

# Fitness for Netball "all year around"

Teddingtons Swan Netball Club –(United Kingdom) Website: [www.teddingtonswans.co.uk](http://www.teddingtonswans.co.uk)

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**It's important to keep in shape for a top Netball Performance all year round.**

## **CORE STABILITY - WHAT IS IT?**

The Core is your trunk, which includes the following muscles, your abdominals (Stomach muscles) and back muscles. Core Stability is the strength of the supporting muscles of your lumbar region during dynamic movements. The Lumbar Spine is the lower back and the supporting muscles are mostly deep including the pelvic floor and transverse abdominals.

### **WHY DO I NEED CORE STABILITY?**

Core Stability is used in balancing and jumping especially whilst under pressure from the defence/opposition. This can help with:-

- Shooters who are stood on one foot,
- Defence leaning or jumping to defend a shot in the circle keeping the 3ft distance.
- Any player leaning off court to prevent a ball going out of court and into the opposition's possession.
- Catching a ball in the air and turning in the air while under pressure from defence.

### **HOW DO I TRAIN FOR BETTER CORE STABILITY?**

- Do a pilates or yoga class. Most gyms have student rates so check one out.
- Sit ups.
- Leg raises.
- Netball specific exercises (practicing the above).
- Exercises on wobble boards.
- Weights stood on one leg.
- Lunge with a twist holding a medicine ball.

## **PLYOMETRICS - WHAT IS IT?**

A method of training explosive speed and/or strength which is described as power. It uses a variety of exercises that use power to maximise this fitness component.

### **WHY DO I NEED PLYOMETRIC TRAINING?**

Power or explosive energy in speed or strength is necessary for jumping high, sprinting fast, dodging to get free or changing direction quickly to make an interception.

### **HOW DO I TRAIN FOR PLYOMETRIC TRAINING?**

- Squats & lunges.
- Jumping onto and off steps/box jumping for example using an aerobics step.
- Jumping over a row of low hurdles.
- Throwing a weighted ball.
- Using resistance during a jumping or sprinting exercise.

# ENDURANCE - WHAT IS IT?

## There are different types of endurance:

Stamina which is cardiovascular endurance and aerobic endurance.

### Speed Endurance:

Which you would need to be able to sustain a speed and repeatedly sprint over a period of time (i.e in Netball) this would also include anaerobic endurance, being able to use the anaerobic energy system efficiently.

### Muscular Endurance:

Using strength repeatedly over a period of time, for example rugby players in tackle after tackle

## WHY DO I NEED ENDURANCE TRAINING?

The main reason for Netball players is to be able to keep a sustained performance throughout the whole match right to the final whistle, this means you can keep up with and hopefully outperform your opposition continually throughout the match.

### Different positions in the team require different types of endurance:

#### Shooters and Circle Defence require:

The ability to sprint and jump in short sharp bursts repeatedly over a prolonged period and the intensity is very high. This type of endurance is mainly speed/muscular and also anaerobic and uses the ATP PC energy system.

#### Centre Mid Court Players require:

More cardiovascular endurance than the circle players as they cover more distance during a game but this needs to be mixed with short sharp bursts of speed.

## HOW DO I TRAIN TO HAVE BETTER ENDURANCE?

To train cardiovascular endurance which all Netball players need in order to keep enough oxygen flowing to the muscles throughout a match then running is the best training session. To improve your cardiovascular endurance fitness you can start with a 20 minute run and build it up, but try and keep running the whole way even if you have to slow down. This needs to be mixed with speed training or your explosive energy will suffer. Maybe next time you feel the urge to go for a 20 minute run do this:-

- Walk briskly to warm up for 200 metres, (about 4 street light poles).
- Jog for 50 metres (1 street light pole to the next light pole).
- Walk for 50 metres.
- Sprint for 50 metres (1 street light - go as fast as you can BUT go all out).
- Walk for 50 metres (2 street light to the next light pole).
- Sprint for 100 metres (2 street lights as fast as you can – go all out).
- Walk for 50 meters
- Sprint for 100 meters

As each week goes by increase the sprint distances. Keep doing this and you'll go faster and sprint further and run longer.

***Don't forget to do some stretches after you've finished. Muscles need to be flexible, this aids recovery & will reduce the likelihood of injury!***

# STRETCHING – WHY IT'S IMPORTANT

Stretching Exercises For Flexibility <http://www.shapefit.com/stretching-exercises.html>

Stretching, though often overlooked, plays a vital role in keeping muscles and joints strong and pliable so they are less susceptible to injury. That's why it's such an important part of warming up before physical activity and cooling down after. Spending a few minutes a day doing slow, deliberate stretches can also help you manage stress more effectively giving you a chance to momentarily shut off outside stressors, and focus, physically and mentally, on your activity. A good routine should work each of the major muscle groups, and needn't take long. Five to 10 minutes is all you need. Go and do a yoga or pilates class, most gyms have student rates.

## Rules to stretch by

- Warm up first: warm muscles, tendons, and ligaments are more flexible and stretch more easily; stretching cold muscles can cause tears.
- Stretches should always be gradual and gentle.
- Hold each stretch in a static position for 10 to 20 seconds, allowing the muscle to lengthen slowly.
- Do not bounce; bouncing actually causes muscle fibers to shorten, not lengthen.
- Stretch only to the point of resistance; if the stretch hurts, you're pushing too hard.
- Don't rush through the stretching routine; use it to prepare yourself mentally and physically for activity.

