

CAMH study confirms genetic link to suicidal behavior

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A new study from the Centre for Addiction and Mental Health has found evidence that a specific gene is linked to suicidal behaviour, adding to our knowledge of the many complex causes of suicide. This research may help doctors one day target the gene in prevention efforts.

In the past, studies have implicated the gene for brain-derived neurotrophic factor (BDNF) in suicidal behaviour. BDNF is involved in the development of the nervous system.

After pooling results from 11 previous studies and adding their own study data involving people with schizophrenia, CAMH scientists confirmed that among people with a psychiatric diagnosis, those with the methionine ("met") variation of the gene had a higher risk of suicidal behaviour compared to those with the valine variation.

The review, published in the *International Journal of Neuropsychopharmacology*, included data from 3,352 people, of whom 1,202 had a history of suicidal behaviour.

The news coincides with Mental Illness Awareness Week, October 2-8, and World [Mental Health](#) Day, October 10.

"Our findings may lead to the testing and development of treatments that target this gene in order to help prevent suicide," says Dr. James Kennedy, director of CAMH's [Neuroscience Research](#) Department. "In the future, if other researchers can replicate and extend our findings,

then genetic testing may be possible to help identify people at increased risk for suicide."

As the low-functioning BDNF met variation is a risk factor for suicidal behaviour, it may also be possible to develop a compound to increase BDNF functioning, Dr. Kennedy says.

About 90 per cent of people who have died by suicide have at least one [mental health disorder](#), the researchers note. Within the studies they reviewed, participants had schizophrenia, depression, bipolar disorder or general mood disorders. In each case, the researchers compared the genotypes of people who had attempted or completed suicide with those who were non-suicidal.

"Our findings provide a small piece of the puzzle on what causes [suicidal behaviour](#)," says Dr. Kennedy.

"When assessing a person's suicide risk, it's also important to consider environmental [risk factors](#), such as early childhood or recent trauma, the use of addictive drugs or medications and other factors."

Provided by Centre for Addiction and Mental Health

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