

Pigmentation develops within two days of radiation exposure.

UVR stimulates ^{no} melanocytes in the skin to produce melanin which is then passed to numerous adjacent cells.

Melanin forms an umbrella over the nucleus of the cell to protect it from UVR. Pigmentation substantially reduces the penetration of UVB.

~~Thickness~~^{Thickening} of epidermis or increased skin growth:

Irradiation of skin with UVR increases with the activity of basal layer of epidermis causing a marked thickening particularly of stratum corneum.

It may become as much as three times its normal thickness.

The skin thickening gives protection from pigmentation and it fades in 4 to 6 weeks.

Peeling or desquamation:

The increased thickness of epidermis is eventually lost as desquamation or peeling. When this happens the resistance of skin to UVR is reduced.

Vitamin D production:

In the presence of UVR, 7-dehydrocholesterol in the skin is converted into vitamin D (calciferol or cholecalciferol) in the skin.

Vitamin D is essential for absorption of calcium.