

STATISTICS

Long Lives for Women

Woman's world predicted for one hundred years from now, when most of the little girls born in 1970 will still be living, outlasting men about six years.

► ONE HUNDRED years from now it will be a woman's world. Although even today women generally outlive men, your granddaughter born in 1970 can reasonably expect to live 80 years, while a grandson born in 1970 can look forward to about six years less of life.

Since most of the little girls born in 1970 will not die until more than 100 years from today, the U. S. may well be on the road to domination by moms, aunts, grandmas and great grandmothers, not to mention spinsters.

Women's lives are enough longer than men's so that it "pays to be a woman," states Dr. Harold F. Dorn of the National Institutes of Health, Bethesda, Md. He has just finished figuring out a table of expected length of life for all people in the United States.

Using a different method of prediction, he comes up with forecasts for the death rate that are considerably lower than most previous estimates. They are especially so for white women.

Dr. Dorn got his figures holding the promise of longer life for everyone by separating the U. S. population into four main groups, then calculating the death rate for each group separately. The groupings he used are "white males, white females, nonwhite males and nonwhite females."

A comparison of Dr. Dorn's figures with similar tables for 1929 shows that in the last 22 years the expected life span has jumped nearly 14 years for women, only a little over 9 for men.

His predictions were made for each group separately because the death rates show "rather appreciably" different trends. Dr. Dorn carried his forecast no later than 1970 because he believes that there may be such advances in medicine and surgery in the next 20 years that his calculations for beyond that time would not be valid.

Compared to 1929 figures, the greatest increase in life expectancy—21.9 years—is forecast for Negro women. They are still not expected to live as long as white women, however, since their estimated age of death was considerably lower to begin with. Expected life span for Negro men jumps from the 1929 figure of 47.6 to 66.9 years.

Dr. Dorn makes no prediction as to what will happen to the total population, whether it will gradually increase, stay steady, or start to drop. That, he says, depends on birth rates, not on death rates, which he has figured.

"Mortality during the early years of life already is so low that even a continuation of the relatively large annual rates of decrease which prevail at the present time," he states, "will have only a small effect upon the average longevity of the total population."

Large increases in the average length of life for the whole population can be gained only by lowering the death rates in late adult life, Dr. Dorn finds. After age 50, accidents, cancer and cardio-vascular-renal diseases account for more than two-thirds of all deaths. But these are the fields in which the most progress can be expected during the next 20 years, since diseases caused by poor sanitation and poor public health facilities are already pretty well licked in the U. S.

Previous tables estimating length of life have been "unduly conservative," Dr. Dorn charges. Such tables are used by insurance companies in computing policy rates. And they are used by those who want to estimate the total population of this country, or of the world, at a future date. All kinds of businesses, from hospital bed manufacturers to toy producers, base their business future on predicted trends in the birth and death rates.

Dr. Dorn figured his tables by studying the mortality trends for the period from

1936 to 1948, determining the different causes of death according to age, sex and race. Then he divided each of the four main groups into 18 subgroups according to age, from babies in the under 5 range to oldsters 85 and over. For each of these five-year-interval groupings he then predicted the death rate in 1960 and 1970 for the four main divisions.

Dr. Dorn plans to publish his findings in a forthcoming issue of PUBLIC HEALTH REPORTS. Meanwhile, statistics released by the U. S. Public Health Service show that babies born in the U. S. this year have on the average nearly 68 years of life ahead of them.

The new estimates for average life span, based on final 1949 vital statistics, are a record high. White women are the longest-lived group in the nation, averaging 71.5 years. White men average 65 years and 11 months. Negroes and other non-white groups have a shorter average life, 58.5 years for men and 62 years, 11 months for women.

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PHYSIOLOGY

Movies of Living Heart Show How Valves Function

► NEW KNOWLEDGE of how one of the heart's valves works has been gained by moving pictures. The pictures, first ever taken of the inside of a living heart, were shown at Montefiore Hospital in New York during a clinic session of the New York Academy of Medicine Post-Graduate Fortnight.

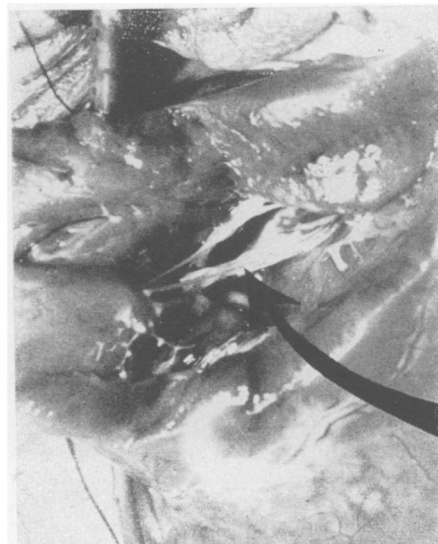
The valve, called the mitral valve, separates the upper and lower left chambers of the heart. It is the one most often crippled by rheumatic fever. Previously scientists thought that an intact chamber of the heart and a column of fluid or blood were required for the valve to open.

The color motion picture showed that the valve may function without fluid or blood in the heart, although complete closing requires the presence of fluid in the heart chamber. In the normal intact heart, fluid is always present, so the valve action is both muscular and hydrodynamic.

Operations on the mitral valve must be performed by touch, but study of the motion pictures is expected to give surgeons better knowledge of the valve structure and function and thus lead to improved surgical procedures.

The motion pictures were taken by Antol Herskovitz, the hospital photographer, under the direction of Dr. Elliott S. Hurwitz, chief of the hospital's division of surgery. In order to make the pictures, the animal was supplied with a temporary artificial heart devised by Dr. Adrian Kantrowitz, also of Montefiore Hospital. A grant from the Playtex Park Research Institute helped finance the project.

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HEART IN ACTION—A still shot from the first moving pictures ever to have been taken of the inside of the living heart. Arrow points into mitral valve (dark portion) opening into upper chamber of heart.