

Light therapy and dementia

More evidence is needed before we can recommend using light therapy to help treat dementia and its symptoms.

Several research studies have looked at using light therapy to treat dementia and its symptoms. However, a greater number of clinical studies, with more participants, is needed before we can come to any conclusions.

Different types of light therapy exist, including bright light therapy and photobiomodulation. These therapies work in different ways.

Bright light therapy

We all have a special biological 'clock' that is involved in regulating the processes that take place in our body each day. This is known as our circadian rhythm.

In dementia, the circadian rhythm can be disrupted, which can result in sleep disorders and disruptive behaviour during the night.

Bright light therapy has been found to be beneficial as a treatment for these sleep disturbances. It is believed to work by helping to regulate the circadian rhythm.

In bright light therapy, a person sits in front of a light box that provides about 30 times more light than the average office light, for a set amount of time each day.

Can bright light therapy prevent or treat dementia and its symptoms?

A small number of studies have suggested that bright light therapy may be beneficial for people with dementia. One small but well-conducted study showed promising effects of bright light therapy on restlessness and [disturbed sleep](#) for people with dementia.

A large and well-conducted research review found that bright light therapy can result in less daytime sleeping and increased night-time sleeping.

Current findings indicate that bright light therapy may be beneficial for people with dementia. However, there are a limited number of studies, and most include a small number of people. Further research is therefore needed before we can come to make any definitive conclusions.



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0333 150 3456

Photobiomodulation

A Canadian-based biotech company, Vielight, has developed a new headset which aims to stop, or even reverse, some of the symptoms of dementia.

The headset, known as the Neuro RX Gamma, works by transmitting near-infrared light to the brain through the skull and nostril. This technique is called 'photobiomodulation', or the use of light to alter biological processes. In this case, the aim is to use light to change the way the brain reacts to the damage that can lead to dementia.

What has research shown?

A small study in 2017 tested this device in five people with dementia. Following the study, the participants reported increased cognitive function, better sleep, fewer angry bursts, less anxiety and less wandering.

A further study in 2018 also suggested that the device is safe and may improve some measures of cognitive function.

The very small number of participants and lack of a control group in these studies makes it impossible to make a conclusion about the effectiveness of the therapy.

What are the next steps for research?

The results from these early studies are promising, and a larger study is now being carried out. The trial aims to recruit 228 people across eight sites in the US and Canada.

Half of the volunteers will receive the light therapy six days a week for 20 minutes for a total of 12 weeks. The rest will receive a placebo treatment. The participants will be assessed for any changes to cognitive ability, the ability to perform daily activities and quality of life for 24 weeks after the start of treatment.

The study is scheduled to finish in May 2021. If successful, this technology could be the first treatment that reverses some of the symptoms of dementia, and the first ever non-invasive, non-drug treatment that effectively treats symptoms.

What should I take away from light therapy research?

The research exploring light therapies is promising and suggests that bright light therapy and photobiomodulation could benefit people with dementia and its symptoms.

However, the research is still in its infancy and there is currently not enough evidence to recommend using light therapy as an intervention in dementia. More clinical studies around each type of light therapy are needed to fully understand the benefit.