Cause of spontaneous eye movements in albinism



People with albinism often have poor vision. A new study from the Netherlands Institute for Neuroscience reveals the cause of this.

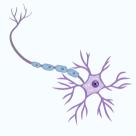


What is albinism?

People with albinism have a lack of pigment and often experience poor vision. In Europe, this occurs in 1 in 20,000 individuals, but in some populations, it is much more common, affecting 1 in 1,000 people.

One of the causes is the spontaneous back-and-forth movement of the eye: 'pendular nystagmus.' This phenomenon resembles the eye movements people make when looking outside while riding a moving train: the eyes automatically move along with the moving landscape and then spring back to the resting position.





Albinism vs healthy

Nerve cells in a small brain area, known as the nucleus of the optic tract, selectively respond to the movement and become active. In healthy individuals, this activity leads to the tightening of the eye muscles to stabilize the image. However, in albinos, this process works differently.

Researchers from the Netherlands Institute for Neuroscience have now demonstrated in albino mice that the cells in this brain area are no longer selective for the direction of image movement. As a result, the image cannot stabilize, leading to the condition of pendular nystagmus.



Currently, surgery of this brain area is not possible. However, this study provides hope that in the future, pendular nystagmus could be reduced by manipulating the activity in this brain region.