

Introduction

Stretching is a fundamental part of Tae Kwon Do and needs to be included in one format or another in every class you teach.

Specific benefits to Tae Kwon Do are

- Increased flexibility – so that kicks can be performed faster, higher and stronger
- Reduced risk of injury
- Reduced muscle soreness and therefore increased recovery times
- Better body awareness
- Reduced muscle tension

This chapter has been put together to introduce some of the basic concepts of stretching, to illustrate some general stretches that you can use, and to ensure you apply safe routines in your class. Stretching is a very broad and complex topic, and to gain a thorough understanding you will need to do further reading in your own time.

The illustrated stretches are by no means exhaustive, but rather a foundation for you to further develop.

When to stretch?

Within Tae Kwon Do (and all other sports training) there are 3 areas where stretching is relevant

Preparatory (Prep)

Done either at the beginning of the class or during the warm-up with the intention of mobilising the joints. These stretches do not increase flexibility and are characterised by the following attributes

- Light in intensity
- Performed for 5-10 secs
- Several repetitions

Developmental (Dev)

These are the ones we are most interested in as they increase muscle length and therefore flexibility. The body temperature must be elevated i.e. after the warm-up. These stretches have the following attributes

- Requires effort
- Few repetitions
- Held for a total of at least 30 secs

Cool-down

Similar to Prep stretches, but done at the end of a class to allow the body to return to its natural state and to prevent soreness.

Types of Stretch

As an instructor you need to be aware of the different categories of stretches, so that you can keep the classes varied, effective and safe. Furthermore, you are responsible for motivating students to adopt good training practises, so stretches need to be simple. A good teaching point would be to explain each stretch, which muscle is being stretched and why it is important to Tae Kwon Do.

Static

Stretching to the end of a muscle's elasticity, and then holding the position. These stretches are unaided. E.g. splits.

Pros

Safest method
Proven to enhance flexibility
Simple
Uses very little energy
Permits semi-permanent change
Allows plenty of time for muscles to adapt

Cons

Not specific to training needs
Does not enhance coordination, endurance or speed

Ballistic

Involves bouncing or bobbing movements using the momentum of the limbs or body to forcibly increase flexibility.

This method is the most likely to cause injury and soreness, and therefore we advise that you don't incorporate this into your classes.

Dynamic/ Active

Similar to ballistic stretches, but without the bouncing. Movements are under control at all times. E.g. front rising kick

Pros

Develops dynamic flexibility, which is essential for Tae Kwon Do
Stretches can be specific to Tae Kwon Do – e.g. Front rising kicks
Increase speed and coordination

Passive

Similar to static stretches but using an external force (usually a partner)

Pros

Good for muscles that are weak or hard to stretch
Allows stretching beyond normal range
Direction, duration and intensity can be measured
Camaraderie

Cons

Greater risk of injury/soreness if partner applies too much force
Rapid stretching will do more harm than good

Proprioceptive Neuromuscular Facilitation (PNF)

A broad category that has its roots in physiotherapy. Used properly these stretches can achieve rapid results. There are two distinct types of PNF stretch, and both normally require a partner to help.

Contract-Relax (CR)

First, the muscle to be stretched is gently lengthened. It is then contracted so that the stretch is resisted. Contraction should be less than maximum effort (about 80%). The muscles is then relaxed briefly before repeating the stretch, but this time a little past the previous stretch.

Contract-Relax-Agonist-Contract (CRAC)

Similar to CR method, except that after the relaxation phase, the agonist (opposite) muscle group is contracted (Opposite muscle groups are beyond the scope of this course).

Frequency and Intensity

Scenario 1 – student trains once per week and only stretches during the class, circa 10 minutes.

Scenario 2 – Student stretches everyday at maximum intensity

Which is the ideal routine? Well neither, but as an instructor Scenario 1 is preferred.

Why? Firstly you are able to monitor the student, and ensure they are getting the most out of the stretch. Secondly, and more importantly, over-stretching will do more harm than good. Over-stretching over a period of time will actually restrict flexibility because the muscle fibres are being damaged each time, and then not given enough time to heal.

