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Youth and alcoholism

Commenting on the results of a study that found a correlation between alcoholism and early drinking, Enoch Gordis says, "It was not previously known that alcohol dependence was influenced in such a dramatic way by early alcohol drinking" ("Alcoholism Shows Its Youthful Side," SN: 1/24/98, p. 52).

Gordis is making the common statistical error of confusing correlation with causation. Merely because alcoholism is correlated with early drinking does not imply that the early drinking influenced the alcoholism. A perfectly attractive explanation is that there are physiological factors that predispose a person toward alcoholism and that one manifestation of these factors is a tendency to begin drinking at an early age.

*Geoffrey A. Landis
Berea, Ohio*

This is to alert you to our results regarding brain damage induced in rats by once-daily

binges of alcohol (FASEB JOURNAL, in press). We find it takes only about five binges to cause distinct neuronal degeneration in the cortex, hippocampus, and olfactory bulbs.

Surprisingly, brain overhydration (not dehydration) is a feature of the repetitive alcohol treatment, and a common diuretic greatly reduces both the swelling in the brain and the neuronal damage.

If we can extrapolate from rats, the take-home message to those youthful drinkers is that it may not take a great deal of bingeing to wash away neurons!

*Michael Collins
Professor
Department of Molecular
and Cellular Biochemistry
Loyola University Medical Center
Maywood, Ill.*

The story raises a very interesting question about the mechanisms of substance addiction. Given that tobacco (nicotine) addiction is most dangerous to children during puberty, the new research begs two

questions: "Is there a common mechanism of vulnerability to addiction?" and "Is there a link between puberty and vulnerability to or immunity from addiction?"

*Paul B. Gallagher
Horsham, Pa.*

Relative density

I'm a little confused by the statement in "Homing in on Milky Way's black hole" (SN: 1/24/98, p. 59) that the object at the center of our galaxy is "denser than 2 trillion suns per cubic light-year." At first glance, this seems pretty dense, but unless I'm mistaken, this would be nearly 300 million times less dense than our sun.

Am I missing something somewhere?

*Scott Miller
Bossier City, La.*

That density is only a lower limit, based on stars that lie at least 5 light-days from the center of our galaxy. However, it is many times greater than that of the densest known star cluster. A single star, like the sun, would be denser.
—R. Cowen

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Cover: The Northridge earthquake near Los Angeles on Jan. 17, 1994, killed 57 people and caused approximately \$30 billion in damage. A new network of instruments and computers in Southern California will help emergency managers respond to quakes more quickly, possibly saving lives and property during the next disaster. **Page 169** (Credit: David L. Carver, U.S. Geological Survey)

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