



You Are Here: [Home](#) » [About Epilepsy](#) » [Epileptic Seizures](#) » [Seizure Triggers](#) » [Photosensitive Epilepsy](#) » [Wind Turbines And Photosensitive Epilepsy](#)

Wind Turbines And Photosensitive Epilepsy

Some people worry about the possibility of wind turbines triggering epileptic seizures in people with photosensitive epilepsy. Photosensitive epilepsy affects up to 3% of people with epilepsy and is triggered by flashing lights or certain patterns.

Under certain conditions a wind turbine's rotating blades cast a shadow from the sun, having the effect of 'shadow flicker'. Studies show that for this to be a potential problem for people with photosensitive epilepsy, a number of factors need to happen at the same time:

The turbine blades would need to rotate at speeds faster than 3 hertz (flashes per second). Turbines on commercial wind farms rotate at speeds under 2 hertz. Smaller, private turbines can rotate faster as they are not subject to the same regulations on rotation speed.

The sun would need to be bright enough, and in just the right position and angle from the horizon in relation to the turbine, to cast shadows of enough intensity and length. The weather and atmospheric conditions in the UK for most of the year reduce this possibility down greatly.

The person with photosensitive epilepsy would need to be within a certain distance from the turbine. Regulations for commercial wind farms include placing wind farms at enough distance from private dwellings for it not to affect people in their houses.

The person would need to be looking at the turbine, with the sun behind the turbine. As most people will avoid looking directly at the sun, this further reduces the risk.

Reducing the risk of photosensitive triggers

If someone with photosensitive epilepsy finds themselves facing any photosensitive trigger, covering one eye with their hand immediately reduces the risk, as the photosensitive effect relies on both eyes receiving the same trigger. Closing their eyes would not stop a photosensitive effect and may even worsen the effect. If you have had a seizure directly triggered by shadow flicker from wind turbines, and you'd like to tell us about it, we would like to hear from you. Please contact us via our online form or call our helpline.

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