Ideally, stretching should be a daily event, but at lower intensity. Stretching at home and stretching in the class are very different, and you, as the instructor, need to motivate the students to stretch in their own time and in a safe manner. A good way of thinking about stretching is that you are trying to fool the brain into thinking the stretched position is actually normal, natural length. Gentle stretching allows this process to take place whereas if you over-stretch then the brain knows the muscle is being lengthened and will try to 'reset' the muscle after the stretch.

A popular consensus in sports science is that STATIC/PASSIVE stretches should be held for at least 30 secs. This could be either in one repetition or as several repetitions totalling 30 secs.

DYNAMIC stretches should be performed between 10 – 50 times, depending on experience of student and type of stretch. E.g. turning kicks against the wall.

For PNF stretches, the static part of the stretch should be held for about 15 secs. Then the 'resistance' section should last between 5-15 secs. Remember to start with shorter contractions. Relax the muscle for a few seconds before repeating up to 3 more times.

E.g. Side Splits

Static - sitting with legs as far apart as possible and straight. Hold for 30 secs

Dynamic – standing side facing against a wall, raise leg several times to the end of the range of movement

Passive – standing side facing against a wall, raise leg so that partner holds and forces stretch for 30 secs

PNF - standing side facing against a wall. Partner holds leg in stretch position for 15 secs. Then force leg down at about 80% effort for 10 secs. Relax. Repeat process twice more but stretching a little further each time.

Golden Rules

'W I N N V E D I S'

1. **W**arm up before developmental stretching
2. **I**ntegrate stretches into the overall class plan. E.g. kicking techniques then concentrate on legs and lower back stretches. E.g. hand techniques/ punching then concentrate on upper body and lower back
3. **N**ever stretch at 100% intensity
4. **N**ever stretch an injured area
5. **V**ariety is the spice of life. Learn variations.
6. **E**xplain the stretch – after all you want students to stretch at home
7. **D**o not bounce or bob at the end range of a stretch
8. **I**f in doubt, leave it out! Don't try anything new without having first done it yourself and ensured it is safe and effective.
9. **S**tart with main muscle groups first (normally the large ones)

Main muscle groups in Tae Kwon Do

Kicks

Hamstrings – back of leg

Gluteals - bum

Quadriceps – thighs

Calves

Adductors – Inner Thighs

Abductors – Outer Thighs

Hip Flexors

Lumbar - Lower back

Abdominals

Handwork

Pectorals – chest

Triceps – back of arm

Deltoids - Shoulders

Latissimus Dorsi – Sides

Trapezius - Upper back

Stretches

Preparatory/ Cool-down

Preparatory stretches should only last a few minutes. They are designed to mobilise all major joint in the body. A good strategy is to start either at the head or feet and work through the body sequentially. Alternatively the stretches can be incorporated into the warm-up. Can be either a static or dynamic stretch.

E.g.


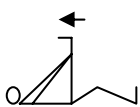
Neck	side to side, left to right, nodding forward
Shoulders	shrugs, circles, gentle punching, arms alternating up and down
Chest	taking arms back
Arms	bicep curls, gentle punching
Sides	side bends, gentle punching
Waist	twists, hip circles
Lower Back	stretching up and back
Hips	gentle kicking, leg circles
Thighs	kick heels back, bend leg back and hold ankle
Hamstrings	gentle kicking, bending forward legs straight, bending forward one leg in front of other
Bum	gentle kicking, knees in to chest, squats
Knees	squats, gentle kicking
Calves	stepping on tip toes, flexing foot back and forth
Ankles	circles
Wrists	circles
Fingers	clench and release, Mexican wave

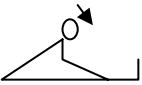
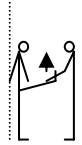


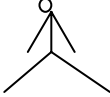
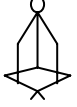
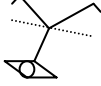
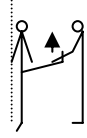
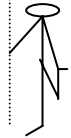
Developmental


