

Warm up Dynamic pre warmup and then static stretching

Stretching helps prepare your body for the exercise it is about to get. Before you stretch, it's important to warm up first. Warming up helps raise the temperature of your body and your muscles so they will be ready for exercise and help prevent injuries. After your body is warmed up, it is time for light stretches.

A proper general warm-up can also help reduce the severity of post-exercise muscle soreness. The higher temperatures and increased blood flow resulting from warm-up are important for delivery of oxygen to the muscles and for prevention of the build-up of unwanted waste products - lactic acid - which can lead to muscle soreness.

Following on from a **dynamic** warmup, it is strongly advised that we move onto a series of **static stretches** designed to address each muscle group. Each stretch should be held for a minimum of 10 seconds with a mild feeling of stretch, is acceptable but if pain is felt stop immediately.

Having completed a series of static stretches the body is now ready to put those together in dynamic stretches which mimic the delivery action.

Cool down

A cool-down provides the body with a smooth transition from exercise back to a steady state of rest.

It helps to remove waste products from your muscles, such as lactic acid, which can build up during vigorous activity (lactic acid is most effectively removed by gentle exercise after your activity rather than stopping suddenly); and helps to prepare your muscles for the next exercise session. Static stretching for 10 minutes or so is a great way to relax and improve flexibility.

In contrast to the warm up session, which aims to increase the heart rate and warm the muscles, the cool down session aims to gradually decrease the heart rate and relax the muscles; an effective cool down will restore the body to its original state and prevent injury.

PRE-GAME WARM UP

A warm up generally consists of a gradual increase in intensity in physical activity (a pulse raiser), joint mobility exercise, and light stretching, **followed by the activity**. Warming up brings the body to a condition at which it safely responds to nerve signals for quick and efficient action. **After you have completed an exercise warm up, you can use DYNAMIC STRETCHES to prepare the joints for movement and muscles for optimal activation. Stretches are done with warm muscles only!** Dynamic stretches mimic movements you will use so will be beneficial to your performance and set you up for your game. Hold the stretch still - don't bounce the movement - and remember to stretch both sides of the body, not just your bowling side.



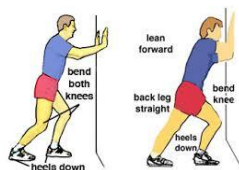
Marching on the spot with a high knee action. Each time the right leg comes down count as 1 repetition. Aim for 20 repetitions. Swing your arms for added movement and stability.



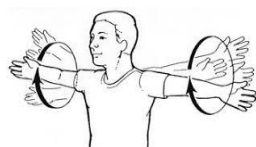
Simple Calf Raise. Feet together - lift as high as you can onto your toes and return to the floor for 10 – 20 reps. When warmed up and to take to the next level you can stand on a step and lower your heels down as much as your ankle flexibility allows for 3 reps.



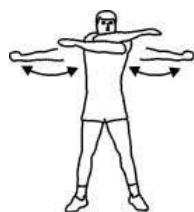
Lunges help improve single-leg balance. Start with one leg out in front of you at a comfortable distance where you can maintain your balance and be able to lower yourself down to perform the lunge. Go straight down – not forward - keeping the knee of your front leg behind the toes of your front foot. When you lower yourself down, keep your chest up and keep looking forward. Perform slowly and with control. 5 reps first leg then switch legs.



Calf stretches. Stand placing hands on the wall for support and feet pointing straight ahead. The back leg should have a straight knee and front leg a bent knee. Lean forward, keeping back leg heel on the ground so that you feel a stretch in the calf muscle in the back leg. 2 reps on one leg then change legs.



Arm circles engage the muscles in the upper body to warm up and stretch the shoulders, arms, chest and upper back and prepare the muscles, tendons and joints to work more efficiently. This also gives you a great cardio boost and increases your flexibility. 15 circle reps.



Arm swings – a dynamic exercise to engage the muscles in the upper body. Warms up and stretches the shoulders, arms, chest and upper back preparing muscles, tendons and joints for work. Each time the arms meet in the centre is 1 rep. 15 reps. A great cardio boost too!

EXERCISES AND STRETCHING SHOULD NOT INDUCE PAIN – IF IT DOES – STOP!

POST-GAME STRETCHES – THE COOL DOWN

A cool-down after physical activity allows a gradual decrease at the end of the exercise. It's good to stretch when you're cooling down because your limbs, muscles and joints are still warm. **Stretching can help reduce the buildup of lactic acid, which can lead to muscle cramping and stiffness.** Hold each of the stretches for 10 seconds - don't bounce the movement - and remember to stretch both sides of the body, not just your bowling side.



Side to side neck stretch — Tuck your chin down until it touches your chest and you can feel tension in your neck. **Slowly** tip your head to each side until you feel the stretch. Repeat on both sides.



