

# What do we know about Fragile X?



## Glossary

**Fragile X syndrome:** Fragile X syndrome is a genetic disorder caused by a mutation of a gene on the X chromosome. It is the most common inherited cause of mental impairment and the most common known cause of autism.

**Fragile X permutation:** this refers to a minor genetic mutation to the X chromosome that on its own, does not cause Fragile X syndrome, but puts the person and their offspring at much higher risk for developing the syndrome in their lifetime.

**Fragile X full-mutation:** A full genetic mutation to the X chromosome that results in fragile X syndrome.

**Social cognition:** The term social cognition refers to the way in which our thoughts are affected by the immediate social context that we are in, and in turn how our thoughts affect our social behavior.

## Summary

Little is known about mental deficits associated with the Fragile X permutation. In this study, the authors focused on finding out if social cognition – a mental impairment commonly associated with Fragile X syndrome – is

apparent in children with a Fragile X permutation. The results suggest that boys with a Fragile X permutation display similar yet milder problems in terms of social cognition than those with the full mutation.

## What families should know

Parents should be aware that children who are carriers of Fragile X syndrome (have the Fragile X permutation), may be at risk for future social problems. Parents should recognize that the Fragile X carrier status in males is associated with specific social difficulties that are similar in profile, although less severe, to males who are fully affected by Fragile X syndrome. The adult carrier profile may have its root in early childhood.

## Reference

Cornish, K. M., Kogan, C., Turk, J., Manly, T., James, N., & Dalton, A. (2005). The emerging Fragile X premutation phenotype: Evidence from the domain of social cognition. *Brain and Cognition*, 57, 53-60. Share

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