Eating disorders - anorexia nervosa, bulimia nervosa or binge eating disorder - usually start in adolescence and often leave young patients and their families helpless. These disorders, that are common, raise the question of early detection. Today, researchers from the University of Geneva (UNIGE) and the University Hospitals of Geneva (HUG), Switzerland, with colleagues from the University of North Carolina in the United States, provide new elements that would allow to identify, long before the critical period of adolescence, children who are more likely to be affected by these serious disorders. Indeed, their findings reveal that an abnormally high or low weight from during childhood significantly increases the risk of eating disorders. These results, which can be read in the Journal of the American Academy of Child and Adolescent Psychiatry, should alert paediatricians to this important public health issue.

What are commonly referred to as eating disorders include all pathologies related to eating: food restriction in the case of anorexia nervosa or overeating that young people engage in, very quickly and with loss of control in bulimia nervosa or binge eating. While these disorders are initially classified as psychiatric conditions, more and more studies tend to show that multiple biological and environmental factors are also at stake. “Whatever the origin of these disorders, it is essential to strengthen their prevention and early detection, and therefore to identify risk factors that are visible from an early age,” warns Nadia Micali, Professor at the UNIGE Faculty of Medicine and Head of the HUG Division of Child and Adolescent Psychiatry, who directed this research.

Warning signs from an early age?

To identify possible common causes of eating disorders, the researchers analysed data from 1,502 participants in a large British longitudinal study that followed parents and their children over more than twenty years: their weight was measured regularly from birth to 12 years of age; at 14, 16 and 18 years of age they were then assessed for eating disorders. “Our results show that a significant difference in weight trajectories in young children indicates an increased risk of eating disorders,” says Professor Zeynep Yilmaz of the University of North Carolina, the first author of this study. “Thus, a low body mass index (BMI) — about 0.5 points BMI compared to the average — as early as age 2 for boys and 4 for girls - is a risk factor for the development of anorexia nervosa in adolescents, just as excessive BMI from mid childhood would be a risk factor for the further development of other eating disorders such as bulimia nervosa or binge eating.”
“Until now, we have had very little guidance on how to identify children who might be at increased risk for developing eating disorders later in adolescence,” explains Professor Cynthia Bulik, an expert on eating disorders at the University of North Carolina. “By looking at growth records of thousands of children across time, we saw early warning profiles that could signal children at risk. Clinically, this means that paediatricians should be alert for children who fall off and stay below the growth curve throughout childhood. This could be an early warning sign of risk for anorexia nervosa. The same holds for children who exceed and remain above the growth curve—only their risk is increased for the other eating disorders such as bulimia nervosa and binge-eating disorder.”

**Metabolic dysregulation at work?**

Although eating disorders are essentially psychiatric in nature, the study highlights the need to also examine metabolic risk factors in addition to psychological, sociocultural and environmental components.

“The differences in childhood body weight of adolescents who later developed eating disorders started to emerge at a very early age — way too early to be caused by social pressures to be thin or dieting. A more likely explanation is that underlying metabolic factors that are driven by genetics, could predispose these individuals to weight dysregulation. This aligns with our other genetic work that has highlighted a metabolic component to anorexia nervosa.” says Professor Micali, who concludes: “Our results also highlight the multifactorial risk for eating disorders, as well as the need to develop early detection tools that could be used as part of routine checks by all paediatricians.” Indeed, the earlier the problem is identified, the better it can be managed, especially if support is provided to the family as a whole, rather than just the individual.