

**Hamstrings (back of thigh)**

- Bent knee position
- Bring one leg in
- Hold on back of thigh
- Extend the leg until you feel a comfortable stretch

**Gastrocnemius (calf)**

- Slide one leg back
- Toes face forward, back heel into the ground
- Keep back leg straight
- Bend front knee
- Chest lifted

**Erector Spinae & Glutes (back)**

- Lie on back
- Arms around back of thighs
- Hug knees into chest

**Soleus (lower calf)**

- Place one leg under the leg
- Toes forward, back heel into the ground
- Bend back knee, sitting down over back leg
- Keep chest lifted, avoid leaning forward

**Obliques (waist)**

- Bent knee position
- Drop knees over
- The knees and feet should relax into the floor
- Both arms relaxed into the floor

**Abdominals (tummy)**

- Pull arms over head
- Push toes away from body
- No capo lift
- Avoids excessive arch in the lower back

**Quadriceps (thighs)**

- Hold by ankles over the knee (or hold shoe/sock)
- Pull in towards the bottom - keep knees together
- Hips and upper body stay down

**Abductors (outer thigh)**

- (Beginner/General)
- Hug inner knee towards the body, crossing the straight leg
- Lift through hip and sit tall
- Keep the body square

**Adductors (inner thigh)**

- (Beginner/General)
- Sole of feet together
- Hold the ankles not the toes
- Feet close to body
- Gently press the knees out
- Keep chest lifted and maintain upright posture

**Latissimus Dorsi (side of back)**

- Support the body with one hand on the thigh
- Raise the other arm above head
- Lift up from rib cage and lean slightly over

**Triceps (back of arms)**

- One hand up, bend at elbow
- Hold elbow
- Gently press down towards spine

**Trapezius (top of back)**

- Clasp hands in front
- Push forward
- Drop head down

**Pectoralis Major (chest)**

- Clasp hands behind
- Situate shoulder blades
- Push chest forward



# FLEXIBILITY AND STRETCHING

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## FLEXIBILITY

Flexibility is the range of movement at a joint and is determined by the suppleness of the muscles and connecting tissue. As we get older flexibility is reduced because muscles and connecting tissues shorten with age. Maintaining flexibility throughout life will help retain correct posture and reduce the risk of injury.

### HOW DO WE ACHIEVE FLEXIBILITY?

By stretching soft tissue such as muscles and tendons to a normal range of movement. Stretching beyond the normal range of movement, particularly with ligaments, can be dangerous because once over-stretched they do not return to their previous state. Over-stretching will reduce the stability of joints and increase the risk of injury.

Ligaments and tendons have low elasticity.

Muscle tissue will lengthen under certain conditions. When a muscle is being lengthened, i.e. is placed in a stretched position, its initial reaction is to contract to prevent you from stretching it too far. This is the tension you feel when you first take up a stretch. This automatic contraction in the muscle is called the stretch reflex.

### TYPES OF STRETCHING

**STATIC** - Holding still, no bouncing, no pain a gentle tension. Static stretches are the most suitable stretches for gym users.

**BALLISTIC** - Bouncing and Swinging. Risk of over-stretching too quickly. The speed and force of the bounce take over and the joint relies on the supportive tissue to stop the motion. This can cause damage to fibres. Ballistic stretches are commonly used by footballers, dancers and athletes but not recommended for gym users.

## STRETCHING IN WORKOUT - WHEN?

After the warm up when the muscles are warm. We perform static stretching for preparation. These are short stretches, approximately 6-8 seconds. These stretches are normally performed in a standing position.

In the cool down, at the very end of the workout to re-align the working muscles and improve flexibility. We perform static stretches either for maintaining or developing flexibility (Approx 10-30 seconds). These stretches are normally performed in a more relaxed position, eg. lying down or seated.

### WHICH MUSCLES DO WE STRETCH AT THE END OF THE WORKOUT?

It is important to stretch the muscles used in workout. Consider using stretches for the following:

- Gastrocnemius (calf)
- Soleus (lower calf)
- Quadriceps (thighs)
- Hamstrings (back of thigh)
- Adductors (inner thigh)
- Abductors (outer thigh)
- Pectorals (chest)
- Trapezius (top of back)
- Triceps (back of arms)
- Abdominals (tummy)
- Obliques (waist)
- Erector Spinae (lower back)
- Gluteals (bum)

## MAINTENANCE STRETCHING

This is when we move to the point where muscle tension can be felt and then we hold the stretching position for approximately 10 seconds. This type of stretching is designed to re-align the muscles after all the work they have done. It prevents them from getting tight and short. It also helps reduce the risk of injury and soreness the next day.

## DEVELOPMENT STRETCHING

This is where we move to the point where muscle tension can be felt and then we hold the stretch position still. When the tension in the muscle eases, after about 8 seconds, we can take the stretch a little further/deeper and then hold still again. This type of stretching will take approximately 15-20 seconds.

The flexibility of the muscles improves when you increase the stretch by going deeper or further.

The following pictorial diagrams show the way in which we can stretch all our major muscle groups.