## Why stretch?

Stretching is useful for both injury prevention and injury treatment. If done properly, stretching increases flexibility and this directly translates into reduced risk of injury. The reason is that a muscle/tendon group with a greater range of motion passively, will be less likely to experience tears when used actively. Stretching is also thought to improve recovery and may enhance athletic performance. The latter has not been fully agreed upon in the medical literature, but improved biomechanical efficiency has been suggested as an explanation. Additionally, increased flexibility of the neck, shoulders and upper back may improve respiratory function.

## How to stretch?

There are three methods of stretching: static, ballistic, and proprioceptive neuromuscular facilitation (PNF). Static is the method recommended for the majority of athletes since it is the least likely to cause injury. Ballistic (bouncing) and PNF stretching are probably best reserved for a select few who are experienced with their use. To get the most benefit from your static stretching routine while minimising injury stretching should be done after warm-up exercises. The increased blood flow to the muscles aids in the flexibility gains from stretching and is an important component for injury prevention. Static stretching is done by slowly moving a joint towards its end-range of motion. A gentle "pulling" sensation should be felt in the desired muscle. This position is then held for 15 - 20 seconds. Do not stretch to the point of pain and do not bounce since this may cause injury to the muscle. Within a session, each subsequent stretch of a particular muscle group seems to give progressively more flexibility. A set of 3 to 5 stretches is probably sufficient to get the maximum out of the routine. Alternate between agonist and antagonist muscle groups (eg. quadriceps and hamstrings), and alternate sides. It is also a good idea to start with the neck and progress down to the feet. This enables you to take advantage of gains in flexibility from the previously stretched muscle groups. Stretching should also be done after the workout.

The post-workout stretch is thought to aid in recovery. Cold packs can be applied to sore areas in those of you who are recovering from injuries.

## Why am I so tight?

There is considerable variation in baseline flexibility between individuals. There may also be variation within a given individual (eg. flexible shoulders but inflexible hips, or flexible right hamstring, but tight, inflexible left hamstring). Genetics, injuries, and abnormal biomechanics all play a role in these differences. One shouldn't try to make big gains in flexibility in a short period of time. Stretching should be done gradually over a long period of time and then maintained to prevent slipping back towards inflexibility. Some people will enthusiastically embark on a stretching program, but then quit two weeks later because they haven't seen any benefit. Be patient and consistent. It takes a long time!

## DELAYED ONSET MUSCLE SORENESS (DOMS)

[http://www.naturaltherapypages.com.au/article/delayed\\_onset\\_muscle\\_soreness](http://www.naturaltherapypages.com.au/article/delayed_onset_muscle_soreness)

Have you ever exercised and found that you have been sore for days afterwards? It's actually not an injury but a common phenomenon known as delayed onset muscle soreness (DOMS).

### What is Delayed Onset Muscle Soreness?

Delayed onset muscle soreness or DOMS is the muscle pain and soreness that is felt 12-48 hours after exercise. It particularly occurs at the start of a new exercise program, after a change in activities, or after a dramatic increase in the duration or intensity of exercise. This soreness is a normal response to unusual levels of exertion that are placed on the body, and is part of the process that the body undergoes in order to gain strength and stamina as the muscles recover and build. DOMS is at its worst within the first two days following exercise or activity and will go away over the following days. DOMS, while annoying, is actually quite common. It is different to the acute pain of muscle strains or sprains, which are felt as an abrupt, specific and sudden pain that occurs during the activity and causes swelling or bruising. DOMS is more of an ache that is felt within the muscles.

### What Causes Delayed Onset Muscle Soreness?

DOMS is caused by microscopic tearing of the muscle fibres. The amount of tearing that occurs will depend on how long and how you exercise, and what type of exercise you undertake. Any movements that you are not used to can cause DOMS but eccentric muscle contractions – or movements that cause the muscle to forcefully contract while it lengthens – apparently cause the most soreness. Eccentric muscle contractions can be found in going down stairs, running downhill, and lowering weights, for example.

### Treating Delayed Onset Muscle Soreness

To deal with the soreness caused by DOMS, the following may be helpful:

- simply wait it out – pain often goes away within 3 to 7 days without any treatment;
- avoid activity that will increase the pain felt;
- use active recovery techniques such as low impact aerobic exercise;
- use the RICE method of treating injuries;
- try some gentle stretching;
- gentle massage to the affected muscles;
- yoga may be helpful to some people;
- wait for the pain to go away completely before beginning exercise again;
- warm up completely before beginning exercise;
- contrast showers may be helpful – alternating between hot and cold water.

## Preventing Delayed Onset Muscle Soreness

Even though DOMS is a common thing, there are ways to prevent it from occurring. The following tips may be of help to you:-

- warm up and cool down properly when undergoing exercise;
- whenever you start a new activity, start gradually and build up the time spent doing it and the intensity of the exercise by 10 percent per week;
- hire a personal trainer to show you how to exercise safely and effectively;
- new weight lifting routines should be started with light weights and high repetitions;
- avoid making sudden changes in your exercise regime;
- avoid drastic changes in the time you spend exercising.