

# Keep on running: Lack of exercise when young may lead to heart disease

April 4 2008

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A lack of physical activity and fitness as a child can lead to an increased risk of heart disease according to research published in the open access journal *Dynamic Medicine*.

Robert McMurray and his team at the University of North Carolina at Chapel Hill have shown for the first time that heart disease factors, known collectively as metabolic syndrome in teenagers are influenced by a child's level of fitness and physical activity. Evidence of metabolic syndrome includes diabetes, high blood pressure, high cholesterol and obesity.

“Many metabolic syndrome factors develop at an early age, before adolescence,” explained McMurray. “Being able to determine which youth are at high metabolic syndrome risk is thus beneficial when considering methods of prevention. We’ve found that low levels of childhood physical activity and aerobic fitness are associated with metabolic syndrome in adolescents, so efforts need to begin early in childhood to increase exercise.”

Almost four hundred participants agreed to take part in the study which involved measuring a variety of physical factors at age 7 – 10 years old and again aged 14 – 17 years old including:

- Habitual physical activity
- Aerobic fitness
- Body mass index

- Blood pressure
- Blood fat content

After seven years almost half of the teenagers had developed at least one characteristic of metabolic syndrome and 5% had developed the metabolic syndrome. Those with the metabolic syndrome were six times more likely to have had low levels of physical activity as children. The group had higher body mass index levels and cholesterol as well as lower levels of fitness and activity. Teenagers with metabolic syndrome had fitness levels well below the national average even as seven year olds. The findings reveal that fitness during childhood is a strong indication for the development of heart disease later in life.

McMurray concluded: “Children today live a very sedentary life and are prone to obesity. This is the first study to examine the importance of childhood fitness levels on your metabolism as a teenager. Previously we didn’t know if low fitness levels were an influence. It’s obvious now that there is a link and this is something which we need to pay attention to by encouraging our kids to keep fit, or suffer the consequences later in life.”

Source: BioMed Central

Citation: Keep on running: Lack of exercise when young may lead to heart disease (2008, April 4) retrieved 2 May 2024 from

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