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This Week

Articles

Research Notes

Departments

Cover: Scientists who use DNA to probe the evolutionary roots of modern humans have run into a vexing problem: Genetic data support either of two competing perspectives. One traces *Homo sapiens* to a single African source just 200,000 years ago, the other to multiple groups in Africa and elsewhere at least a million years ago. **Page 88** (Illustration: Tim Teebken)

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Letters

Light of our lives

I found Janet Raloff's article "Does Light Have A Dark Side?" (SN: 10/17/98, p. 248) quite intriguing, but I am puzzled by the researchers' interpretation of their results. They reasoned that since eye cells in profoundly blind people were not responsive to light, they could not signal a decrease in nighttime melatonin production.

Recent research, however, has demonstrated that not only the eyes but cells scattered throughout the entire body respond to light and may be responsible for regulating the biological clock. Sighted and nonsighted populations would not differ in this regard. Why, then, should there be any difference in two groups' incidences of light-induced cancer?

Miriam Ruff
Silver Spring, Md.

The work to which you refer, on skin sensors of light, is quite new and has not been successfully replicated. Steven Lockley, one of the sources for this article, attempted such a replication. Lockley's team irradiated the back of the knees of blindfolded men. Yet even 67,500 lux, in 3-hour exposures beginning at midnight, did not suppress melatonin. The researchers argue that these new data, reported in the September JOURNAL OF CLINICAL ENDOCRINOLOGY AND METABOLISM, *"support the established view that intact, uncovered eyes are a prerequisite for light-induced suppression of melatonin in humans."*
—J. Raloff

With regard to your article, I must admit to being very skittish about applying research on nocturnal animals to diurnal ones when it comes to exposure to light. My concern is amplified considerably when I read "5 lux . . . a little more illumination than . . . full moonlight." Full moonlight—moon overhead on a clear night—is at best 0.1 lux. This is one-fiftieth of 5 lux, a minimum recommended level for parking lots. Also, the 0.2 lux referred to in the sidebar is twice full moonlight and far above the "typical moonless night." The above figures are taken from the *Illuminating Engineering Society Handbook.*

Bill F. Jones
Orange, Calif.

Connections between extended light and cancer are not entirely new. In 1956, I reported that in female rats reared and kept lifelong under constant light, puberty was accelerated and estrous cycles soon reverted to permanent estrus (*Endokrinologie* 33: 129-138, 1956). Daily injections of a pineal extract (melatonin was not yet available) prevented permanent estrus and kept estral cyclicity going despite constant exposure to light (*Endokrinologie* 33: 287-295, 1956).

Keeping a strain of mice prone to develop mammary tumors under constant light did not interfere with estral cyclicity but prolonged estrous periods, accelerating occurrence of and death from mammary tumors

CORRECTION

In "Insulin-resistance gene defect identified" (SN: 1/16/99, p. 38), NATURE MEDICINE *was incorrectly cited as the main reference for the article. The correct reference is* NATURE GENETICS.

Letters continued on p. 90