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News Release

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Sunshine may slow weight gain and diabetes onset, study suggests

Exposure to moderate amounts of sunshine may slow the development of obesity and diabetes, a study suggests.

Scientists who looked at the effect of sunlight on mice say further research will be needed to confirm whether it has the same effect on people.

The researchers showed that shining UV light at overfed mice slowed their weight gain. The mice displayed fewer of the warning signs linked to diabetes, such as abnormal glucose levels and resistance to insulin.

The beneficial effects of UV treatment were linked to a compound called nitric oxide, which is released by the skin after exposure to sunlight. Applying a cream containing nitric oxide to the skin of the overfed mice had the same effect of curbing weight gain as exposure to UV light, the team found.

Vitamin D – which is produced by the body in response to sunlight and often lauded for its health benefits – did not play a role, the study found.

The team says the new findings add to the growing body of evidence that supports the health benefits of moderate exposure to the sun's rays.

Previous studies in people have shown that nitric oxide can lower blood pressure after exposure to UV lamps.

The results should be interpreted cautiously, the researchers say, as mice are nocturnal animals covered in fur and not usually exposed to much sunlight. Studies are needed to confirm whether sunshine exposure has the same effect on weight gain and risk of diabetes in people.

Researchers at the Telethon Kids Institute in Perth, Western Australia, led the study in collaboration with the Universities of Edinburgh and Southampton.

Dr Shelley Gorman, of the Telethon Kids Institute and lead author of the study, said: "Our findings are important as they suggest that casual skin exposure to sunlight, together with

plenty of exercise and a healthy diet, may help prevent the development of obesity in children."

"These observations further indicate that the amounts of nitric oxide released from the skin may have beneficial effects not only on heart and blood vessels but also on the way our body regulates metabolism," Dr Martin Feelisch, Professor of Experimental Medicine and Integrative Biology at the University of Southampton, added.

Dr Richard Weller, Senior Lecturer in Dermatology at the University of Edinburgh, said: "We know from epidemiology studies that sun-seekers live longer than those who spend their lives in the shade. Studies such as this one are helping us to understand how the sun can be good for us. We need to remember that skin cancer is not the only disease that can kill us and should perhaps balance our advice on sun exposure."

The research is published today in the journal *Diabetes*.

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