This comprehensive monograph collates in 33 chapters all the present-day knowledge on “human living together with sun irradiation”. The title accentuates intrinsic protection in human body as opposed to external protection brought in by sunscreen lotions, fabrics or limited duration of exposure to sun irradiation. Stimulation of human organism by solar radiation are devoted to vitamin D3 production, its pivotal role in bone calcification and the vision mechanisms. The negative effects of overexposures to Sun are cumulated in chapters describing cancer induction, photoaging, hazards to eyes, photodegradation of hair, and lipid peroxidation.

The external protection of people is covered by the following topics: food, diet, protection by fabrics and sunscreens. Especial attention is devoted to the quantitative aspects of estimation of biohazards from sun irradiation. Erythema, and its numerical evaluations are described in connection with DNA damage and NAD depletion in cells affected by UV rays. The mechanism of erythema is still an enigma, and new researches have disclosed that DNA damage in the cell is not directly related to the erythema. That statement, based on the compelling experimental evidences, leads to the conclusion that sunscreen protection evaluated by attenuation of erythema can not be translated directly to power of decreasing mutagenic effects of UV irradiation. The chapter “Photochemical and photophysical properties of sunscreens”, based on a sound molecular basis and illustrated by numerous absorption and emission spectra, will be of valuable help for dermatologists and cosmetologists.

As internal protection is envisaged stimulation of chemically induced melanin production, boosting of the immune response, inducing the expression of heat shock proteins and of heme-oxygenase. The decrease of number of sunburn cells (doomed to apoptosis) can be achieved by external supply of NAD which restores the glycolytic pathway interrupted when poly-ADP ribosylation depletes the cell of NAD.

The hair and Asian skin are treated anew by Korean scientists whose experience differs largely from all the data collected till now on Caucasian skin.

Final chapters concern sunlamps and sunbeds and supplied numerical data on solar radiation reaching the Earth’s surface.

What I consider as missing aspects of this monograph are applications of sun protection knowledge in the medical treatment of some dermatological disorders. Perhaps this will be covered in the next volumes of (Comprehensive series in photosciences).

The described volume will be certainly a reference book for everyone working in the field of photobiology or to a layman wishing to understand our living with ultraviolet provided by Sun irradiation.

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