

Stretching – a vital part of dancers training and practice

By Tania Huddart for DANZ ©

This resource represents latest approaches and will challenge some present dance practice.

The information around end-range stretching on page 3 is particularly important. DANZ encourages dance teachers of all genres and styles to be familiar with the content and approaches in your studio and dance practice. While the role of dance is largely beneficial to people's health, injuries are increasing. Stretching in the appropriate way will minimize injury arising from poor preparation.

Stretching

Increasing flexibility through stretching has traditionally been an important part of a dancers training. Historically dancers have copied stretches and done them automatically without real thought for what is happening to their bodies. Effective stretching is very individual as each dancer has different abilities and limitations. Stretching properly can do more than just increase flexibility, it can enhance physical fitness, increase mental and physical relaxation. Regular stretching can also reduce muscular soreness and the risk of injury to muscles, joints and tendons, and increase body awareness.

It is important to stretch the muscles that need to stretch rather than the ones that are already flexible and to make sure that both sides of the joint are stretched. This reduces the risk of developing an imbalance that may lead to injury. Warming up before stretching is a must and there also needs to be adequate rest between heavy stretch sessions. Over stretching should be avoided as it will increase the risk of injury and keep you further from your goal.

What is flexibility?

Flexibility is predetermined at birth as part of our genetic inheritance and can be described as the general absence of stiffness within the range of movement possible at a joint or series of joints, as in the case of the spine. Stretching increases muscle length permanently if done over a period of weeks and months, on a regular basis. It is also used to increase the elasticity of the muscle temporarily.

There are two main types of stretching - **static** and **dynamic**. **Static stretching** refers to the amount of movement obtained by passively moving a limb to a maximum degree. An example of a static stretch is lying on your back with one leg raised in the air and gently easing the leg in toward the

chest to stretch the hamstrings. It is advisable to use static stretching as this slow and gentle form of stretching gives the best results. As a general rule, stretching should be done for 10 to 30 seconds at a time and repeated 2 to 3 times.

Dynamic stretching refers to the amount of active movement possible as a result of muscle contraction. Dynamic stretching is a good technique to use to move body parts gradually in order to increase the range or speed of movement - circling the ankle or shoulders are examples of dynamic stretches. Many Pilates' exercises move the body in a dynamic movement range.

When and how to stretch – mid end and plastic range stretching

Improving flexibility is generally thought to help with performance enhancement and injury prevention. However, when and how you stretch is also very important.

When you stretch a muscle you also stretch surrounding tissues like nerve, ligament, tendon and connective fascia. When stress, in the form of stretching, is applied to tissue, the tissue will deform and the deformation is called a strain. The more strain you apply the more deformation occurs. Initially this strain is elastic - meaning the muscle will return to its original length when the force is released. However, after a certain point beyond the elastic range we reach what is termed the **plastic range**. In this case the tissue permanently deforms but does not rupture.

Flexibility training before class should consist of **midrange stretching** and joint articulation.

Stretching in **end range** positions are better to be done at the end of class when the body is warm and the dance activity that requires you to be strong and stable has ceased.

End range stretching or over stretching just before class is still common in New Zealand dance, yet is not good practice. End range stretching is more likely to cause injury than prevent it.

The excitability of the muscle changes when it is stretched, which leads to reduced contraction ability and reaction time of the muscle - in other words, reduced strength and stability. Stretching in the end range positions before class reduces strength and stability.

Dancers striving to increase flexibility will often stretch into the **plastic range**. Care should be taken at this point as past the plastic range is failure of the tissue, also known as a rupture. Sometimes only a little extra force is required to move from the plastic range to rupture of the tissue.

Muscles protect nerves and nerves protect muscles. When the muscle is being stretched from the elastic into the plastic range we see a change in the blood flow to the nerve and as a result of this, the neural input to the muscle is altered.

It is recommended by a variety of sources that children and young adults still experiencing bone growth should not hold stretches for longer than 10 seconds. Adults can hold a stretch for up to a minute. Passive stretches should also be performed in sets of 2-4 repetitions with a 15-30 second rest in between each stretch.

Breathing and Stretching

Correct breath control helps you to gain the most from your flexibility training. Breathing helps to relax the body, increase blood flow and remove lactic acid from the muscles. Slow relaxed breathing, with an emphasis on exhalation, during a stretch is recommended.

Correct breathing when stretching will improve muscular elasticity and increase the rate at which lactic acid is removed from the muscles, reducing muscle soreness and the risk of injury. The breath execution should remain fluid and not be forced in order for the respiratory system to work effectively.

Exhalation occurs through the mouth or nose. Inhalation through the nose cleans, warms and humidifies the air you inhale to increase oxygen transfer into the lungs.

Making Gains in Flexibility

Gaining adequate flexibility depends on a number of factors:

Warming up properly

In order to get the most out of your stretches and to avoid injury, you need to warm up properly before you do stretching. **The best time to stretch is when your muscles are warm.** If you want to do a stretch routine and you are not already warm, you will need to perform some type of aerobic activity before you start your stretching.¹ Stretching to increase your flexibility is best done at the end of the cool down phase of your dance class.

Consistency

Stretching every once in a while will not help you achieve your goal unless you are naturally flexible. Your flexibility is predetermined at birth and is dependent on the shape of your joints. Increasing your flexibility requires a consistent level of commitment.

