

Serious eating disorder ARFID is highly heritable, according to new twin study

February 1 2023



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Avoidant/restrictive food intake disorder (ARFID) is strongly influenced by genetic factors, according to a twin study examining this relatively new type of eating disorder. The study has been published in the journal

JAMA Psychiatry by researchers at Karolinska Institutet.

ARFID is a serious eating disorder that leads to malnutrition and nutritional deficiencies. Researchers estimate that between one to five percent of the population is affected by the [eating disorder](#).

Unlike anorexia nervosa, ARFID is not about the patient's experience of their own body and fear of gaining weight. Instead, the disease is characterized by the avoidance of certain types of food due to a sensory discomfort because of the characteristics or appearance of food, or for example, the fear of choking, a food poisoning phobia, or lack of appetite.

Researchers at Karolinska Institutet have now investigated the importance of genetic factors for developing ARFID. A cohort of almost 17,000 pairs of twins in Sweden born between 1992 and 2010 participated in the study. A total of 682 children with ARFID between the ages of six and twelve years could be identified.

The researchers used the twin method to determine the influence of genes and the environment on the onset of the disease.

"We know that [identical twins](#) share all genes and that [fraternal twins](#) share about half of the genes that make people different. When we then see that a certain trait is more common in both members of identical twin pairs than in fraternal twin pairs, it is an indication that there is a genetic influence. We can then estimate the degree to which a trait is influenced by genetic factors," says Lisa Dinkler.

The researchers discovered that the genetic component for developing ARFID was high, 79%. This means that 79% of the risk of developing ARFID can be explained by [genetic factors](#).

"This study suggests that ARFID is highly heritable. The [genetic component](#) is higher than that of other [eating disorders](#) and on par with that of [neuropsychiatric disorders](#) such as autism and ADHD," says Lisa Dinkler, a postdoctoral researcher at the Department of Medical Epidemiology and Biostatistics at Karolinska Institutet

ARFID is a relatively new diagnosis. In 2013, the disorder was included in the Diagnostic and Statistical Manual of Mental Disorders, DSM-5, and this year it was included in the World Health Organization's diagnostic manual ICD. The latest edition, ICD-11, will be introduced to the Swedish health care system in a couple of years, consequently, the diagnosis is not an official part of Swedish health and medical care yet.

The next step in Dr. Dinkler's research is to study the extent to which ARFID is associated with other psychiatric diagnoses, such as anxiety and depression, neurodevelopmental disorders, and gastrointestinal problems.

"We will use twin studies to test the extent to which ARFID shares underlying genetic and [environmental factors](#) with these conditions," says Dr. Dinkler.

More information: Etiology of the broad avoidant restrictive food intake disorder phenotype in Swedish twins aged 6 to 12 years, *JAMA Psychiatry* (2023). [DOI: 10.1001/jamapsychiatry.2022.4612](https://doi.org/10.1001/jamapsychiatry.2022.4612)

Provided by Karolinska Institutet

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