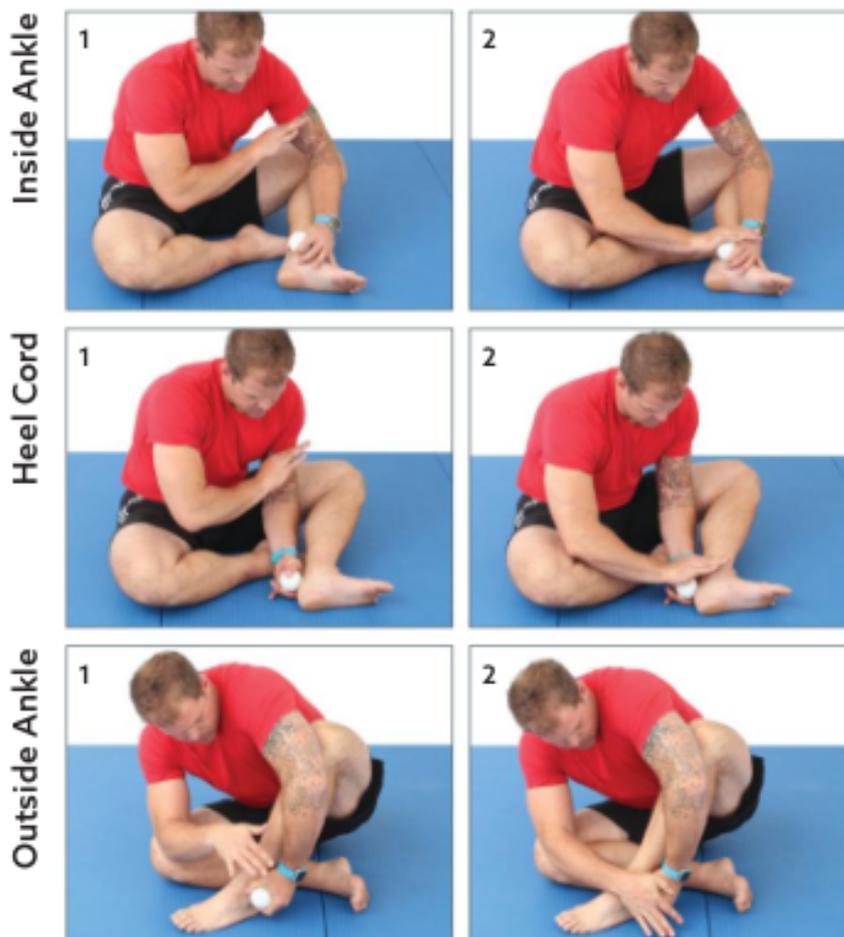
Figure 3 – illustration from *Becoming a Supple Leopard* showing a roller calf smash



Ankle specific exercises:

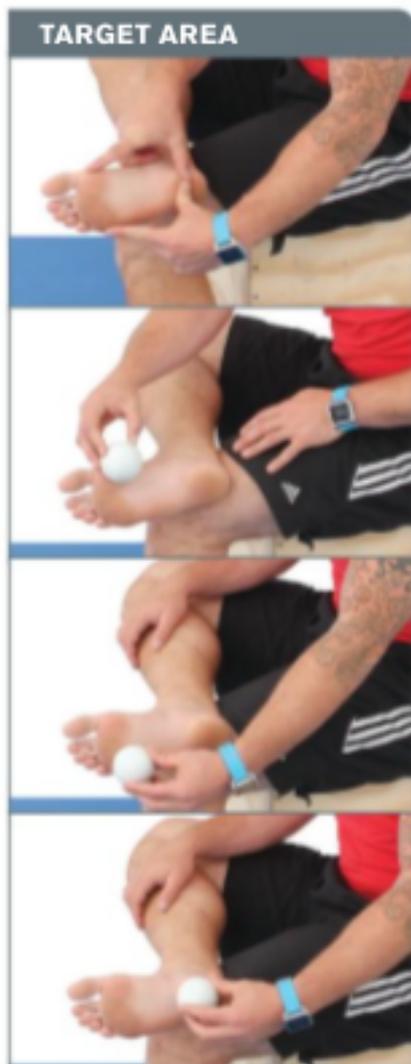
1. Ball whack (done with a yoga tune up ball or a tennis ball as a lacrosse ball can be too hard) - This helps unrestrict some of the sliding surfaces around the ankle to improve the mobility of the skin around the joints.