Overhead shoulder stretch — Point your elbow upward with your hand behind your head. With your other hand grab your elbow and **gently** pull towards the other side until a good stretch is felt. Repeat on both sides.



Posterior shoulder stretch — Hold your arm horizontally across the front of your body. With your other hand, grab your elbow and gently pull towards your chest. Repeat on both sides.



Side Stretch — Feet hip width apart, and arm pointing overhead, held by the opposite hand. Keeping your hips stable, bend your torso so that the stretch is felt along your side. Repeat on both sides.



Forward Lunge Stretch — This will stretch your hip flexors and hamstring muscles. With your body and feet all facing forward, place one leg back and the other leg forward, hands on the front thigh. Shift your weight forward remaining as upright as possible and keeping both feet flat on the floor. Repeat on opposite side.



Quadriceps Stretch — Support yourself with one hand while standing on one leg. Bend your free leg back and hold on to your ankle with your free hand. To increase the stretch, pull the foot higher behind the body. If this is too difficult at first, stand at a chair as if you were going to sit but instead put your instep on the seat. Lower your standing leg and feel the stretch in the one on the seat. You may need to hold onto the chair to balance.



Wrist Flexion — Hold your hand with the palm facing down. Drop the fingers and palm at the wrist. Grab your fingers with the other hand and pull them towards the body. Change hands and repeat.



Wrist Extension — Hold your hand with the palm facing down. Bend the fingers and palm at the wrist. Grab your fingers with the other hand and pull them back and towards the body. Change hands and repeat.

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Warm up – Stretching exercises



Slide 10

Hamstring stretch

Ensure both feet are pointing forward. Bend left leg by sitting slightly backwards keeping the right leg straight and rotate the torso forwards and downwards towards the floor.

10. Hamstring stretch (right leg)



Slide 11

Gastrocnemius stretch

Imagine pushing against a wall. Point both forward in a straight line. Keep the left leg slightly flexed, right leg straight and keep right foot on the floor.

11. Gastrocnemius (calf) stretch (right leg)



Slide 12

Quadriceps stretch

Stand with feet slightly apart, right leg slightly flexed. Pull right ankle up behind the posterior. If needed, this can be done using a partner to balance against whilst they also do the stretch.

12. Quadriceps stretch (left leg)



Slide 13

Abductor and adductor stretch.

Point both feet straight ahead. Keep left leg as straight as possible, bend the right knee and press hips down wards towards the floor hands on right knee to aid balance.

13. Forward lunge - abductor and adductor muscles



14. Adductor muscles



Slide 15

Erector and deltoid muscles

Stand with both feet together pointing forward. Cross right foot over left. Right arm pointing vertically upward alongside head, with thumb pointing backwards. Left arm pointing vertically downward alongside left leg, with thumb pointing forwards. Keeping the arms straight, push right hand backwards, and at the same time push the left hand forward.

15. Erector muscles (lower back) and deltoids



16. Oblique muscle stretch

For the Upper body in your back died Muscles and movement is a rotational one to fully stretch “upper torso”

Tips

Slide 16
Oblique and posterior deltoid stretch
Stand with both feet together pointing forward. Cross left foot over right, keep arms straight and across chest to the right of your body. Push both arms backwards as far as they can go to the right of your body.

Tips
More of an upward stretch



17. Oblique muscle stretch

Slide 17
Oblique and anterior deltoid stretch
Stand with both feet together pointing forward. Put your right arm behind you head. Keeping the left arm straight slide it down your left leg as far as you can manage.



18. Erector (lower back muscles)

Slide 18

Erector muscles.

Stand with feet slightly apart with feet pointing forward. Cross both arms across the chest at arm's length. Flex both knees slightly, push posterior backwards and rotate trunk forward and downwards towards the floor. Breathe in on the way down and slowly out on the way back up.



19. Tricep stretch (right hand)

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Triceps stretch

Stand with both feet slightly apart and pointing forward. Lift right arm upwards holding the elbow with the left hand until right elbow is above the head. Slowly push the elbow backwards and slide the right hand down the back.



Slide 20

Bicep and anterior and posterior deltoid (shoulder)

Stand with both feet slightly apart pointing forward. Straighten the right arm and place the left hand under the triceps and shoulder. Keeping the right arm straight, push against the left arm, whilst keeping the left-hand firm to resist.

20. Bicep stretch (Right arm)



Slide 21

Biceps, triceps and deltoid stretch

Stand with both feet slightly apart and facing forward. Put both arms behind the back and at the same time link both hands together. Raise the arms upwards as far as they will go whilst at the same time pulling the hands backwards.

21. Bicep, triceps and pectoral stretch



Slide 22

Finger stretch

Stand with both feet slightly apart and facing forward. Interlock the fingers of both hands, raise the arms to chest height and push the fingers away from the body.

22. Fingers stretch