Study shows link between weight gain during infancy and risk factors for heart disease

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(Medical Xpress)—Weight gain during infancy is directly linked to increased risks of obesity, high blood pressure and arterial wall thickening later in life, and the best way to avoid this is to breastfeed, according to University of Sydney research published online in the journal, *Pediatrics*.

The study followed 395 non-diabetic children born at two maternity hospitals in Sydney, from birth through to the age of eight.

Paper lead author, Dr Michael Skilton, said the study examined whether weight gain in infancy (from birth to 18 months) could be associated with higher incidence of obesity, higher blood pressure, systemic inflammation and arterial wall thickening in later childhood.

"The first 18 months of life are an important period for our growth and development," he said.

"Excessive weight gain over this period may have consequences for later body size, however, its relationship to arterial wall thickening and risk factors in later childhood had not been well documented, until now.

"Our study found early postnatal weight gain from birth to 18 months is significantly associated with later childhood overweight and obesity, as well as a poorer risk factor profile and greater arterial wall thickness.

"Excessive weight gain during infancy was strongly associated with

increased waist circumference and higher blood pressure at eight years of age, compared to those with normal weight gain in early life."

Dr Skilton said two surprising additional findings were that breastfeeding for at least six months and a longer gestation period were associated with lesser weight gain in children.

"Our study found independent predictors of greater early weight gain included shorter gestation and a failure to breastfeed until six months of age," Dr Skilton said.

"Our research showed the effect of early weight gain was amplified by later childhood, with weight at eight years being 2.1 to 3.3 kg higher for every 1kg of weight gain during infancy."

Dr Skilton said future studies could assess whether reducing excessive early life weight gain might be associated with improved cardiovascular risk profiles, in later life.

"We have identified, for example, that breastfeeding is a potentially modifiable factor associated with significantly less early life weight gain."

More information: pediatrics.aappublications.org … s.2012-2789.abstract

Provided by University of Sydney