

Swimming is a unique sport. Water does not behave like objects on land and, unlike the majority of team sports; swim coaching has a conditioning framework – high volumes of metabolic stress. The positives from this approach are significant: A very high capacity for work (swimmers routinely turn up scratch to running events and dominate the runners), strength development, and the personal growth associated with a demanding year round commitment. Bodies have to be strong in very specific places and ways to cope with so much unusual stress. Land training is a form of strength conditioning intended to raise resilience and physical performance taking into account the nature of swimming:

- Swim shapes and postures - notably the streamline
- Constant loading of specific joints: Shoulders, backs, hips etc.
- High frequency (10-20 hours each week) year-round stress
- Unique environment. Largely blind activity conducted in water

### *LAND CONDITIONING FOR CHILDREN*

Strength conditioning is any activity that utilises a high intensity or muscle-specific training stimulus. There are examples of strength conditioning stimuli all around the lives of children, including jumping and sprinting, climbing and throwing. The key concept to understand about strength training, of any kind, is that qualitative (skills and joint function) conditioning must precede quantitative (volume/ intensity) conditioning: Always start with basic motor skills and postural concepts. Load or intensity is a secondary consideration and the question of how much will answer itself once motor proficiency/ efficiency and work capacity reach a sufficiently high level.

An analogy that I find useful is that of a house. The foundations are the equivalent in the body of basic motor skills, joint and postural function. Next there is the frame (walls and roof) and these represent physical strength and work capacity. Finally there is the fit-out – the step that reflects your personality and desires. The fit-out of your house makes it your home. It is the athletic equivalent of building specific sporting and athletic capacities, such as speed, agility and quickness. A house has to be constructed with a specific order of events; so to the body. A house, like your body, can be unique to you though it contains the same basic elements and adheres to the same physical rules as anyone else's house. The principle difference between a house and our bodies is the role of choice. Our bodies reflect our choices, each and every day. The function of our bodies depends on activity.

Strength training is appropriate for children provided it's a match to their needs. Children are not small adults. A child's mind and body are less mature. The plasticity that is the characteristic of a growing body means less resilience and, depending on biological/ training age, children also have underdeveloped motor skills with which to support and drive physical activity. The requirement that training should match the needs and goals of the individual should be the same for all regardless of the age, but there is simply more to gain and to lose with a child. Teach or ingrain the correct thing and the child will have a lifetime skill. Impart the wrong idea or outcome and the results can be a lifetime of low or impaired performance.

## *THE LESSON OF SCHOOLING*




There are two important lessons for exercise and physical development from schooling:

1. It needs to be every day. This is a reflection of an important facet of human biology: We are 24hr machines. Our bodies operate in cycles and 24hours is the basic unit.
2. Once started (at 5-7 y/o) it must not stop. This permits the total load to be divided into small, manageable bite sized amounts. 12-15 years of development broken down into hours and days.

Sport is a form of specialisation no different in its time demand than engineering, medicine, or law. The same number of hours - more than 10 000 - has to apply to developing and extending our intellect and skill sets. The rules of long term athlete development, of which strength conditioning is a major component, are the same as for schooling.

## *WHAT SHOULD CHILDREN ACHIEVE FROM STRENGTH CONDITIONING?*

All children have to learn **how** to train and, just like schooling, the earlier the process begins the further the process may be extended. We become the choices we make so we must reinforce the psychology of high achievement and self-responsibility:

-  Self-awareness and control
-  Self-management and productivity
-  Long-term adherence and goal setting

Athletic development is primarily a vertical process: There are basic or fundamental capacities that underpin the performance and development of more specialised capacities. At Sport Performance there are three basic priorities:



### *THE FIRST PRIORITY IS INJURY-FREE AND STRONG*

### *THE SECOND PRIORITY IS TO EXTEND BASIC (AND SPECIALISED) MOTOR SKILLS*

### *THE THIRD PRIORITY IS TO BECOME SOMEONE WITH A BIG CAPACITY FOR WORK: THE BIG ENGINE PERSONALITY*

Physical strength is the currency of human movement. The stronger the body is and the smaller in number the strength and functional imperfections (termed deficits) the more efficient our bodies are and the greater our capacity for work. Sport Performance specialises in strength conditioning and long-term development of children from 8-10 years of age up to adulthood.

## *RELATED READING:*

-  *The Sport Performance Method*
-  *Long-term athlete development*

These and other resources are available free to all at: <http://sportperformance.co.nz/resources.html>