

SYMPOSIUM 2 – LIFESTYLE DISEASES

FOCUS: RISK FACTORS

Is Sitting the New Smoking?

Professor David Koh Soo Quee

PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Tungku Link Road, Bandar Seri Begawan, Brunei Darussalam BE1410

E-mail: david.koh@ubd.edu.bn

Sedentary behaviour (SB) is any behaviour that requires very low energy expenditure of less than 1.5 metabolic equivalents (METs). The main SB postures are sitting or lying down. It includes activities such as sleeping, sitting, watching television, writing, deskwork, typing, playing seated computer games and sitting during commuting. The terms 'sitting time' and 'sedentary time' are often used interchangeably, but both refer to SB. SB increases with age and is higher among those living in high income countries.

In large scale epidemiological studies, SB has been linked to excess risk for cardiovascular disease (CVD) (HR 1.14), cancer (HR 1.13) and Type 2 diabetes (HR 1.91). There is also associated higher mortality from CVD (HR 1.18), cancer (HR 1.17) and all causes (HR 1.24). It has also been suggested that SB may be related to adverse effects on physical musculoskeletal capability, quality of life, mental health and cognitive performance.

The mechanism of action of physical inactivity in causing adverse health outcomes is believed to be via cardiometabolic pathways. These include alterations in genetic expression of energy metabolism, reduction in insulin sensitivity, increase in triglycerides and LDL cholesterol, decrease in net calorie expenditure, and increased abdominal & visceral adiposity. An emerging hypothesis is that the physiological mechanisms underlying health benefits of physical activity may be distinct from mechanisms causing deleterious health consequences by SB. The elevated mortality associated with prolonged, uninterrupted sedentary bouts suggest the potential importance of skeletal muscle inactivity on cardiometabolic pathway mechanisms.

To be physically active is not enough to prevent the adverse health effects caused by SB. Experts also recommend that we should avoid SB, especially prolonged bouts of SB. The current recommended guidelines for adults are for 150 minutes of moderate to vigorous physical activity per week. In addition to this, it is recommended that short breaks should be taken after every 30 minutes of SB.

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