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Contact: Danielle Cass

danielle.x.cass@kp.org

510-267-5354

[Kaiser Permanente](#)

Extremely obese children have 40 percent higher risk of reflux disease of esophagus

Electronic health records used to study 690,000 children

July 9, 2010 (PASADENA, Calif.) – Extremely obese children have a 40 percent higher risk of gastroesophageal reflux disease (GERD) and children who are moderately obese have a 30 percent higher risk of GERD compared to normal weight children, according to a Kaiser Permanente study published online in the *International Journal of Pediatric Obesity*.

This large population-based study establishes an association between obesity and GERD in children, an association that has been previously reported in adults. GERD can lead to decreased quality of life, chronic respiratory conditions, and increased risk for cancer of the esophagus (the tube that carries food from the mouth to the stomach) if it persists through adulthood.

Researchers used electronic health records to conduct a cross-sectional study of 690,321 children aged 2 – 19 years who were members of the Kaiser Permanente Southern California integrated health plan in 2007 and 2008.

About 8 to 25 percent of children in the U.S. may be affected by frequent symptoms of gastroesophageal reflux, depending upon their age and body mass index. GERD is a chronic condition in which the liquid content of the stomach flows up in to the esophagus. This can inflame and damage the lining of the esophagus. GERD may be responsible for an increased occurrence of coughs, asthma, and inflammation of the larynx. Left untreated, GERD may result in chronic esophageal inflammation and lasting damage to the esophagus. Cancer of the esophagus is the nation's fastest growing cancer and is expected to double

in frequency in the next 20 years -- unlike most other cancers, which are decreasing in frequency.

Researchers suspect this rise is due in part to the nation's obesity epidemic.

"Childhood obesity, especially extreme childhood obesity, comes with a high risk for many serious health consequences such as diabetes, cardiovascular disease and cancer. The takeaway message of our study is that GERD now also is one of the conditions associated with childhood obesity" said study lead author Corinna Koebnick, PhD, a research scientist at the Kaiser Permanente Southern California's Department of Research and Evaluation in Pasadena, Calif.. "Beyond counseling for weight loss, obese children who report symptoms of GERD may need to be treated for the underlying reasons to help avoid persistence of GERD into adulthood and to prevent its complications. "

"Even though some health conditions associated with extreme childhood obesity may not seem important early in life, they can be a significant burden for the patient and a link to other serious conditions later in life. We need to be aware of these links, search for obesity-related conditions and address childhood obesity as a family issue as early as possible," noted Dr. Koebnick.

Previous research into the association between obesity and GERD was hospital-based instead of population-based, included mainly people with asthma, and did not address extreme childhood obesity. In this study, the percentile of the measure of a child's weight in relation to height for age was calculated according to the 2000 U.S. Centers for Disease Control and Prevention recommendation to assign a weight class (normal weight, overweight, moderate and extreme obesity). Children in the study had an average of 2.6 medical visits per year where height and weight were measured.

This study is part of the Kaiser Permanente Southern California Children's Health Study, Kaiser Permanente's ongoing work to identify and treat childhood obesity through research and community programs. Results from the Children's Health Study published in the Journal of Pediatrics in March 2010, reported that extreme obesity is affecting more children at younger ages, with 12 percent of African American teenage girls, 11.2 percent of Hispanic teenage boys, 7.3 percent of boys and 5.5 percent of girls 2 – 19 years of age now classified as extremely obese.

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In February 2010, Kaiser Permanente announced that it was a founding partner of the Partnership for a Healthier America (www.ahealthieramerica.org), a nonprofit, nonpartisan foundation created to catalyze and increase support around First Lady Michelle Obama's campaign to curb childhood obesity in a generation.

Other study authors included: Darios Getahun, MD, Ning Smith, MS, and Steven J. Jacobsen, MD, PhD, from the Kaiser Permanente Department of Research and Evaluation in Pasadena, Calif.; Amy H. Porter,

MD, from the Kaiser Permanente Baldwin Park Medical Center; and Jack K. Der-Sarkissian, MD, from the Kaiser Permanente Medical Center, Los Angeles.

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The Department of Research and Evaluation conducts high quality, innovative research into disease etiology, prevention, treatment and care delivery. Investigators conduct epidemiology, health sciences, and behavioral research as well as clinical trials. Areas of interest include diabetes and obesity, cancer, HIV/AIDS, cardiovascular disease, aging and cognition, pregnancy outcomes, women's and children's health, quality and safety, and pharmacoepidemiology. Located in Pasadena, Calif., the department focuses on translating research to practice quickly to benefit the health and lives of Kaiser Permanente Southern California members and the general population. Visit www.kp.org/research.

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