



Strength and Conditioning

The Importance of Strength and Conditioning for Swimmers

All the top swimmers in the world today engage in some form of strength and conditioning training to complement their in water work. We use the term "land training" when talking about strength and conditioning because our program uses a combination of land and in water strength training. We use this methodology to transfer land based strength gains to in water stroke and body movements.

Key Principles of Strength and Conditioning

1 – Strength and conditioning can help prevent injury. If nothing else you should perform maintenance exercises to prevent many common swimming injuries such as swimmers shoulder or breaststrokers knee.

2 – Strength and conditioning can enhance performance. Swimming requires a balance of endurance and power, strength training can help develop both these attributes and improve your in water performance.

Understanding the Demands of Swimming

The importance of strength and conditioning becomes even clearer when you reflect on the demands of swimming.

Competitive swimming events range from 50-1500m anywhere from 20s to over 15 minutes. Swimmers will draw on various energy systems when they perform as discussed in the previous section. Strength training will help swimmers train their energy systems for racing.

Swimming is a full body sport and requires the coordinated activation of muscles in the legs, core and upper body with virtually every stroke. A breakdown in one area can have a detrimental effect on performance and even possibly cause injury. Strength training will build core stability and develop coordination between the body segments that will reduce drag and improve propulsion in the water.

Swimming is a non weight bearing sport and the legs do not take the pounding they do in other land based sports, but the repetitive nature of swimming strokes can lead to overuse and potential injury. Strength training can address any imbalances and reduce the risk of injury.

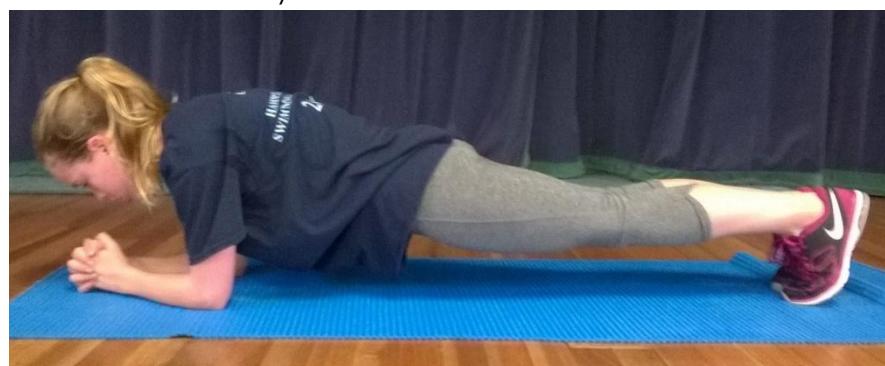
Swimming places unique demands on the core of the body that are unlike those in land based sports. Swimmers need to generate force and pressure by gripping the water pressing against a fluid surface. Swimmers need to be even stronger and more stable than most land based athletes. Strength training particularly done in the water will enhance your stroke, leg kick power and core stability.

Strength and conditioning training can enhance performance even for young swimmers. Age group and youth swimmers will not build large muscle mass, they will see improved strength and coordination, increased bone density, improved self image, improved confidence and a greater potential for preventing injury. All these should be appealing to age group and youth swimmers.

Below are some core stability and body balance exercises which can be practiced at home with siblings, parents or friends. Hold each position for a minimum of 1 minute, aiming for longer durations up to 3 minutes. Holding the correct position and posture is vital, if you can no longer hold the correct position take a break and try again when recovered.

Lower Plank

1. Elbows and lower arm to floor, straight back toes supporting legs, head down in line with the body



Upper Plank

1. Hold press up position with straight arms, straight back, head down in line with the body



Upper Plank Wide Legs

1. Hold the same position as the upper plank with legs slightly wider than shoulder width



Super Swimmer

1. Lay on front in streamline position, raise arms and legs as high as possible and hold



Sky Diver

1. Lay on front, hands on side of head, raise legs with bent knees, raise upper body and quads as high as possible and hold



Raised Leg Kick

1. Lay on back hands by side palms down, raise legs 6 inches in alternate kick position



2. Alternate leg position, toes pointed to simulate backstroke / front crawl leg kick



Straight Leg Hold

1. Lay on back hands by side palms down, toes pointed, raise legs 6 inches and hold



Squat Hold

1. Knees bent close to 90 degree as possible, head looking forward in line with the body and hold



Ski Sit

1. Back straight against a flat surface, knees bent to 90 degrees shoulder width apart, head looking forward and in line with the body

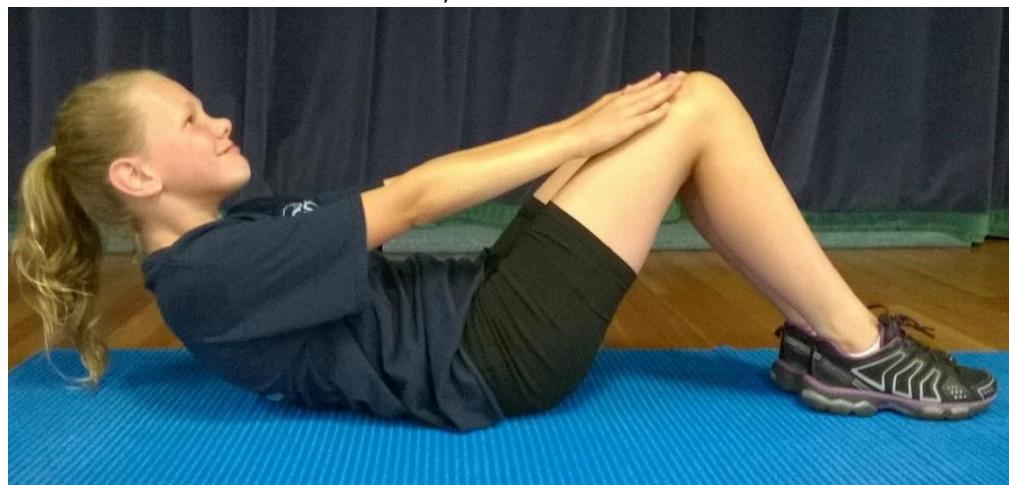


Curls – Core – This exercise can be performed on your own to strengthen the abdominals.

1. Starting position – Lay on back knees half bent, arms straight hands on legs



2. Keeping arms straight slide hands up legs till they get to the knees, keeping head still and in line with the body



3. Lower arms and body from core till back in the starting position

