

Alcohol May Guard Diabetics' Hearts

Now comes some disheartening news for teetotalers. A study finds that diabetes sufferers who enjoy an occasional libation, compared with those who eschew alcohol, have just half the risk of dying from coronary artery disease. Those who down a drink a day face only 20 percent of the teetotalers' heart-disease mortality.

These numbers may prove significant for public health because coronary artery disease is the leading cause of death in people with adult-onset—or type II—diabetes.

Numerous studies have shown that in the general population, light-to-moderate drinking lowers an individual's risk of death from heart disease (SN: 3/30/96, p. 197). In the new study by Charles T. Valmadrid and his colleagues at the University of Wisconsin-Madison Medical School, alcohol's protective effect appears greater still among people with adult-onset diabetes.

"By the time persons are diagnosed with type II diabetes, they already have atherosclerosis," Valmadrid points out. It's just a matter of time, he says, before vessel-hugging plaque clogs their arteries. Because these individuals usually take many medicines and suffer from multiple ailments, he thought that alcohol might not offer any benefit.

"But what we found was the opposite," Valmadrid says. "The magnitude of risk



When is drinking healthy?

reduction was much greater in them than has been seen in studies of the general population."

Of the 983 men and women with type II diabetes participating in the study, 11 percent were lifelong abstainers, 33 percent former drinkers, 46 percent occasional drinkers, and 6 percent weekly drinkers. Another nearly 4 percent downed an average of one or more drinks daily. Over 12 years of follow-up, 198 of the participants died of heart disease, the researchers report in the July 21 *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*.

Even after accounting for the severity of disease, the medications the participants took, and additional risk factors such as age and smoking, the researchers found that alcohol exerted a profound positive effect.

Much of the benefit, Valmadrid says,

probably traces to blood changes common in drinkers. These include a decrease in the ability to form clots and an increase in the share of cholesterol residing in high-density lipoproteins (HDLs), the so-called good cholesterol. However, he suspects that alcohol's recently found ability to improve the body's insulin sensitivity may also slow the progression of heart disease in this population.

While Michael H. Criqui and Beatrice A. Golomb of the University of California, San Diego don't challenge the new study, their accompanying editorial offers some caution on how to interpret it.

"I don't think the evidence suggests that any of the groups should drink more"—even teetotalers, Golomb told *SCIENCE NEWS*. She notes that alcohol can alter the effects of many medicines, sometimes causing blood-sugar concentrations to plummet dangerously, and it can also increase the risk of nerve damage in people with diabetes. Many new drinkers may also prove unable to moderate their consumption, she says.

Though Criqui concedes that a physician might be able to determine when advocating alcohol "might be valuable," he argues that before people with diabetes try anything "as chancy as alcohol," they should avail themselves of "new therapies that are less risky." These include lipid-lowering drugs and antiplatelet agents, such as aspirin, he says. —J. Raloff

Hubble spies a cluster's unruly past



van Dokkum, Marjin Franx, ESA and NASA

Hubble's view of galaxy cluster MS 1054-03 reveals colliding galaxies (boxes on right). One of the most distant known groupings of galaxies, the cluster lies 8 billion light-years from Earth.

Streams of stars torn from galaxies. Pairs of galaxies sculpted into odd shapes. These images of a distant galaxy cluster suggest that the good old days were plenty violent.

The Hubble Space Telescope found that 13 of 81 galaxies in the remote cluster MS 1054-03 are either remnants of collisions or were caught in the act of colliding. Most of the 13 are massive. For a single cluster, that's the largest number of galaxies ever found to show evidence of collision, report Dutch astronomer Pieter G. van Dokkum of the Kapteyn Astronomical Institute in Groningen and the Leiden Observatory and his colleagues in the Aug. 1 *ASTROPHYSICAL JOURNAL LETTERS*.

The Hubble images, recording light that left the galaxies 8 billion years ago, reveal what the cluster looked like in its youth. More mature clusters show fewer collisions. The new observations confirm the prevailing view that massive galaxies form through collisions of smaller ones over an extended period. An earlier theory suggested that these behemoths emerged in one big baby boom.

During collisions, galaxies typically don't plow into each other but pass so close that their mutual gravity distorts the orbits of their stars. Astronomers have suggested that when two spiral galaxies merge, they form a blobby elliptical galaxy. Van Dokkum's team argues that the new observations support that scenario. Harry C. Ferguson of the Space Telescope Science Institute in Baltimore cautions that MS 1054-03 may not be a typical cluster. —R. Cowen