

RISKS OF CHRONIC EXPOSURE OF THE EYE BY OPTICAL RADIATION

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ABSTRACT

In recent years a growing body of data has accumulated in relation to the effects of optical radiation on the incidence and chronology of age related ocular pathologies. Chronic exposures to optical radiation result in both artificial and natural sources, but in practice solar radiation is by far the most significant. The solar exposure of the eye varies with geographic location, the altitude, the time of day and the geometry of the exposure. The absorption sites within the ocular tissues are dependent upon the wave length of the incident radiation. Each tissue of concern in the eye selectively absorbs specific wavelengths, thus precluding these from falling on the next underlying tissue along the path length. The actionspectra of eye pathologies will be discussed in relation to tissue, age, and specific waverlengths absorbed.