

WATCH OUT, WEEKEND WARRIORS!

Those who exercise sporadically could be putting their lives at risk.



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Weekend Warrior Exercise Syndrome refers to sedentary office workers who engage in extreme physical activity once or twice a week. Many of them are middle-aged adults who participate in intense and hard-driving sporting activities only during the weekends. The heart can be put under a lot of stress.

Isn't exercise good for the heart?

While exercise has many benefits, doing it sporadically can be especially dangerous as it puts such folks at risk of Sudden Cardiac Death (SCD). This is a condition of an unexpected, natural death due to cardiac causes initiated by an abrupt loss of consciousness, usually within one hour of the onset of symptoms in a person who may or may not have recognised pre-existing heart disease but in whom the time and mode of death are unexpected.

The main mechanism is usually due to a serious abnormal rhythm of the heart (arrhythmia). This rhythm is known as ventricular fibrillation, and it describes the

complete loss of efficient function of the heart muscles, resulting in failure of the pumping heart. This abnormal rhythm occurs in about 90% of patients with SCD.

In the younger population, SCD is often caused by congenital heart defects, which includes conditions such as hypertrophic cardiomyopathy (abnormal thickening of the heart muscles), congenital coronary artery abnormalities, and long QT syndrome (inherited heart rhythm disorders with fast chaotic heartbeats).

In older athletes (35 years and above), it is more often related to underlying coronary artery disease, which can cause 75–80% of sudden cardiac deaths in this age group. Other causes would include pre-existing structural heart diseases (10–15% of SCD), and electrical disorders of the heart.

A study done in Singapore in 2003 showed that half the deaths occurred in people below 60, and the majority (more than 90%) were males. The study also showed that 81% of SCD were due to coronary artery disease.



Another issue is that, in recent years, short-distance triathlons have attracted more non-elite athletes, who tend to be weekend warriors. They don't exercise regularly to build up their endurance for lack of time. Not surprisingly, these events have been associated with a higher incidence of SCD.

It has been shown that the final 1.6km of a 42km-long marathon accounts for almost 50% of sudden cardiac deaths. It is also known that the final sprint with sudden cessation is associated with greater risk. The risk of SCD in triathlons is twice that of marathon runners — this risk is highest in the swimming leg of the event. This will be a much bigger problem for weekend warriors.

Assess your cardiac health

This is why people who wish to embark on an exercise programme or sporting activity, particularly after a long lay-off or have only exercised sporadically, should undergo physical health screening to identify those

who belong to the high-risk group of having coronary artery disease. This is particularly so for men aged 40 and older and women aged 50 and older.

This check-up should include an exercise treadmill test, which monitors the changes in heart electrical activity and tells us how the heart responds during times when it is working the hardest. This may pick up coronary artery disease. Another important test is an echocardiogram, which uses sound waves to create pictures of the heart chambers, valves, walls and blood vessels attached to the heart. This helps identify any structural abnormalities of the heart and may also identify blocked arteries.

If one is at high risk of having coronary artery disease, cardiologists recommend CT coronary angiogram, during which X-ray images of cross-sections of the heart are taken and the images reassembled by the computer to produce a detailed picture of the heart.

Other useful tests for high-risk patients would be the myocardial perfusion imaging,

which helps determine the adequacy of blood flow through the coronary arteries.

Exercise prescription

After a proper evaluation and taking into consideration the age and presence of any medical conditions, an exercise prescription can be given, which would include the type of activity, intensity, frequency and duration.

In general, cardiorespiratory exercise of moderate intensity for 150 minutes per week is recommended. Thirty minutes a day of brisk walking, jogging or swimming five times a week is acceptable. It is also recommended to do resistance exercises to strengthen major muscle groups, and also flexibility exercises to improve the range of motion two to three days per week.

Older patients should also consider neuro-motor exercise training, which involves balance, agility and coordination two to three days per week to help reduce the risk of falls. Examples of such exercises would include tai chi and yoga. 🧘