

## **Females with Fragile X Syndrome**

**At the current time, there is very little research on fragile X syndrome in girls and women. The following information is based on a very small number of studies, and these studies need to be repeated before conclusions can be drawn.**

As fragile X syndrome is an X chromosome-linked disorder, many females show milder characteristics than males with the syndrome. Around 40 to 50% of females with fragile X syndrome will show no obvious signs of the syndrome; however, it is likely that these genetic changes will have a mild impact.

### **Intellectual and cognitive characteristics in females with FXS**

A wide range of IQ levels have been found in females with FXS, but around half of females will have an IQ in the borderline to mild intellectual disability range. Females with FXS that have an IQ within the typical range still tend to receive special educational resources at school. In particular, difficulties with maths is commonly reported in females with fragile X syndrome, as well as some difficulties with reading.

Problems with executive function are also apparent in females with fragile X syndrome, such as problems with short attention span.

### **Social skills in females with FXS**

Some females with FXS may show some social difficulties when interacting with others, such as anxiety around strangers and taking longer to initiate interaction than peers who are matched for age and IQ.

Research has shown that shyness and poor eye contact are significantly more common in females with fragile X syndrome compared to girls with Turners syndrome.

### **Impulsivity and overactivity in females with FXS**

Females with fragile X syndrome may show heightened levels of impulsivity and overactivity, which when combined with attentional problems can result in a dual diagnosis of ADHD.

## **Autism in females with FXS**

Autistic characteristics are more prevalent in females with fragile X syndrome than in age-matched and IQ-matched peers. Research shows that around 1 in 10 females meets the criteria for a diagnosis of autism.

### Female Carriers

The Fragile X Society has some [information about the behavioural and emotional characteristics of female carriers](#), and further research is being carried out in this area by Dr. Jo Moss and colleagues.