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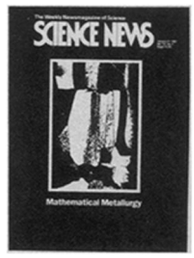
This Week

Research Notes

Articles

Cover: The etched surface of a piece of aluminum wire reveals distinct regions that correspond to separate crystals. A mathematician and a metallurgist, using a new kind of mathematics, are collaborating in an effort to catalog the number of different ways in which crystal surfaces may meet when crystals are packed together. (Photo: AT&T)



Departments

Letters

Holiday highs

Taking a break from vacuuming cat hair in my Ft. Lauderdale home, I read your article about holiday cholesterol fluctuations ("'Tis the season," SN: 12/6/86, p.360). A thought occurred to me that may explain both the cholesterol changes in Dr. Gordon's subjects and the abundance of cat hair in my house.

In spite of the unusually warm fall we have had in Florida, my cats have persisted in growing (and shedding) their winter coats. I jokingly compared them to the poinsettias on the patio, which respond at holiday time to the changes in daylight hours rather than the temperature. Perhaps flowers, cats and men in experiments react to the changing hours of daylight in their coloration, hair growth and cholesterol levels, respectively. The dates of Dec. 15 to Jan. 12 are the shortest days of the year. If these are changes necessary for adapting to cold weather, it might make sense that something other than cold weather itself, such as length of day, triggers the preparations.

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Interesting point, but men in the cities with the least change in day length, San Diego and Houston, had the greatest change in cholesterol levels. *—J. Silberner*

I read with interest the article indicating that cholesterol levels reach a yearly peak from Dec. 15 through Jan. 12 and a similar nadir in June. The hormone melatonin, produced in the pineal gland, follows a similar pattern. When darkness occurs, such as at night or during the winter solstice, production of the hormone soars. During daylight or during the summer solstice, production is reduced. If cholesterol levels show a similar pattern of rising in the morning or during the periods of shorter daylight, it may indicate that the two processes are linked.

Lawrence D. Busack
Monaca, Pa.

As a solar engineer, I was intrigued by the correlation between the holiday season and cholesterol level. I wonder if a similar connection could be made between the solar cycle and cholesterol. The winter solstice occurs during the peak observed in the data, and the summer solstice happens to match the June minimum. Also the cities with the greater change (Houston and San Diego) have the greater change in reception angle for solar energy annually. Could there be something in the sun that brings out the cholesterol in all of us?

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