

Find the switch for healthy artificial lighting

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In my view, developments in lighting technology call for a deeper insight than we have at present into how artificial light affects our physiology and behaviour (see [K. M. Zielinska-Dabkowska *Nature* 553, 274–276; 2018](#)).

At the right (or wrong) time, light can suppress the production of melatonin, advance or delay our internal clock, and affect how alert we are. These visual functions depend on a special class of cell in the human eye that responds to light signals independently of the rods and cones used for image perception. Known as intrinsically photosensitive retinal ganglion cells, they express a pigment called melanopsin that is sensitive to short-wavelength light.

The boost in the contribution of short-wavelength illumination at dawn and dusk relative to daylight seems to act as a crucial signal for circadian rhythms ([M. Spitschan *et al. Sci. Rep.* 6, 26756; 2016](#)). It stimulates activity in mice during those times ([L. Walmsley *et al. PLoS Biol.* 13, e1002127; 2015](#)). These and other facets of the complex circadian system need to be investigated if we are to design genuinely healthy artificial lighting.