Long-term effects of obesity in children

O The prevalence of childhood obesity has increased at an alarming rate, with 1.65 million Malaysian school children expected to be overweight or obese by 2025

The Sun (Malaysia) · 18 Jul 2022 · 19 · Ű BY DR YEAP JO WEARN DrYeap is a paediatrician attached to KPJ Sentosa KL. Through his articles, he aims to help increase public awareness of the common issues associated with children's health.

IN this first article in a two-part series, we will first take a look at the harmful health effects of childhood obesity and in the second part, on children who are underweight and malnourished. The World Health Organisation (WHO) reported that globally, obesity has tripled from 1975 to 2016.



Here in Malaysia, we already have the unflattering title of the most obese nation in South East Asia. According to our Ministry of Health's National Health & Morbidity Survey in 2019, an estimated 50% of our adult population is either overweight or obese, rising from 45% in 2011. Children are not spared from this trend, with the national obesity prevalence rate in 2019 of 5.6% among children under the age of five, and 14.8% in those aged five to 17 years; a significant increase from 6.1% reported in 2011.

An overweight child is defined as a weight between 85th to 95th percentile for age on the growth chart, and obesity refers to a child above the 95th percentile for age. While some degree of genetics plays a part in developing childhood obesity, it accounts for less than 5% of total cases. Uncontrolled eating and a sedentary inactive lifestyle remain the main factors causing childhood obesity.

Most obese children carry on into becoming obese adults and develop the many negative impacts of obesity on their physical and psychological health.

The consequences of childhood obesity are that the chronic illnesses that we usually associate with older adults are now seen even during childhood.

Among the conditions brought about by childhood obesity include:

Diabetes mellitus

There is gradually an increasing amount of children as young as 12 years old who are being diagnosed with type 2 diabetes.

The risk of developing diabetes quadruples among obese children. Diabetes mellitus (high blood sugar) is a long-term health condition which leads to serious complications in many organs of the body. Some of the complications include heart attack, stroke, visual impairment (retinopathy), kidney injury (nephropathy), nerve injury (neuropathy), and delay in wound healing.

Some of the symptoms of diabetes include excessive thirst (polydipsia), excessive urination amount and frequency (polyuria), excessive hunger (polyphagia), and excessive nighttime urination (nocturia). It is common to see dark spots around the neck and skin fold areas (acanthosis nigricans) which is a sign of insulin resistance.

Hypertension

High blood pressure, the "silent killer", has no signs or symptoms. Over time, it leads to similar multi-organ complications as diabetes. It is usually detected by chance, such as during hospital admission for other illnesses, or only when complications of hypertension have occurred.

High cholesterol

The constellation of high blood pressure, insulin resistance, and high cholesterol make up what is known as the metabolic syndrome. Elevated cholesterol levels are a common finding in childhood obesity. Left unchecked, it further exacerbates the chances of developing cardiovascular diseases.

Fatty liver

A high amount of fat in the liver is called fatty liver disease. Eventually, fatty liver disease progresses into liver inflammation, liver cell damage, and finally irreversible liver failure.

Gallstones

Cholesterol is a component of bile and a high concentration of cholesterol predisposes to stone formation in the gallbladder.

Sleep apnoea

Obesity is a crucial risk factor for obstructive sleep apnea. A person with sleep apnoea frequently snores loudly during sleep. They develop sudden and multiple periods of not breathing while sleeping followed by a characteristic gasp for air. This impairs their sleep quality and results in excessive daytime sleepiness and poor concentration. The child's school performance will noticeably deteriorate resulting from their poorer memory and cognitive skills. They are also constantly irritable and may find it difficult to socialise with others.

Poor asthma control

Achieving good asthma control becomes more challenging in children with obesity. Poorly controlled asthma has a significant impact on the quality of life. Uncontrolled asthma predisposes the child to develop frequent and possibly severe asthma attacks requiring hospital admissions and even treatment in the intensive care unit.

Raised brain internal pressure

A condition named idiopathic intracranial hypertension occurs when there is raised pressure in the brain. Half of the children who develop this condition are found to be obese. The child complains of persistent worsening headaches, with some having associated visual impairment.

Psychosocial impact

Children with obesity are more likely to face teasing and bullying which in turn impacts their self-esteem and confidence. They are at increased risk for developing depression and anxiety. Some respond with emotional eating, worsening the obesity-depression cycle.

Muscle and bone complications

It is common to find children with obesity complaining of muscle aches and pains from the stress upon the muscles, joints, and bones from excess weight. Many develop bone deformities such as bowing of their leg bones and dislocated hip bone.

With the many deleterious effects brought about by childhood obesity, it becomes more important for us to actively play a part in preventing it, as a healthy lifestyle begins at home. Teaching our children the importance of making healthy eating choices and performing physical activity goes a long way in promoting a healthier society.