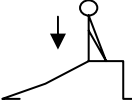
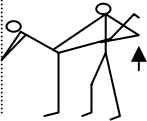


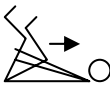
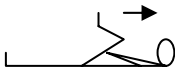
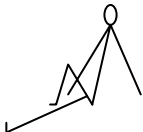
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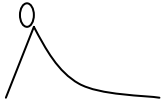
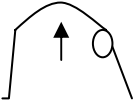



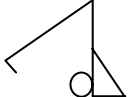

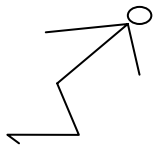
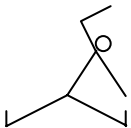
1. Stretch main muscle groups first
2. Stretch the muscles you are going to be using

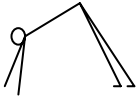
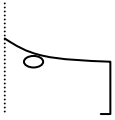

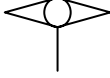
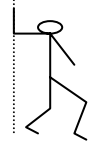
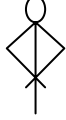


Also included are some variations for the stretches, so that you have more options for planning your classes.

Hamstrings	
	<p>Sitting on floor. Straighten one leg and bend other so that foot is against inner thigh. Bring chest to knee. Flexing foot will also stretch calf too.</p> <p>Variations: 1. Dynamic 2. Partner pushing the back</p>
	<p>Lying on back, bring one leg up. Lock knees and pull leg towards head. Flexing foot will also stretch calf too.</p> <p>NOTE: Keep the tailbone down on the floor, otherwise you will stretch the lower back instead</p> <p>Variations: 1. Dynamic 2. Partner pushing leg 3. PNF</p>

	<p>Sitting on floor with both legs straight out in front. Bring chest down to knees.</p> <p>Variation: 1. Dynamic 2. Partner pushing the back</p>
	<p>Against wall (or freestanding if more advanced). Straighten one leg out in front of you, so that partner holds and pushes up. Stabilising leg should stay straight, with foot pointing forward – no tiptoes!</p> <p>Variation:</p> <ol style="list-style-type: none"> 1. PNF, bring chest down to knee 2. Partner steps back so that you are going into front splits
	<p>Sitting on floor with legs wide apart and straight. Bring chest down to knee using arms</p> <p>Variations: 1. Dynamic 2. Partner pushing back</p>
<p>Inner Thigh</p>	
	<p>Sitting on floor with legs wide apart and straight. Bend body forward. This stretch also stretches the lower back.</p> <p>Variations:</p> <ol style="list-style-type: none"> 1. You can pull body down using arms 2. Partner pushes the back 3. Partner in front with legs against thighs and pulling arms. 4. Dynamic
	<p>Side splits, with feet pointing forward. Can be freestanding or against wall.</p> <p>Variations:</p> <ol style="list-style-type: none"> 1 Grab ankles and pull down 2. Knees on floor instead of feet
	<p>Classic groin stretch and can be performed free sitting, against a wall or lying down. Bring soles of feet together and apply downward pressure on legs using the arms.</p> <p>Variations: 1. Dynamic 2. Partner pushing down 3. PNF</p>
	<p>Against a wall, open legs out. The back should be flat on the ground and the bum resting against the wall.</p> <p>Variations: 1. Partner pushes legs down 2. PNF</p>
	<p>Side facing against a wall or freestanding for more advanced. Lift leg out to the side so that partner can raise further.</p> <p>Variation</p> <ol style="list-style-type: none"> 1. Dynamic – without partner 2. PNF 3. Partner steps backward
<p>Quadriceps</p>	
	<p>Classic thigh stretch and can be done against wall, freestanding, lying on your front or lying on side. Bend leg back, grab ankle with hands and pull towards buttocks</p> <p>Variations: 1. Dynamic 2. Partner pushes leg 3. PNF</p>

