

NEWS

Anorexia's link to autism, explained

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In 1983, psychologist **Christopher Gillberg** posed a provocative question to the readers of the *British Journal of Psychiatry*: Could **autism and anorexia nervosa** share underlying causes? Gillberg's curiosity came in part from his observations of three autistic boys whose female cousins all had the eating disorder, which is characterized by food restrictions, low body weight, an intense fear of gaining weight and a distorted body image.

Gillberg, professor of child and adolescent psychiatry at the University of Gothenburg in Sweden, initially suggested that anorexia is the 'female form of autism.' Although that idea wasn't entirely accurate, his suspicions that eating disorders and autism are linked have borne out: People with anorexia are **more likely to be autistic** than those without it, studies show. There are fewer data demonstrating that autistic people are at particularly high risk for eating disorders, but experts say it's likely.

Here is what researchers know about the overlap between the two conditions and what they are still working to find out.

How often do anorexia and autism overlap?

Estimates vary, though most researchers agree that roughly 20 percent of people with anorexia are autistic. Both conditions are rare — about 1 percent of people are autistic and 0.3 percent have anorexia — and most research so far has examined the prevalence of autism in people with anorexia, not the reverse. Among 60 women receiving treatment for an eating disorder at a clinic in the United Kingdom, for example, 14 of them, or 23 percent, **scored above the diagnostic cutoff** on a test called the Autism Diagnostic Observation Schedule (ADOS). Similarly, about one-third of people with anorexia have been **diagnosed with autism**, according to a long-running study that has followed 51 people with anorexia and 51 controls in Sweden since the 1980s. Because of

changes in how autism is diagnosed, some participants met the criteria for a diagnosis at one time point and not at others, but those with anorexia still tend to score higher on a test of social-communication difficulties than controls do.

Population studies confirm the link. Children with social difficulties at age 7 and 11 are more likely than their peers without such difficulties to **engage in disordered eating behaviors**, such as fasting or using diet pills, at age 14, according to data from more than 5,000 children born in the U.K. And among 1.7 million people in Denmark's national health registry, the **likelihood of having autism** is more than 15 times higher among people with anorexia than among those without; likewise, autistic people are more than five times as likely to have anorexia as non-autistic people. But having **depression** also increases the likelihood of having autism in this cohort, so it's unclear whether autism has a unique link to anorexia or simply increases the likelihood of having a psychiatric condition.

Parsing the overlap between the two conditions is complicated by the fact that starvation can cause brain changes that result in autism-like behaviors, such as **social difficulties** and problems with **emotion processing**. It may be difficult to accurately diagnose autism in people with severe anorexia, says **William Mandy**, professor of clinical psychology at University College London in the U.K. Among 40 adolescent girls undergoing intensive treatment for anorexia, for example, 21 **scored above the diagnostic cutoff** on the ADOS, but parents of only 4 reported seeing autism traits in childhood — necessary for an autism diagnosis. This suggested that for most of the girls, the eating disorder had caused new behaviors that mirror autism. It's also possible the girls' autism had been missed in childhood. "It's still an ongoing debate," says **Heather Westwood**, clinical psychologist in eating disorders at King's College London.

Do eating disorders have the same causes in autistic and non-autistic people?

Anorexia involves a damaging focus on weight and body image, but people with autism may restrict their eating for other reasons, such as coping with difficult emotions or having certain food aversions. For some autistic people, eating disorders may originate in **restricted and repetitive behaviors** that take the form of an intense interest such as calorie-counting, exercise or an insistence on a limited diet.

Eating disorders usually begin in adolescence, when people's social lives tend to become more complex. In a qualitative study of autistic women with anorexia published in April, few participants reported their eating behaviors as being **primarily driven by body image**, although some used a goal of thinness as a way to fit in with peer groups from which they felt excluded. This sort of emotional driver may be particularly common among girls with undiagnosed autism, who can experience painful inner lives without adequate support. "Sometimes they seem to stumble across this realization that if you actually starve yourself, you can numb a lot of those emotions," Mandy says. "It becomes a way to manage acute anxiety and unhappiness."

A condition called avoidant/restrictive food intake disorder (ARFID), added to the Diagnostic and

Statistical Manual of Mental Disorders in 2013, may be the most appropriate diagnosis for some autistic people who are underweight or have trouble eating. ARFID, sometimes called ‘extreme picky eating,’ also involves food avoidance but doesn’t include the intense focus on weight and body image seen in those with anorexia.

Other research, though, challenges the theory that eating disorders in autistic people are less driven by weight concerns than in non-autistic people. In an unpublished study, Westwood found that the relationship between body image and disordered eating is roughly the same in the two groups, a finding she calls “puzzling.”

Difficulties with **identifying emotions** — called alexithymia — and understanding physical sensations, such as hunger, may also contribute to the overlap; alexithymia is common in both **autism** and **anorexia**. Researchers know less about the extent to which other eating disorders, such as bulimia and binge-eating disorder, appear in autistic people, though some suspect an overlap there, too. And most research so far has focused solely on girls and women, because eating disorders are underdiagnosed in boys and men.

How are eating disorders treated in autistic people?

Autistic people with eating disorders tend to have **worse outcomes** than their non-autistic peers. This may be due in part to treatments that don’t accommodate autistic people’s needs or that focus too heavily on weight and body image.

Therapy for eating disorders often involves in-person doctor’s appointments and inpatient stays. People in treatment often need to eat meals in group settings, which can be noisy and overwhelming, making eating even more difficult. Many autistic people have trouble visiting doctor’s offices because of **sensory sensitivities**, such as an aversion to bright fluorescent lights. Group therapy may also be difficult for some autistic people.

Elisabet Wentz, professor of psychiatry at the University of Gothenburg and an investigator on the Swedish longitudinal studies, is implementing autism-friendly changes in her eating disorders clinic in response to the high number of autistic people she has observed seeking treatment for anorexia or bulimia. She has designated two of the eight inpatient beds at her clinic specifically for autistic people and allows autistic people to eat alone if they prefer.

It’s important for clinicians treating eating disorders to be aware of the overlap, experts say, as many of the people they treat may have undetected autism. For example, all of the 15 women with both conditions in the April study sought services related to an eating disorder or other mental health problem before they were diagnosed with autism: The average age of anorexia diagnosis in the group was 17, but the average age of autism diagnosis was 29.

“It really does help to know that they’re autistic if you want to be trying to help them with their eating disorder, and with their life more generally,” Mandy says.