Why some autistic people can tolerate severe pain? Gene mice studies yielding answers

The gene SHANK3, a leading candidate for autism risk, helps sensory neurons respond to pain, according to a study in mice. The findings may provide a genetic explanation for the high pain threshold seen in some people with autism.

SHANK3 is mutated in about 2 percent of people with autism. It is missing in people with Phelan-McDermid syndrome, a condition marked by autism, severe intellectual disability and a blunted sensitivity to pain. Individuals with either condition often show a muted response to extreme temperatures or pressure.

Most studies of SHANK3 have focused on the gene's role in the central nervous system, where it supports communication between neurons. The new study…reveals a role for SHANK3 in sensory neurons just outside the spinal cord. This makes SHANK3 necessary for the proper perception of pain.

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The finding also suggests that the insensitivity to pain seen in SHANK3 mice stems from sensory neurons and not from the brain's inability to process pain signals.

[The study can be found here.]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: Autism gene may double as pain processor