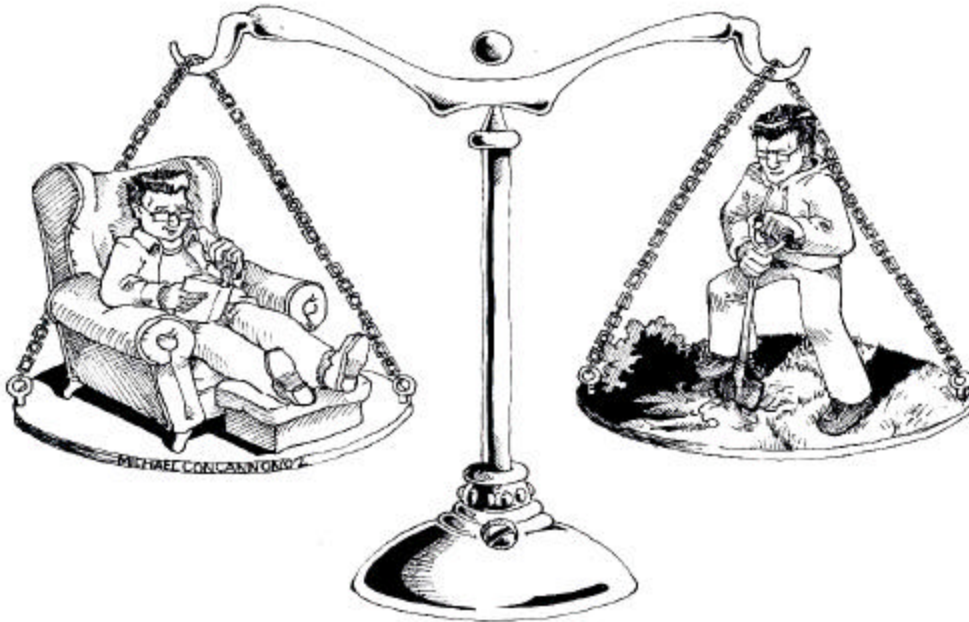


## THE CONCEPT OF ENERGY CONSERVATION

### NOTES:

Energy conservation is a way to maximize your activity level by minimizing weakness and fatigue.

Saving energy does NOT mean doing less. Rather you may have more energy at your disposal. These strategies will help you achieve the BALANCE BETWEEN WORK AND REST which will enable you to participate in those activities most meaningful to you.



Many people are affected by decreased energy levels as a result of conditions such as Fibromyalgia, Post-polio Syndrome, Parkinsons, Multiple Sclerosis and Depression to name a few. The problem of weakness and fatigue is not always obvious to others. It is important to have an Occupational Therapist help in overcoming energy limitation.

Sometimes people resist changes because familiar routines and habits are comforting. Giving up a familiar routine or changing it may feel overwhelming or inconvenient. However, by applying these energy conservation strategies, you will enable yourself to accomplish the same tasks using less energy.

This involves behavioural changes on your part which takes time. It will take a few days or weeks, and patience is required.

## LOOKING AT ENERGY

### NOTES:

All human activity requires energy. Activities consume energy at different rates ranging from very low amounts to very high amounts. Common sense tells us that simply lying on a bed breathing would consume a low amount of energy as compared to the high energy cost of a game of tennis, or of running a marathon.

In the current literature from the fields of exercise physiology, cardiology, rehabilitation, nutrition, sports medicine and public health, one sees METs as a commonly used measure of the energy cost of an activity. MET stands for “metabolic equivalent”. It measures the amount of oxygen the individual consumes during an activity. The MET scores for various activities start at 1 MET and go upwards from there. 1 MET is equivalent to 3.5 ml. oxygen per minute per kg. of weight. A very strenuous activity such as playing soccer has a MET score of 10 as it requires 10 times as much energy as the basic resting metabolism. There are many published MET tables we can make use of to find out exactly how our own everyday activities score in terms of energy cost. You can refer to our sample [MET Table](#) in the Appendix in order to determine the amount of energy used for each of your daily activities.

You can also make use of the table to gradually build endurance through a slow progression from your present MET score to a higher level.

Some scores may surprise you. For instance, a standing hot shower scores higher in energy requirement than one would expect. It is in the same range (4-5 METs) as playing badminton, playing tennis and raking leaves! Unfortunately, many people mistakenly think that a nice hot shower at the end of an exhausting day will revive them. By trying a more luke warm temperature and sitting on a shower chair, you can reduce the energy cost of this particular activity.

## LOOKING AT METS

## NOTES:

When looking at these scores remember that they are averages. They are only approximate values. The actual amount of energy spent in performing an activity also depends upon:

- body size
- body positioning
- the amount of vigour or intensity of motion
- heat or cold extremes
- the excitement or anxiety one is feeling
- speed at which the activity is performed
- length of time the activity is performed
- equipment being used

Notice in the Mobility column, the walking scores go up in energy cost as the walking speed increases and also as the steepness of the slope increases.

MET scores are determined for a one-minute unit of time. Some activities listed require a longer time period to complete than others. Therefore, although two activities may be listed together as having the same MET score, one will require more energy if you do it for a longer time.

For example,

Maria can easily take a warm standing shower, but she finds washing a car beyond her level of endurance. Yet both activities have the same MET score. Why can Maria accomplish one activity, but not the other? Time spent is the answer: The shower lasts 5 minutes, whereas washing the car takes 40 minutes. If Maria spent 5 minutes doing either task, the amount of energy she expended would be the same.