

Injury prevention programme for 11 year old swimmers

The England Talent screening programme has now been going for 2 full years and following on from this we have analyzed the data collected. From the data we can see there has been a correction of muscle imbalances, improvement of movement ranges and posture correction in the swimmers we have assessed. , The ages of the swimmers assessed are 12-15 and even from the age of 12 the swimmers show imbalances, poor posture and changes in the ranges of movement. These changes are known to predispose to injuries of the Lower back, shoulder and knee in swimmers at a later stage in their careers. Prevention is known to be better than cure so if we can prevent these changes occurring we can hopefully prevent the injuries occurring later in their swimming careers.

From the data we have collected we have devised an exercise program for 11 year olds to prevent the changes in the muscle length, range of movement and posture occurring. This exercise program should be done 3 times a week and will take approximately 30 minutes to complete. It can be done at the club land sessions or at home. The exercises are safe to do and will prepare the 11 year old swimmers to be able to progress in the sport and with their land work with fewer injuries.

One area that was poor with the swimmers was the flexibility of muscles. When swimmers were asked about how often they stretched they admitted this was very rarely. Whilst we don't want over stretches muscles we do want the muscles to go back to their normal length after exercise. Stretching post exercise can reduce muscle soreness and will help return the body to normal quicker than not stretching. Therefore swimmers should be encouraged to stretch for 10 minutes after every pool and land session.

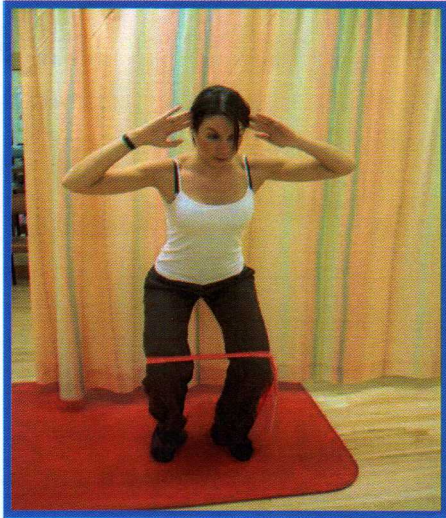
In this article we are covering the core exercises for 11 year olds. This does not include the stretches that every swimmer should do after training.

Exercise program

1. Squat control

For this exercise you will need to place an exercise band around the knees. The band should be tied around the knees and the knees should be 3 inches apart when the band is relaxed.

Stand with the feet hip width apart and the hands above the head in a streamline position. Take the knees outwards until the knees are over the feet. During the exercise the knees should stay in line with the second toe at all times. Slowly squat taking the bottom towards the heels and keep the weight in the heels. Make sure the back stays straight and the head does not drop forwards



Repeat this up to 20 times

2. Balance

The ages of 4-11 are the best time to improve balance. If poor balance continues into the teenage years this may cause problems when impact work is done during land sessions. Simple exercises to improve balance can make a massive improvement on core stability.

Stand on one leg. Slowly take the arms into a streamlined position. Gradually lift the raised leg and extend it at the same time as flexing the hip. You should end up in a straight line horizontal streamline position

Hold this for 20 seconds

Repeat on the other leg

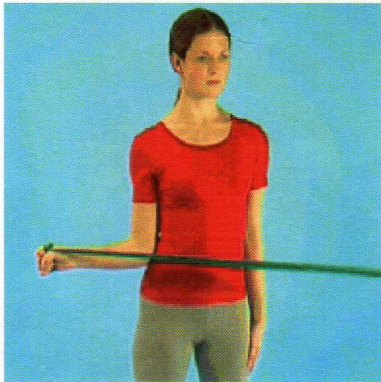


3. Cuff work

The rotator cuff are muscles which act together to help keep the humeral head in the centre of the shoulder joint. They are very important in swimmers as the shoulder is at risk of impingement and instability caused by overuse of certain muscles.

Stand with the exercise band attached to a door handle. Make sure the door is closed and will not come open whilst you are exercising.

Stand sideways to the door. Make sure you have good posture with the weight evenly between the feet, tummy tucked in and shoulders rolled backwards. Keeping the elbow into the side slowly pull the band to the side making sure your arm is close to your side and elbow stays at 90 degrees. Take the forearm as far as you can- hold for 3 seconds and slowly release.



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Repeat this 20 times with each arm

4. IR stretches

In swimmers the range of internal to external rotation at the shoulder is often different to in non-swimmers. The internal rotation becomes limited and poorly controlled. This means as you pull through the water you will be able to generate less power. It also means you are at risk of shoulder problems. Therefore you need to stretch the shoulder rotation.

Lie on one side with your arm out at 90 degrees to your body. Bend the elbow to 90 degrees. Use your other arm to gently push the forearm towards the bed. Hold at the end of range for 10 seconds. Repeat this 3 times with each side

