Do sunscreens protect us?

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Sunlight stimulates a multitude of important biological effects on skin causing amongst other pathological changes, photocarcinogenesis. Sunscreens are designed to provide protection against these harmful properties of ultraviolet radiation and public health campaigns have been employed to encourage their use. Despite this, there has been a continued rise in the incidence and mortality of the most harmful skin cancer, malignant melanoma. Although public health campaigns and mathematical models suggest sunscreen use would reduce incidence of all skin cancers including melanoma, research so far has not provided clear-cut evidence that this is true. One randomized controlled trial found the daily use of sunscreen over 4½ years significantly reduced the incidence of squamous cell carcinoma but not of basal cell carcinoma. More recent studies have had similar results; the risk of squamous cell carcinoma is decreased but the results for basal cell carcinoma are equivocal. Furthermore, some early research on melanoma has even suggested controversially that the application of sunscreen may even increase the risk of melanoma. However, the presence of confounding factors such as the potential inappropriate application of sunscreen and increased time of UV exposure in sunscreen users are not fully accounted for within these studies. We will explore the available evidence on both the beneficial and harmful effects of sunscreen use with practical advice on how we might advise our patients to best protect themselves from photocarcinogenesis.

Biography

Xinyi Du has graduated from Medicine at the University of Cambridge, UK in 2012. She is completing her Training in General Internal Medicine in London and is currently based at the Royal Marsden Hospital. She has an interest in public health and medical education and is additionally completing a Masters in Clinical Education at King’s College, London.

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