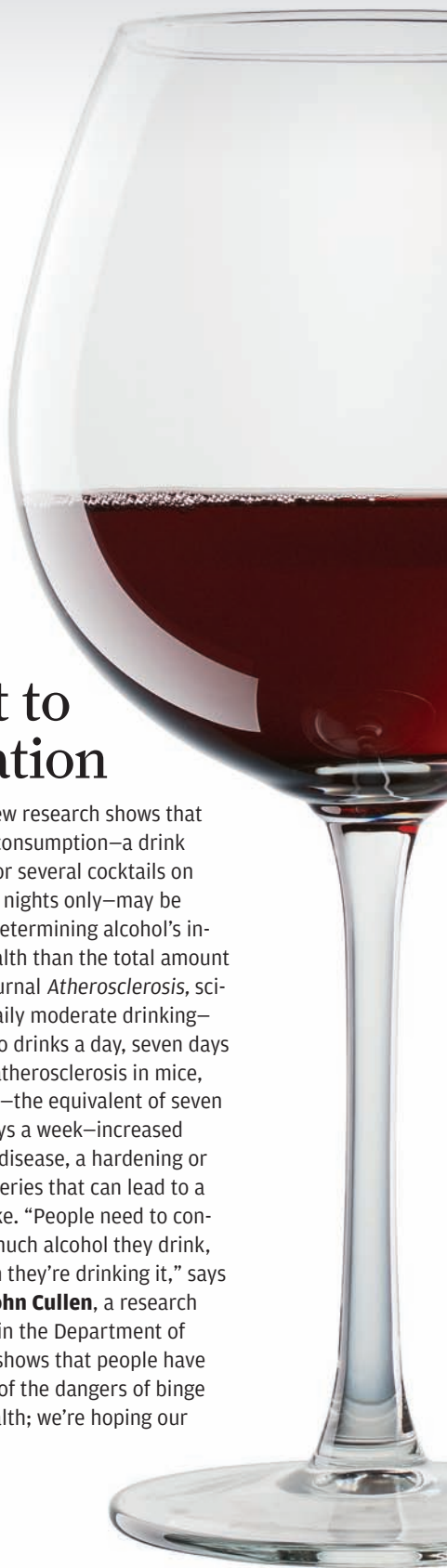


## A Toast to Moderation

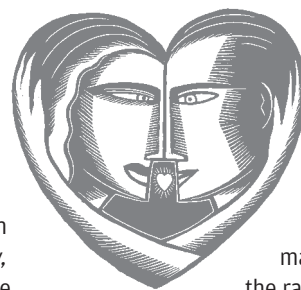
For the first time, new research shows that patterns of alcohol consumption—a drink or two every night, or several cocktails on Friday and Saturday nights only—may be more important in determining alcohol's influence on heart health than the total amount consumed. In the journal *Atherosclerosis*, scientists found that daily moderate drinking—the equivalent of two drinks a day, seven days a week—decreased atherosclerosis in mice, while binge drinking—the equivalent of seven drinks a day, two days a week—increased development of the disease, a hardening or narrowing of the arteries that can lead to a heart attack or stroke. “People need to consider not only how much alcohol they drink, but the way in which they’re drinking it,” says lead study author **John Cullen**, a research associate professor in the Department of Surgery. “Research shows that people have yet to be convinced of the dangers of binge drinking to their health; we’re hoping our work changes that.”



## Is Marriage Good for the Heart?

Giving your heart to a supportive spouse turns out to be an excellent way to stay alive, according to new research.

Happily wedded people who undergo coronary bypass surgery are more than three times as likely to be alive 15 years later as their unmarried counterparts, according to a study published online in *Health Psychology*, a publication of the American Psychological Association. The effect of marital satisfaction is “every bit as important to survival after bypass surgery as more traditional risk factors like tobacco use, obesity, and high blood pressure,” says



**Harry Reis**, a professor of psychology. He coauthored the study with **Kathleen King**, a professor emerita from the School of Nursing.

But the marriage advantage plays out differently for men and women. For men, marriage in general is linked to higher survival rates, and the more satisfying the marriage, the higher the rate of survival. For women, the quality of the relationship is more important. Unhappy marriages provide virtually no survival bonus for women, while satisfying unions increase a woman's survival rate almost fourfold.

## How Chronic Stress Short-circuits Parenting

In the best of circumstances, raising a toddler is daunting—but parents under long-term stress often find it particularly challenging to tap into the patience, responsiveness, and energy required for effective child rearing. Now research helps to explain why chronic stress and parenting are such a toxic mix.

A study published in *Development and Psychopathology* finds that ongoing strains like poverty or depression disrupt the body's natural stress response, making mothers more likely to engage in a host of problematic parenting behaviors, including neglect, hostility, and insensitivity.

“Stress gets under your skin,” says lead author **Melissa Sturge-Apple**, an assistant professor of psychology. “It literally changes the way a mother's body

responds to the normal demands of small children, and those changes make it much harder to parent positively.”

The study is the first to measure physiological stress response in real time, says **Fred Rogosch**, research director at the University's Mt. Hope Family Center and a fellow author on the paper.

Researchers observed 153 mothers and their 17- to 19-month-old children, and participants' reactions were captured using a novel wireless electrocardiograph monitor developed for the study by University engineers **Zeljko Ignjatovic** and **Wendi Heinzelman**.

“Stress is not just in our heads, it's in our bodies,” says Sturge-Apple.



## Breaking Up, Continental-Style

Lava deposits that lie many thousands of miles apart share common chemical and isotopic signatures—an indication that they share a common source in the Gondwana supercontinent. That's according to new research by **Asish Basu**, a professor of geochemistry.

The Sylhet Traps lava flows of the Shillong Plateau in northeastern India lie some 340 miles to the east of the Rajmahal Traps at the bend of the Ganges River as it flows south to the Bay of Bengal. Almost 1,000 miles to the south is the 3,000-mile-long Ninetyeast Ridge, rising a mile above the surrounding Indian Ocean floor, still beneath the seawater. And some 1,600 miles east of the southern edge of this ridge is the edge of western Australia, while 2,500 miles to the southwest is the underwater Kerguelen Plateau, just off Antarctica.

Basu's findings, which were published in the journal *Earth and Planetary Science Letters*, show that the samples all came from the same lava plume that seems to have broken apart the Gondwana supercontinent. It formed about 500 million years ago by the amalgamation of the continental landmasses of Antarctica, South America, Africa, Madagascar, Australia, the Arabian Peninsula, and the Indian subcontinent. "It's important to understand large regions of igneous rock formations—called large igneous provinces," says Basu, "because they often break apart continents and are sometimes associated with environmental catastrophes, like mass extinctions."

Rajmahal Traps

India

Sylhet Traps

Ninetyeast Ridge

Australia

Broken Ridge

Kerguelen Plateau

Antarctica