Figure 4 – illustration from *Becoming a Supple Leopard* showing where to use a ball for a ball whack



2. Plantar surface smash - This is great for helping to treat Plantar Fasciitis issues. The best way to address this is to use either a lacrosse ball or some sort of foot roller. To do this you'll need to roll the ball/roller around until you hit a sensitive spot and then contract and relax under pressure. The great part of this exercise is you can do it while sitting down on a chair or couch at the end of the day (or while you are at work).

**Figure 5 – illustration from Becoming a Supple Leopard showing the target areas for a plantar smash with a lacrosse ball**

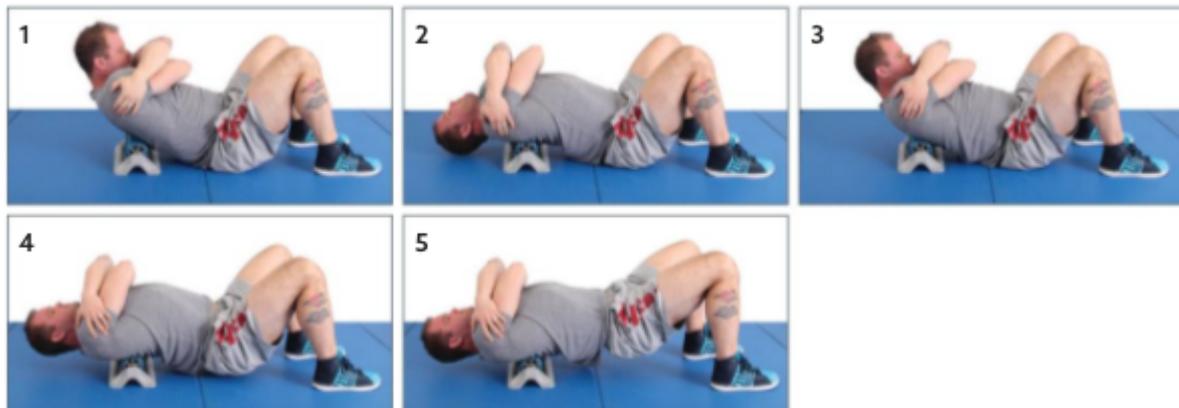


The target area encompasses the plantar surfaces of the bottom of your foot, from the ball of your foot to your heel.

## Thoracic spine exercises

1. **Roller smash mobilization** – this doesn't mean lying on the floor rolling aimlessly. You need to be systematic and slowly contract and release the body over the roller. The benefits of doing this are improved neutral spine, a greater range of motion in the shoulders, and reduced neck/upper back/shoulder pain.

Figure 6 – illustration from *Becoming a Supple Leopard* showing how to do a extension smash to aid thoracic mobility.



**1.** Wrap your arms around your chest and position the roller at the base of your ribcage. Wrap your arms into a big hug, sucking up the slack in your back, pulling all the soft tissue and the scapula out of the way so you can target the motion segments of your back.

**2.** With the tissues of your upper back wound up tight, create an extension force over the roller by arching back.

From this position, spend as much time as necessary extending over the roller until you feel change in the area.

**3.** Keeping your arms wrapped tightly around your body, sit up as if you were doing a crunch. Keeping the majority of your weight positioned over the roller, scoot your butt toward your feet, slide your back down the roller, and move on to a new area.

**4.** Having positioned the roller in the middle of your upper back, arch back and extend over the roller, creating as much extension as possible.

**5.** When you've experienced enough change, progress up your spine to the base of your neck. To create more extension over the roller, squeeze your butt and elevate your hips as you arch back.

Alternatives to a roller are to use a peanut (basically 2 lacrosse balls joined together, which can be done cheaply by taping them together), and if more downward pressure is needed then you can also load weight to the chest while you are on the peanut roller.

## Other methods that can aid with mobility issues

- Getting a regular sports massage. While it can be expensive it is worth investing in it if you can afford it to help relax tight muscles, and also help with injury prevention.
- Getting acupuncture
- Getting a physiotherapist to use accupressure on tight muscles (this is similar to acupuncture, but involves a lot more pressure than acupuncture)

## Conclusion

In the past 2 years I have realised the importance of mobility both as part of my own understanding of how my body moves, and also the role it has in injury prevention. Like with all aspects of Taekwon-Do I have realised that I will be an ongoing journey to improve my ability to relax in between movements. While mobility is my current focus, I hope to make gains in other aspects that will aid my ability to relax more during movements, as my understanding of how my body moves evolves.

## References:

- GM Marano, GM Bos & GM Trajtenberg 2014 The Art of Taekwon-Do 2<sup>nd</sup> edition, Italy
- Kelly Starrett and Glen Cordoza 2015 Becoming a Supple Leopard 2<sup>nd</sup> edition, USA