WHO Issues New Healthy Life Expectancy Rankings

Japan Number One in New ‘Healthy Life’ System

Japanese have the longest healthy life expectancy of 74.5 years among 191 countries, versus less than 26 years for the lowest-ranking country of Sierra Leone, based on a new way to calculate healthy life expectancy developed by the World Health Organization (WHO).

Previously, life expectancy estimates were based on the overall length of life based on mortality data only.

For the first time, the WHO has calculated healthy life expectancy for babies born in 1999 based upon an indicator developed by WHO scientists, Disability Adjusted Life Expectancy (DALE). DALE summarizes the expected number of years to be lived in what might be termed "full health." To calculate DALE, the years of ill-health are weighted according to severity and subtracted from the expected overall life expectancy to give the equivalent years of healthy life.

The WHO rankings show that years lost to disability are substantially higher in poorer countries because some limitations -- injury, blindness, paralysis and the debilitating effects of several tropical diseases such as malaria -- strike children and young adults. People in the healthiest regions lose some 9 percent of their lives to disability, versus 14 percent in the worst-off countries.

In terms of DALE, the rest of the top 10 nations are Australia, 73.2 years; France, 73.1; Sweden, 73.0; Spain, 72.8; Italy, 72.7; Greece, 72.5; Switzerland, 72.5; Monaco, 72.4; and Andorra, 72.3.

DALE is estimated to equal or exceed 70 years in 24 countries, and 60 years in over half the Member States of WHO. At the other extreme are 32 countries where disability-adjusted life expectancy is estimated to be less than 40 years. Many of these are countries with major epidemics of HIV/AIDS, among other causes.

The United States rated 24th under this system, or an average of 70.0 years of healthy life for babies born in 1999. The WHO also breaks down life expectancy by sex for each country. Under this system, U.S. female babies could expect 72.6 years of healthy life, versus just 67.5 years for male babies.
"The position of the United States is one of the major surprises of the new rating system," says Christopher Murray, M.D., Ph.D., Director of WHO's Global Programme on Evidence for Health Policy. "Basically, you die earlier and spend more time disabled if you're an American rather than a member of most other advanced countries."

The WHO cites various causes for why the United States ranks relatively low among wealthy nations. These reasons include:

- In the United States, some groups, such as Native Americans, rural African Americans and the inner city poor, have extremely poor health, more characteristic of a poor developing country rather than a rich industrialized one.
- The HIV epidemic causes a higher proportion of death and disability to U.S. young and middle-aged than in most other advanced countries. HIV-AIDS cut three months from the healthy life expectancy of male American babies born in 1999, and one month from female lives;
- The U.S. is one of the leading countries for cancers relating to tobacco, especially lung cancer. Tobacco use also causes chronic lung disease.
- A high coronary heart disease rate, which has dropped in recent years but remains high;
- Fairly high levels of violence, especially of homicides, when compared to other industrial countries.

All of the bottom 10 countries were in sub-Saharan Africa, where the HIV-AIDS epidemic is rampant. In ascending order beginning with 191, those countries were Sierra Leone, 25.9 years of healthy life for babies born in 1999; Niger, 29.1; Malawi, 29.4; Zambia, 30.3; Botswana, 32.3; Uganda, 32.7; Rwanda, 32.8; Zimbabwe, 32.9; Mali, 33.1; and Ethiopia, 33.5.

The overall life expectancy in sub-Saharan Africa has dropped precipitously over the past 10 years, mostly because of the AIDS epidemic, the WHO says. Life expectancy dropped for female babies from 51.1 years to 46.3 years. For males, the level dropped from 47.3 years to 44.8 years.

AIDS is now the leading cause of death in Sub-Saharan Africa, far surpassing the traditional deadly diseases of malaria, tuberculosis, pneumonia and diarrheal disease. AIDS killed 2.2 million Africans in 1999, versus 300,000 AIDS deaths 10 years previously.

"Healthy life expectancy in some African countries is dropping back to levels we haven't seen in advanced countries since Medieval times," says Alan Lopez, Coordinator of WHO's Epidemiology and Burden of Disease Team. "This is just one example why the WHO decided to measure healthy life expectancy for all member countries using DALE for the first time, to give a truer picture of where good health reigns, and where it doesn't."

Life expectancy in several countries in southern Africa has been cut 15-20 years off what the WHO would expect it to be in Africa without HIV. Other African countries have lost 5-10 years of life expectancy because of HIV.

