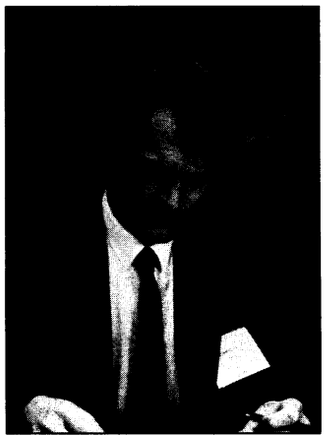


Richard Peto

of cell membranes.

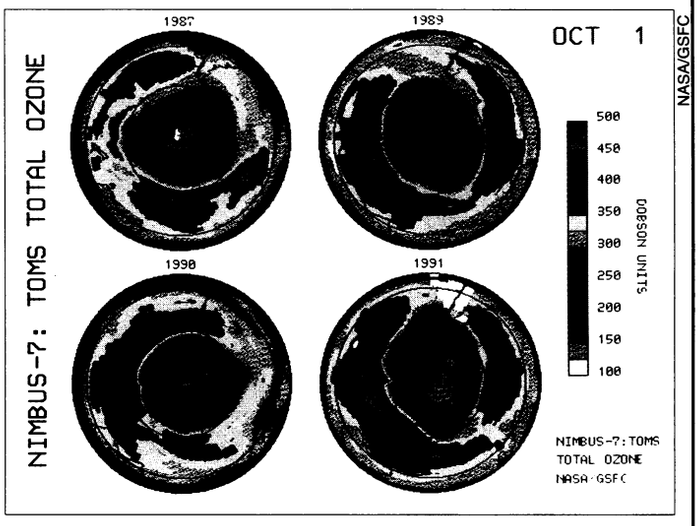
Kenneth Warren, director for science at Maxwell Macmillan and the person who nominated Peto for the award, says it confers much-needed recognition for randomized control trials and meta-analysis, which he calls "the gold standard for clinical decision making." Warren adds that although it's "an enormously important field," many medical professors in both Europe and the United States still have only a vague notion of what it's all about.

The Horten award, billed as a competitor to the Nobel, is a biennial award for advances in medicine established from a bequest by Helmut Horten, a German supermarket magnate.

Antarctic Ozone Hole Hits Record Depth

A bad year for the ozone over Antarctica looked like a good bet this year. For the past 2 years, stratospheric ozone destruction has equaled the record set in 1987. Now things look even worse, with a record-setting ozone hole.

In 1987, 1989, and 1990, the minimum amount of ozone over Antarctica early each October was 120 to 125 Dobson units (the standard ozone measure) compared to the typical level of 220 that prevailed before manmade chlorofluorocarbons (CFCs) began eating into the ozone layer. The depletion allowed as much as twice the usual amount of biologically damaging ultraviolet light to reach the earth's surface. But researchers took some comfort in the fact that the hole seemed to have hit a barrier to further losses.



A bad year getting worse. *In these 1 October maps, the 1991 hole* (purple and pink area) *looked like the 3 previous years. By 6 October, it had hit a new low.*

Now that barrier may have been breached. On 6 October, the satellite-borne Total Ozone Mapping Spectrometer detected an ozone minimum of 110 Dobson units, according to Richard McPeters of NASA's Goddard Space Flight Center in Greenbelt, Maryland.

The region of the lower stratosphere where icy cloud particles and the chlorine of CFCs combine to destroy ozone—between 14 and 24 kilometers—looks much the same as it did in 1987, says Samuel Oltmans of the National Oceanic and Atmospheric Administration in Boulder, who monitors ozone instruments lofted on balloons from the South Pole. However, says Oltmans, "what seems to be different is that there's less ozone around 28 kilometers. The reason is not clear." Has CFC-induced destruction escaped from its genie's bottle? Or has an errant wind of ozone-poor air just happened over the Antarctic this year? Scientists need more time to say.

Living Thin and Long

For almost a century, studies have shown that when you feed rodents and other animals low-cal diets, they tend to live longer and stay healthier. Now, a new study of 1100 mice—the largest population yet for this kind of project—by Tufts University veterinary pathologist Roderick Bronson has yielded the most specific and dramatic findings to date. It shows that underfed rodents are not only less prone to cancer but exhibit fewer physiological signs of aging.

When their calories were cut 40%, the mice lived 29% longer than average. Furthermore, an examination of their tissues—including sections of brain, ears, eyes, and throats—showed fewer age-related abnormalities. The reduction in the incidence of tumors and other lesions was especially striking: the slender mice had fewer at all ages, while the fatter ones had four times as many by age 2. Says Richard L. Sprott of the National Institute on Aging, which funded the project, "What stunned us was that every single type of tumor and nearly every kind of lesion were delayed (in the skinnier mice)."

The study is one of 14 NIA is supporting as part of a 10-year effort—involving 9000 rodents—to identify which physiological changes are due to normal aging, and which to disease. It's too early to tell what all this means for humans, say the researchers, but studies in primates are reportedly yielding encouraging results—except for those who look forward to their meals. Years spent on 40% fewer calories is no trivial lifestyle change.

The Ex-Commies Are Coming

As might be predicted, a big surge of scientists from the disintegrating Soviet empire is clamoring at the gates of the National Institutes of Health seeking jobs, fellowships, and opportunities for research collaboration.

NIH in turn is increasing its efforts to alert former Communists of opportunities, according to Philip E. Schambra, director of the Fogarty International Center, NIH's international arm. Among programs available is a new one called Fogarty International Research Collaboration Awards. Next year plans are to award about 35 grants of up to $20,000 a year, for a maximum of 3 years, for Soviet and East European scientists' research labs as well as travel expenses for them and their U.S. collaborators.

Schambra estimates that the resources NIH is putting into collaborative research activities with scientists from former Eastern bloc countries will have trebled in 3 years—to between $5 million and $6 million by 1992. Their presence on the NIH campus—where one-third of the Ph.D.-level staff are from abroad—is also becoming more marked. In 1988 there were 67 Hungarians, Czechs, Poles, Bulgarians, and Russians at NIH; in 1990 there were 111.

Correction

In a list of the world's 10 most-cited scientists (*Science*, 4 October, p. 28), the name of biologist Robert Tjian was spelled wrong, and his institution was misidentified. Tjian is a Howard Hughes Medical Institute investigator at the University of California at Berkeley. We regret the errors.