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## UV-induced changes in the immune response to microbial infections in human subjects and animal models.

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### **Abstract**

Exposure to UV is a recognised risk factor for skin cancer and it also induces immunosuppression to a variety of antigens encountered following the irradiation. The latter property has been demonstrated in rodent models of infections with the microbial agents including viruses, bacteria, protozoa and helminths. In the majority of cases the severity of the symptoms and the microbial load in the host are increased as a result of the immunomodulation. UV can also affect the pathogenesis of some natural microbial infections of human subjects, such as causing recrudescence of herpes simplex virus and contributing to the oncogenic potential of papillomaviruses. Sufficient data have been generated from the animal models to construct a risk assessment in humans for suppression of microbial immune responses induced by sunlight exposure. This estimation requires verification from epidemiological studies and from further work to assay modulation in human immunity to particular pathogens experienced before and after the UV radiation.

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