The health benefits of physical activity are often spoken about, but many people ask what exactly are they? Warburton and colleagues conducted a literature review to examine the benefits and determine the amount of physical activity necessary for these benefits. Physical activity appears to reduce the risk of over 25 chronic conditions. Not only does physical activity extend life expectancy, it delays the onset of chronic disability and disease.

**All cause mortality**
There are consistent findings of 20%-35% lower all-cause and cardiovascular-related premature mortality among physically active men and women when compared with their sedentary peers. Low physical fitness has been cited as a more important risk factor than hypertension, high cholesterol, obesity or cigarette smoking and even when another risk factor is present, physical activity has a protective effect. Studies suggest that sedentary individuals can substantially lower their risk with only minor increases in their activity levels.

**Cardiovascular disease**
Regular physical activity is associated with 20%-50% risk reductions of cardiovascular disease and coronary heart disease in men and women of all ages. Evidence is beginning to mount for the dose-response relationship between physical activity and stroke, although findings appear to be stronger for ischemic than for haemorrhagic stroke.

**Cancer**
There is a clear association between physical activity and lower risks of colon cancer (~30%) and breast cancer (~20%) and growing evidence of the association of a reduced risk for other cancers.
Diabetes
Participation in both habitual aerobic and resistance type physical activities appears to reduce the risk of type 2 diabetes mellitus and is an effective strategy in secondary prevention.

Hypertension
Physical activity is effective in the primary and secondary treatment of hypertension in both normotensive and hypertensive individuals. Habitual physical activity can lead to reductions in blood pressure. While the effect is greatest in those with hypertension, it also extends to the prevention and treatment of hypertension particularly in the overweight and obese.

Osteoporosis
Weight-bearing exercise (especially resistance exercise) appears to have positive effects on bone mineral density. Exercise interventions have been shown to prevent or reverse 1% of bone loss per year. In addition, physical activity reduces the risk and number of falls and fractures compared with inactive individuals.

Musculoskeletal fitness and health
Even without improvements in aerobic fitness, physical activity can reduce chronic disease and disability risks. Better grip strength and greater ability to perform sit-ups has been associated with lower levels of mortality and of weight gain in some populations.

Mental health
Numerous studies indicate that regular moderate intensity physical activity reduces scores for depressive symptoms and is associated with lower anxiety. The impact of sufficient physical activity on clinical depression may be as great as pharmacological treatment and may have better sustainability. There is some evidence to support a preventive role for depression, and some association with better ratings of quality of life and global self-esteem.

Sedentary behaviour
High numbers of hours sitting each day has been shown to be related to greater risk of chronic disease, cardiovascular disease, obesity and type 2 diabetes mellitus.

How much is enough?

- Thirty minutes of moderate intensity (e.g., brisk walking) exercise on most days of the week appears to be associated with significant reductions in all-cause and cardiovascular related mortality and lower risk of hypertension.
- Higher durations appear to be associated with lower risks of colon and breast cancer and for the maintenance of body mass and the prevention of weight gain.
- Resistance and flexibility improvement lead to improved musculoskeletal fitness, reduced risk of osteoporosis, and are also recommended in the control of hypertension.
- Television watching should be reduced to less than 10 hours per week.

New information forthcoming
A new consensus statement article regarding Canadian guidelines for physical activity is expected from Canadian experts in the fall of 2009.