

who try to curb their intake by switching to beer or wine.

Another change long championed by the CSPI (and also favored by the AMA) has been ingredient labeling on alcoholic beverages, a move opposed by wine-makers and distillers. Two federal district courts have ruled in favor of such labeling, and the case is now under appeal in the District of Columbia.

According to the Alcohol, Drug Abuse, and Mental Health Administration, the annual costs of alcohol abuse exceed \$116 billion and it accounts for between 100,000 and 200,000 deaths per year (compared with 300,000 deaths per year from smoking). ■ **CONSTANCE HOLDEN**

EPA Grapples with Regulating Underground Storage Tanks

Underground storage tanks are said to be a big source of ground water pollution in the United States, but no one has had a handle on how big. Figures vary widely. Now the Environmental Protection Agency has completed its first major survey that systematically estimates the number of tanks used to store motor fuels and how many are leaking. The results will be used by the agency to develop regulations for the tanks.

In a separate, but related action, EPA recently tightened rules governing hazardous waste to be stored in new tanks located above or below ground.

EPA estimates that there are 796,000 individual motor fuel tanks at 326,000 establishments, which include gas stations and trucking companies. The estimate is based on extrapolation from a selected sample of about 900 businesses. As many as 35% of the tanks leak and half of them lose as much as 6 gallons of fuel daily, according to the agency results. These findings are based on the actual testing of tanks at 218 businesses. Eighty percent of the tanks are located above the water table. The survey did not include a tabulation of underground tanks that hold hazardous waste.

An agency official cautions that the results concerning leakage may be an overestimate because several factors can skew the data. Joseph Carra, deputy director of waste management at EPA, says that because of these difficulties agency researchers spent much of the 2-year project developing a method to test for leaks in buried tanks. The cost of digging up tanks for analysis was prohibitive.

The containers were subjected to operat-

ing pressure that was slightly higher than normal and then monitored for a drop in fuel level. The equivalent of a big straw was placed in the tanks as a gauge. Carra notes that the higher pressure may cause the tanks, which are usually made of steel, to bulge at the ends, causing the fuel level drop and giving the false impression that fuel is leaking. Temperature variations in the stored fuel can affect the gauge level too.

To EPA's surprise, the survey indicated that fiberglass containers, which constituted 11% of the tanks actually tested, are just as likely to leak as steel tanks that are the same age. Fiberglass was considered to be less likely to leak because it is corrosion-proof, but the fiberglass walls may crack if the tank is not properly installed, Carra speculated.

On 1 July EPA announced a new regulation that requires extra containment of tanks storing hazardous waste. New tanks must now have double walls or concrete vaults built around them to prevent leaks into ground water. According to EPA estimates, there are 4000 locations that store more than 20 billion gallons of hazardous waste annually, but the figures represent only a best guess. ■ **MARJORIE SUN**

Chilean Physicians Under Arrest

Two Chilean doctors who have been active in investigating torture under the dictatorship of General Augusto Pinochet have been arrested by the government.

The physicians, Juan Luis González, president of the Colegio Médico de Chile (CMC), and its general secretary Francisco Rivas, were awarded the AAAS Scientific Freedom and Responsibility Award at the association's May meeting in Philadelphia.

The CMC helped orchestrate a 2-day national strike early this month to bring pressures for democratic elections. The doctors were among 18 leaders charged with planning to destabilize the government. They were formally declared "delinquents" (*reos*) and jailed on 11 July. They are reportedly not being mistreated and the hope is that they will eventually be let out on bail.

There has been much rallying around on the doctors' behalf and the American ambassador, Harry Barnes, has pledged to keep close tabs on the situation. A telegram expressing concern over the doctors has been sent to the Minister of the Interior from the heads of the American Medical Association, the AAAS, the National Academy of Sciences, and the Institute of Medicine. ■

CONSTANCE HOLDEN

OECD Predicts Growing Concentration of Research

Paris

The pressures of international competition, combined with continuing heavy expenditures on military research, are likely to increase the already-growing concentration of the West's spending on research and development in a relatively small number of advanced countries, according to a report* published here by the Organization for Economic Cooperation and Development.

In 1983, says the report, the seven largest OECD countries accounted for 92% of the combined R&D outlays of all its member states, which include almost all the West's industrialized nations. Five countries alone, namely, the United States, Japan, West Germany, France, and Great Britain, provided 86%.

The report says that R&D expenditures in the first three of these can be expected to reach 3% of each of these countries' gross domestic product by the end of the decade. In contrast, in the majority of other OECD countries the maximum will be 1.5%.

The report points out that more than half of the total amount of university-based fundamental research in the natural sciences carried out in all OECD countries takes place in the United States alone.

In the social sciences, it is Japan which occupies the most dominant position, since these subjects take up 40% of the government's spending on university R&D. In the natural sciences and engineering, however, Japan falls well behind the total expenditures of countries belonging to the European Economic Community, whereas the United States still spends the same as Japan and the EEC combined.

The report points out that the United States and Japan are at "opposite ends of the spectrum" in terms of the way that government R&D funds are allocated. In the United States, the biggest beneficiary is private industry, which received between two-fifths and one-half of the total allocated for government support for R&D, compared to one-quarter each for universities and government-owned research establishments.

In Japan, in contrast, the OECD report says that industry receives only about 5% of the government's total funding, while 90% is divided equally between government laboratories and the universities. ■

DAVID DICKSON

*"OECD Science and Technology Indicators, No. 2: R&D, Invention and Competitiveness" (OECD, Paris 1986).