

Girls with eating disorders regain healthy fatty acid levels when their weight normalizes

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A study of teenage girls with eating disorders has shown that reduced essential fatty acid levels returned to normal once the girls increased their weight to a healthy level.

The research, published in the August issue of *Acta Paediatrica*, suggests that it is not necessary to give omega-3 polyunsaturated [fatty acid supplements](#) to adolescent girls with eating disorders.

"Essential fatty acid status is altered in eating disorders that result in weight loss" explains co-author Dr Ingemar Swenne from Uppsala University Children's Hospital. "This is important because deficiencies in polyunsaturated omega-3 essential fatty acids have been implicated in the development of depression and other [mental health issues](#)."

Dr Swenne teamed up with child psychiatrist Dr Agneta Rosling, to analyse the [red blood cells](#) of 24 [adolescent girls](#) who had suffered from eating disorders and had lost an average of 10kgs. Their average age at the start of the one-year study was 14.3 years.

The researchers compared the results from the eating disorders group with 39 normal weight girls from local schools.

Key findings included:

- The girls in the eating disorder group had an average [body mass](#)

[index](#) of 15 at the start of the study and this had risen to 19 at the one-year follow-up. This compared to the 21.2 recorded in the control group of the same age.

- Seventeen of the girls had [anorexia nervosa](#) and the remaining seven were classified as having an unspecified eating disorder.
- Twelve had depression at the start of the study, but this had fallen to two at follow-up. Only two were menstruating at the start of the study, but this had risen to 16 at follow-up.
- The girls in the eating disorder group showed marked differences in the levels of fatty acids in their blood cells at the start of the study, compared to the girls in the control group. In particular they had lower levels of essential omega-3 fatty acids.
- Once the girls' weight normalised, the differences between the two groups became less marked and the girls in the eating disorder group regained more healthy omega-3 fatty [acid levels](#).

"It is clear from our study that once the girls attending the Eating Disorders Unit received adequate nutrition, normalised their eating behaviours and gained weight, their metabolism and endocrine function improved" concludes co-author Dr Agneta Rosling.

"This was sufficient to ensure that their essential fatty acid status improved and, in particular, their omega-3 levels recovered to a more healthy level.

"We believe that this research indicates that providing girls with eating disorders with omega-3 supplements is unnecessary if they normalise their eating behaviour and weight."

More information: Omega-3 essential fatty acid status is improved during nutritional rehabilitation of adolescent girls with eating disorders and weight loss. Swenne et al. *Acta Paediatrica*. 101, pp. 858-861. (2012). [DOI:10.1111/j.1651-2227.2012.02684.x](https://doi.org/10.1111/j.1651-2227.2012.02684.x)

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