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This Week

Research Notes

Articles

Cover: Not everyone has a penchant for jumping out of airplanes — but some people sure like to. However, many of those who disparage such behavior as needlessly risky feel no qualms about driving to work without seat belts on, leading researchers to wonder how risk is perceived and to investigate the mechanisms that make risk-takers tick. (Photo: Mike Kelly, courtesy U.S. Parachute Association)

Departments

Letters

Hypertension and gravity

"Tibetan nomads: 'High' living . . . combined with low blood pressure" (SN: 5/16/87, p.312) seems to indicate that researcher Cynthia M. Beall was surprised to discover that "Hemoglobin concentration was greater for Phala nomads [living in western Tibet's high plateau at 16,000 to 18,000 feet above sea level] than for sea-level populations or for Tibetans living at 12,000 feet above sea level, but residents of Chile's Andes Mountains have the highest known hemoglobin rates at elevations several thousand feet lower than the Tibetan plateau."

Perhaps altitude above sea level is not the crucial factor. According to the *Guiness Book of World Records,* "the Andean peak of Chimborazo . . . is 7,057 feet further from the earth's center than the summit of Mt. Everest." This follows from the earth being pear-shaped rather than truly spherical. Since our planetary atmosphere is retained by the force of gravity, which diminishes with distance from the center of the earth, perhaps the Chilean natives' hemoglobin level reflects an environment that is genuinely poorer in oxygen availability even though closer to sea level.

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Speedy switch?

"Putting a spin into chemistry" (SN: 6/6/87, p.357) was quite interesting, especially in regard to the propellahexaene molecule's ability to switch back and forth between the left- and right-handed states. It may be that there is a practical application for this molecule. Because molecules are small, they can generally change state quite rapidly. If chemists can identify and control the factors that determine the two states of this molecule, it might be possible to construct a switching device using propellahexaene. Such a molecular switch could well be many times faster than current devices based on silicon technology. In addition, if the molecule is optically active (able to polarize light), it might be useful as an optical switch for fiber-optic devices as well.

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