



Multidimensional Physical Activity

There are different ways to harness the protective properties of physical activity because it has multiple independent biologically-important dimensions.

Focusing on one dimension alone, such as minutes of activity or the number of steps taken, creates a danger of developing a false picture of activity, which may be detrimental to personal health outcomes.

Personalised multidimensional profiling is essential for an accurate assessment of an individual's physical activity and to enable bespoke strategies for successful behaviour change. It creates a greater understanding and offers a variety of activity choices which can be tailored to the individual's needs.

Our 5 Measurable Dimensions for Physical Activity:

NON-SEDENTARY TIME:

is the amount of time, measured as a percentage of your day, that you spend not being sedentary (e.g. not sitting or lying down).

CALORIE BURN:

is your overall daily energy expenditure.

MODERATE ACTIVITY:

is any activity during your day, which increases your energy expenditure to more than 3 x's your resting level.

MODERATE BOUTS:

have the same intensity as the moderate activity dimension but only counts activity completed in bouts of 10 minutes or more.

VIGOROUS BOUTS:

is any activity that is more than 6 x's your resting energy expenditure and accumulated in bouts of at least 10 minutes



Inactivity & Associated Future Disease Risk

Physical inactivity is the fourth leading risk factor for global mortality and is linked to the development of numerous chronic diseases, such as heart disease, stroke, type-2 diabetes, dementia, obesity, depression, and certain cancers.

Our multidimensional approach allows us to create a comprehensive profile of the future disease risks associated with an individual's level of physical activity.

Therefore we can now use an individual's physical activity profile in the same way as blood pressure and smoking status in the diagnosis of future disease risk.

Evidence shows that it's never too late to see health benefits from improving your physical activity. Whatever your previous behaviour, optimising your physical activity now and going forward can reduce your associated future disease risks.

Preventable Disease Risks associated with Physical Inactivity



Type 2 Diabetes



Cardiovascular disease, Coronary heart disease and stroke



High LDL ('bad') cholesterol & triglycerides, & reduced HDL ('good') cholesterol



Weight gain and obesity



Hypertension



Dementia & Alzheimer's disease



Colon cancer