

《伤不起！空气污染竟会导致脱发》

缩短寿命、皮肤老化、精神疾病……近日空气污染又添了“一宗罪”：导致脱发。新研究发现，污染空气中的颗粒物会导致人类头皮上促进头发生长、防止脱发的几种蛋白质水平下降。如果无硅油洗发水也挽救不了你的发际线，不如考虑搬家去空气清新的地方。



Photo by Verne Ho on Unsplash

If you're worried about your receding hairline and you live in a city, you might want to consider moving, as scientists have found exposure to high levels of air pollution may be linked to hair loss.

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New research presented at the European Academy of Dermatology and Venereology (EADV) Congress in Madrid

found particulate matter (PM) – that is present in polluted air – could impact both hair growth and retention.

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The team took cells, known as dermal papilla, from the base of hair follicles on the human scalp and then exposed them to the polluted air. They used various concentrations of PM10-like fine dust and diesel particulate extract (found naturally in areas with high use of vehicles).

??(??????10??????????PM10)????????(????????????????)????????

Then, 24 hours later, they tested the samples to detect whether specific hair-growth proteins in the cells had changed at all.

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Researchers found the presence of PM10 and diesel particulate decreased levels of the protein responsible for hair growth – beta-catenin – and morphogenesis.

??????PM10????????????????????????????????——????????????????

morphogenesis[,m?rf?'d??n?s?s]: n. [?] ????

Morphogenesis is the biological process that causes an organism to develop its shape. It is one of three fundamental aspects of developmental biology.

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According to the study, the levels of three other proteins which are responsible for hair growth and hair retention – cyclin D1, cyclin E and CDK2 – were also decreased.

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This meant that the greater the level of pollutant, the greater the decrease in proteins was found. This is one of the first studies to look at the link between pollution and baldness.

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Hyuk Chul Kwon from the Future Science Research Centre in South Korea, said: “While the link between air pollution and serious diseases such as cancer, chronic obstructive pulmonary disease (COPD) and cardiovascular disease (CVD) are well established, there is little to no research on the effect of particulate matter exposure on the

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