

Constant sunlight linked to summer suicide spike

May 7 2009



Suicide rates in Greenland increase during the summer, peaking in June. Researchers writing in the open access journal *BMC Psychiatry* speculate that insomnia caused by incessant daylight may be to blame.

Karin Sparring Björkstén from the Karolinska Institutet, Sweden, led a team of researchers who studied the seasonal variation of suicides in all of [Greenland](#) from 1968-2002. They found that there was a concentration of suicides in the summer months, and that this seasonal effect was especially pronounced in the North of the country - an area where the sun doesn't set between the end of April and the end of August. Björkstén said, "In terms of seasonal light variation, Greenland is the most extreme human habitat.

Greenland also has one of the highest [suicide](#) rates in the world. We found that suicides were almost exclusively violent and increased during

periods of constant day. In the north of the country, 82% of the suicides occurred during the daylight months (including astronomical twilight)".

The researchers found that most suicides occurred in young men and that violent methods, such as shooting, hanging and jumping, accounted for 95% of all suicides. No seasonal variation in alcohol consumption was found. The authors speculate that light-generated imbalances in turnover of the neurotransmitter serotonin may lead to increased impulsiveness that, in combination with lack of sleep, may explain the increased suicide rates in the summer. They said, "People living at high latitudes need extreme flexibility in light adaptation. During the long periods of constant light, it is crucial to keep some circadian rhythm to get enough sleep and sustain mental health. A weak serotonin system may cause difficulties in adaptation".

Björkstén concludes, "Light is just one of many factors in the complex tragedy of suicide, but this study shows that there is a possible relationship between the two."

More information: Accentuation of suicides but not homicides with rising latitudes of Greenland in the sunny months, Karin S Björkstén, Daniel F Kripke and Peter Bjerregaard, *BMC Psychiatry* (in press), www.biomedcentral.com/bmcpsychiatry/

Source: BioMed Central ([news](#) : [web](#))

Citation: Constant sunlight linked to summer suicide spike (2009, May 7) retrieved 27 April 2024 from <https://medicalxpress.com/news/2009-05-constant-sunlight-linked-summer-suicide.html>

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