"The DALE system is simple," says Dr. Lopez. "In the old system, we
measured a total life expectancy based on the average numbers of years males and females could expect to live in each country. However, people don’t live all those years in perfect health. At some point in your life, you will have some level of disability. These years with disability are weighted according to their level of severity to estimate the total equivalent lost years of good health. You subtract this from total life expectancy, and what remains is the expected number of years of healthy life."

This is the first time that anyone has measured every country’s healthy life expectancy using the DALE system.

High-ranking countries

Several factors go into making Japan number one in the rankings. One is the low rate of heart disease, associated with the traditional low fat diet. The national diet is changing, with high fat foods such as red meat becoming common. The effect of tobacco has also been mild until recently, with low lung cancer rates. These rates for men are expected to jump in coming years as the long-term effects of the post-World War II smoking popularity begin to hit.

In Australia, smoking rates have dropped sharply from their earlier peaks, leading to lower lung cancer and heart problem rates.

France registered high because of the health of its women, which pulled up the overall average.

French women never smoked in any large numbers until recently. Many young French women, however, have begun smoking, which will lead to rapid increases in lung cancer rates and other diseases associated with tobacco in 10 to 20 years. French men are already suffering from growing rates of these diseases from tobacco.

Sweden ranks high because of its health care system and because tobacco use is relatively low.

Women Living Longer, Healthier

Studies have shown consistently that as countries get richer, male mortality tends to decline less than female mortality. This WHO study shows that the same patterns hold when healthy life expectancies are measured.

In the early 1900s, the gap between female and male life expectancy was 2-3 years in richer countries around the world. By 1999, women were living on average 7-8 years more than men in those same countries.

Women are generally more health conscious while in rising economies, men have much higher smoking rates and exercise much less. Women have been living longer and healthier lives in richer countries basically because they have always smoked less than men, the WHO says. Women in these countries have been smoking much more in recent years, which will translate into higher disability and death rates in the coming years, the WHO warns. In addition, men in richer countries tend to have poorer diets than women do, and men exercise much less than did their grandfathers.
In poorer countries, men are victims of more disabling injuries than women. They also get more diseases than women, for a variety of reasons.

Regional Results

North African and Middle East -- Males and females have similar levels of healthy life expectancy, which is unusual. Also, the position of women in these societies is often not good, less care is given to female children, and they have a higher risk for reproductive deaths than in other countries.

In Saudi Arabia, the overall healthy life expectancy is 64.5 years -- 65.1 for male babies and 64.0 for female babies. In Bahrain, the overall healthy life expectancy is 64.4, but 63.9 for male babies and 64.9 for female babies; Qatar, 63.5 overall, and 64.2 for male babies, 62.8 for females; and Kuwait, 63.2 overall, with 63.0 for male babies and 63.4 for female babies.

East Asia -- China has 20 percent of the world population, so that it is of major significance that the Chinese have a fairly good healthy life expectancy, at 62.3 years, 63.3 years for women and 61.2 for men. "This is a very impressive performance for that level of income," says Dr. Lopez.

Russia -- Healthy life expectancy is a fair 66.4 for female babies but just 56.1 years for males. This is one of the widest sex gaps in the world. The most common explanation is the high incidence of male alcohol abuse, which led to high rates of accidents, violence and cardiovascular disease. From 1987 to 1994, the risk of premature death increased by 70% for Russian males. Since 1994, life expectancy has been improving for males.

Similar rates exist for other major countries of the former Soviet Union. In Ukraine, female babies can expect to live an equivalent of 67.5 years of healthy life versus 58.5 years for male babies. In Belarus, the rates are 67.2 years for female babies and 56.2 years for male babies.

Southeast Asia -- Countries of the region have produced very mixed results. Viet Nam has been improving dramatically in health profiles and healthy life expectancy, rising to 58.2 years, while Thailand has not improved significantly over the past decade, though it is still ahead of Viet Nam at 60.2 years. Myanmar has not done very well, with a healthy life expectancy of just 52 years, substantially behind its Southeast Asian neighbors. This shows that even countries with the same levels of income can have very different healthy life expectancies.

Latin America -- Cuba has the highest healthy life expectancy in the region, at 68.4 years, near U.S. levels. It is followed by Uruguay at 67.0 years; Argentina at 66.7 years and Costa Rica at 66.7 years. Brazil is split, with a high healthy life expectancy in its southern half, and a lower one in the north. The total average is a relatively low 59.1 years, at 55.2 for men and 62.9 for female babies.

(Christopher Murray, M.D., Ph.D., Director of WHO’s Global Programme on Evidence for Health Policy, is available for telephone interviews on Thursday and Friday, June 1-2. Please call 703-820-2244 to schedule time.)