	<p>Sit back on heels. Toes should be pointing back. Do not do with bad news</p> <p>Variations: 1. Dynamic 2. Take arms back 3. Lie back on feet.</p>
<p>Hip Flexors</p>	
	<p>Classic stretch and can be done against wall or freestanding. Feet should be hip-width apart. Step forward so that knee is directly above ankle. The other leg should be slightly bent with heel off the floor.</p> <p>Variations: 1. Dynamic 2. Back knee on floor.</p>
	<p>Facing wall, extend leg out so that partner can hold and raise. Keep stabilising leg straight. Partner also holds lower back to stabilise.</p> <p>Variations: 1. Partner steps backward 2.PNF 3. Straighten back.</p>
<p>Outer Thigh</p>	
	<p>Lying on back, bend knee so that it is directly above hips and then with the opposite hand take across body. Note: The back should remain on the floor.</p> <p>Variations: 1. Dynamic 2. Partner pushes knee down 3. PNF 4. Leg straight out</p>
	<p>Standing against wall with feet together, thrust hip out.</p>
<p>Gluteals</p>	
	<p>Lying on back, put foot on opposite knee. Wrap arms around leg that has foot on floor and pull towards the body. Keep back flat on floor</p> <p>Variations: 1. Partner pushes leg towards you 2. PNF 3. Foot against wall</p>
	<p>Lying on floor, bend knee into chest. Keep back flat on floor.</p> <p>Variations: 1. Partner pushes knee into chest 2. PNF</p>
	<p>Sitting on floor with legs straight out. Take leg and cross over so that foot is placed near outside of knee. Twist body around so that opposite arm is across the outside of the bent knee. Twist in opposite direction to stretch out the side of the leg.</p> <p>Note: Depending on body position this stretch will work outer thighs or gluteals</p>

Lower Back	
	<p>"Cobra". This stretch can also be done standing or on the knees. Note: Do not do with as a PNF stretch</p> <p>Variations: 1. Dynamic 2. Partner pulling body back</p>
	"Crab"
	"Cat"
	<p>Sit back on heel and then take body forward with arms straight out in front.</p> <p>Variations: 1. Partner pushes down buttocks.</p>
	Lying on back, bend in both legs and grab with arms. Pull in so that the lower back in bends.
	Lie on back. Using your arms as support, bring whole body up so that it is vertical. Keep legs straight and from the waist, bend legs towards head.
Obliques	
	<p>Standing with legs shoulder width apart, twist body around. Note: Keep hips pointing forward</p> <p>Variations: 1. Dynamic</p>
	<p>Lying on back, bend legs to 90°, keeping knees and feet together. Rotate knees to the side. Go as far as you can without taking shoulders off the floor. Also stretches Quadratus Lumborum (QL), which is important for stabilising during kicks</p> <p>Variation: 1. Partner pushes down knees whilst holding down shoulder.</p>
	<p>Sitting with legs wide apart, bend body to the side. This also stretches out the inner thighs.</p> <p>Variations: 1. Dynamic 2. Partner holds top arm and pulls</p>
Calves (any movement that flexes the feet)	

	<p>From standing, bend forward so that hands are on floor. Keep feet firmly on floor and legs straight. Can also be done against wall.</p> <p>Variations: 1. One leg 2. Dynamic - stepping motion</p>
Shoulders	
	<p>Against wall, place arms on wall and bend forward so that head drops below hands. Push down</p> <p>Variation: Kneeling with partner pushing down upper back</p>
	<p>Take arm across the body. Press into the body using the other arm.</p> <p>Variation: 1. Partner stands behind and pull arm 2. PNF</p>
Pectorals	
	<p>Place hands behind head and push elbows back.</p> <p>Variation: 1. Dynamic 2. Partner pulls elbows back 3. PNF</p>
	<p>Against wall, elbow at shoulder level. Step past elbow and twist upper body away from wall.</p> <p>Note: Also stretches the shoulders</p>
	<p>Place both hands, fingers pointing downwards on the lower back. Push elbows back</p> <p>Variations: 1. Partner pulls arms back 2. Dynamic</p>
Triceps	
	<p>Take both arms back so that one elbow is pointing upwards and the other downwards. Lock hands and pull down.</p> <p>Variation: 1. Partner pulls top arm down</p>
	<p>Lots of fun! One partner can get a back stretch the other can do strength work such as squats.</p>