

# Extremely obese children have higher prevalence of psoriasis, higher heart disease risk

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Children who are overweight or obese have a significantly higher prevalence of psoriasis, and teens with psoriasis, regardless of their body weight, have higher cholesterol levels, according to a Kaiser Permanente study published online in the *Journal of Pediatrics*. The study findings suggest that higher heart disease risk for patients with psoriasis starts in childhood in the form of higher cholesterol levels.

Psoriasis is a [chronic inflammatory disease](#) of the skin that often starts early in life and, according to the National [Psoriasis](#) Foundation, affects more than 7 million Americans.

"This study suggests a link between [obesity](#) and psoriasis in children," said study lead author Corinna Koebnick, PhD, a research scientist at the Kaiser Permanente Southern California's Department of Research & Evaluation in Pasadena, Calif. "But our study findings also suggest that the higher [heart disease risk](#) for patients with psoriasis starts in childhood in the form of higher [cholesterol levels](#). We may need to monitor youth with psoriasis more closely for cardiovascular risk factors, especially if they are obese."

Researchers used electronic health records to study 710,949 racially and ethnically diverse children and found that obese children were almost 40 percent more likely to have psoriasis than normal weight children. Extremely obese children were almost 80 percent more likely to have

psoriasis than normal weight children. Additionally, among youth with psoriasis, it was four times more likely that the psoriasis would be severe or more widespread in obese youth than what was seen in normal weight children. Additionally, teens with psoriasis had 4 to 16 percent higher [cholesterol](#) levels and liver enzymes, regardless of their weight, than youth without this condition.

"Very little is known about psoriasis in children where the disease is mostly viewed and treated as a burdensome skin condition and less considered a metabolic disease," adds Dr. Koebnick.

"Psoriasis may also put children at risk for metabolic disease, as seen in adults, so studies such as these are extremely important in helping primary care providers learn the best way to care for these children," notes co-author Amy Porter, MD, Southern California Permanente Medical Group's regional physician lead for weight management, and pediatrician at Kaiser Permanente's Baldwin Park Medical Center.

Epidemiologic studies in adults have shown that patients with psoriasis are at a higher risk of developing metabolic conditions such as diabetes, hypertension, heart attack and stroke. In adults, obesity has also been linked to a higher risk of developing psoriasis, and obesity, like psoriasis, is also associated with an increased risk of cardiovascular disease, metabolic syndrome and diabetes.

"Both conditions are characterized by a chronic low-level inflammation," notes Dr. Koebnick. "Yet, we know little to nothing about the metabolic risk of psoriasis, especially when combined with obesity in children." Psoriasis in children may increase blood cholesterol levels, and this may additionally be triggered by the presence of obesity. While the present study has limitations due to its cross-sectional design where both body weight and information on psoriasis were assessed at the same time, future studies based on this cohort will address these issues.

"It has been well described that adults with psoriasis have increased cardiovascular risk factors, but we have now examined these issues in [children](#). As we follow these patients over 30-40 years, we will be able to determine if these increased cardiovascular risk factors in turn increase the risk for major adverse cardiac events," said study senior author, Jashin J. Wu, M.D., director of clinical research and the associate residency program, and director for the department of dermatology at Kaiser Permanente Los Angeles Medical Center.

Provided by Kaiser Permanente

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