Perseverance

Stretching can be uncomfortable and is usually more challenging at the beginning. Your flexibility will increase depending on how willing you are to push yourself to your own personal limits. However, stretching should **never** be extremely painful as this may lead to injury. **Injuring yourself will only keep you further from your goal.** It is important that you are aware of your limits and that you are honest with yourself. Cherish your natural gifts and be kind to yourself when assessing the areas you need to work on to achieve your goals.

Giving your muscles time to rest and heal

Your muscles will take time to adjust and make the changes you require of them. With consistent flexibility training it will take you between 6 weeks to 8 months to get comfortable. You also need to give your muscles time to heal, rest and repair themselves and therefore you should alter your stretching programme with light days, heavy days and rest days.

A good stretch should only target the muscles you are trying to lengthen. This ensures that you do not need to overcome the resistance of more than one muscle group at a time. Isolating the muscle group gives you greater control over the stretch so you are able to vary the intensity of the stretch.

Movement Exploration Stretching

Models: Shanina Connell, Aeran Collett, Tania Kopytko

Back of the hip

Starting position

Lie on your back with your legs against the wall and your buttocks close to the wall but not quite touching. Cross one ankle over the other knee. Imagine that your legs form a bow and arrow. As you ease into the stretch the string of the bow tightens.

Description

Exhale and gently bend the knee of the foot that is on the wall and slowly lower your foot until you feel a stretch around your buttocks. You will notice that your lower back tilts back and rests on the floor, but take care that the buttocks do not leave the floor completely. If they do, move a little further back from the wall and try again.



Thigh

Starting position

Lie on your stomach with both legs extended behind you and your legs gently squeezed together. If you have lower back problems, place a pillow under your stomach for support. Turn your head to one side and relax it on the floor.

Description

Bend the knee of one leg and hold onto your foot. Exhale and gently ease the heel towards the centre of your buttocks. If your thighs are very tight and you cannot reach your foot comfortably you can try placing a towel around your ankle to help you pull your heel closer.



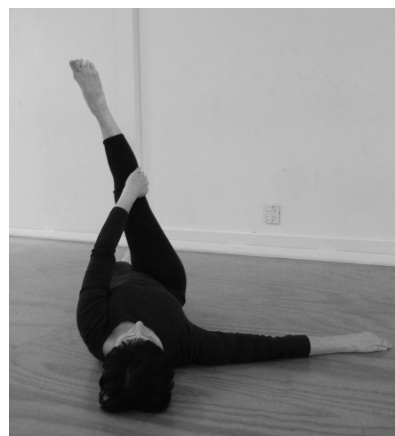
Outer thigh (Iliotibial band)

Starting position

Lie on your back and extend one leg up into the air at approximately 90 degrees. The other leg is straight on the floor.

Description

Use your opposite hand to draw your leg across the centre line of your body. Keep your hips anchored to the floor as you do this movement.



Hamstrings

Starting position

Lie on your back and extend one leg up into the air at approximately 90 degrees. The other knee is bent and the foot placed on the floor for support. Clasp your hands behind your thigh and keep your shoulders relaxed.

Description

Exhale and keep your spine elongated as you gently hinge the leg towards your trunk until you can feel a good stretch through the back of your thigh. Take care not to collapse the lower back to the floor. Think of stretching your sitting bone to the wall in front of you. If the stretch is too intense, relax your foot and soften your knee slightly, or move the leg away from your trunk to reduce the tension on the muscle.



Calf

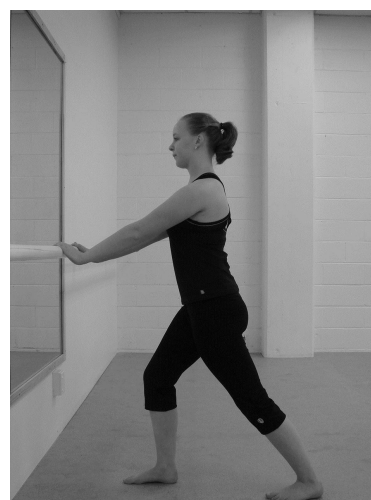
Starting position

Stand facing a wall and place both your hands on the wall at shoulder level, or hold onto a ballet barre.

Description

Extend one leg directly behind you as the front knee bends. Ensure both feet are in the parallel position. Maintain neutral spine and increase the stretch by bending the front knee a little more.

Variation: you can also stand with the balls of your feet on the edge of a step and 'hang' your heels down. Take care with your postural placement.



Conclusion

Seek professional guidance and advice if you lack confidence or knowledge in this area of dance practice. As a teacher/leader you have a responsibility to role model good stretching practice for your safety and the safety of your students and dancers.

About Tania

Tania Huddart has worked closely with DANZ over the past 5 years to design the Perfect Performance specialist training and resources for dance health and safety. A dance studio and Pilates specialist based in Wellington, Tania is one of the advisors on the NZ dance qualifications development project with Skills Active ITO.

Tania started her career as a dance teacher working in South Africa and Europe, following her dance degrees from the Universities of Cape Town and Durham. Tania has a particular interest in teaching techniques and methodologies as well as combining anatomy, biomechanics and dance technique. She is a strong supporter of the importance of on-going professional development for dance people and in 2011 she completed the Trinity College London, Certificate in Dance Health and Safety.