chism
the children's hospital at Westmead
Institute of Sports Medicine

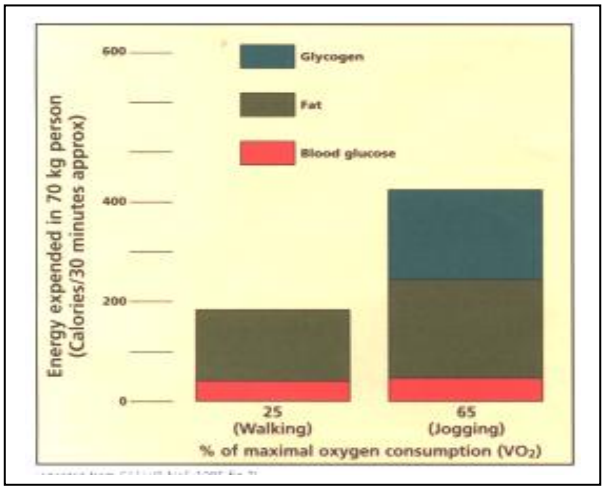
The Role of Exercise in Weight Management / Loss.
Exercise is very important in weight management. Increased activity levels increase the body's fuel consumption (calories). Exercise does not always have to be strenuous or involve a gym. In fact there are many benefits associated with activities as simple as walking. One of the most important forms of activity is incidental exercise. This includes any activity which keeps you on your feet and moving. Examples would include walking to and from school, playing with friends and family after school or riding a bike. People forget that exercise can be lots of fun. The main thing to remember that more physical activity you participate in the greater the benefit that you will have. These benefits include weight control, improved cardiovascular fitness and better general well being.

Structured Programs – Gym, running etc
A structured program can assist some people in optimising weight loss. Exercise and diet is far more effective than just diet alone. (See your dietician). Today many gyms also offer a range of aerobic classes and activities that are quite enjoyable. Importantly any child that begins an exercise program needs to be closely supervised. Looking for a gym that has instructors that are qualified to work with children is advisable and we are happy to assist you.

Resistance Training
In older children in addition to programmed aerobic intervention it may be useful for children to participate in a structured resistance training program. The benefits include increase muscle strength and metabolism. Programs that include resistance training need to be a minimum of 2 days per week. Training should not be on consecutive days. Aerobic training is allowed the next day. Particularly with the first few sessions some soreness is to be expected. Delayed onset muscle soreness is normal. Resistance training in children should emphasise technique, high repetitions and 2-3 sets only. After completion of the third set a child should be tired, but not exhausted. Activities that include loading of the spine, eg squats are not appropriate. Remember to look after your back with good technique! Maximal lifts (1RM) are not appropriate before age 16.

Training Zones – Myths, Misconceptions
In the late 1980's and early 1990's one of the more popular theories or prescriptions for exercise was to promote low intensity exercise to increase the loss of body fat. The theory was that lower intensity exercise is better for using the body's fat stores. While a greater percentage of fat is utilised during exercise at lower intensities, higher intensity exercise will use more calories, which will include more carbohydrate and more fat. The key ingredient is intensity, the harder you work the more calories and fat you will lose. See diagram on other side.

Table 1. Energy expenditure with increasing intensity (VO2)



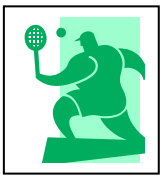
Source : Sports Dietitian Fact Sheet 4 March 1999

Table 2. CALORIES USED IN DIFFERENT TYPES OF EXERCISE

The table below may be useful in providing some insight into the caloric expenditure of different forms of exercise.

LIGHT **4 Cals (17kj) /minute)**	**MODERATE** **7 Cals (30kj) /minute)**	**HEAVY** **10 cals (40kj) /minute)**
Walking, slow	Walking,brisk	Walking (power),jogging
Cycling,light	Cycling,moderate	Cycling,vigorous
Golf,social	Swimming,freestyle	Swimming,strenous
Tennis,doubles	Weight training,light	Weight training,heavy
Housework,cleaning	Tennis,singles	Wrestling/judo advanced
Callisthentics,Yoga	Squash,Badminton	Football (training)
Ten Pin Bowling	Football	Skipping
Aquaaerobics,light	Basketball	Kick Boxing,Tae Bo
Line/square dancing	Volleyball	Basketball (pro)
Skate Boarding	Dancing	Climbing stairs
		Dancing (strenous)

Golf (mild)



Tennis (moderate)

Running (heavy)

This table should be used as a guide only. Some individuals may be able be to participate in sports in the moderate calorie expenditure section, yet have heavy calorie expenditure. Eg Most social tennis players, would have a moderate calorie expenditure playing singles, however some pro tennis players in some matches would fall into the heavy category. Swimming and walking are other categories that can fall into multiple categories. The bottom line is simple, as exercise intensity increases so to does calorie expenditure.