

# Smoking, Obesity Shortening U.S. Life Spans

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FROM THE NATIONAL RESEARCH COUNCIL

The life expectancy of Americans falls short compared to that of their counterparts in other high-income countries, and smoking and obesity are key contributors to the difference, the National Research Council of the National Academies reported.

The life expectancy at birth for U.S. men increased from 65 years in 1950 to 76 years in 2006; for U.S. women, it increased from 71 to 81 years. Similarly, life expectancy at age 50 for men in the U.S.

**Based on data from several studies, obesity accounts for about 20%-35% of the difference in longevity between Americans and residents of other countries.**

increased from 23 to 29 years. For American women, that figure rose from 27 to 33 years. Still, the improved life expectancy in the United States – the world's top spender on health care – fell below that of eight other rich countries, including Australia, Japan, and Canada (see chart).

The National Council on Aging commissioned the report, "Explaining Divergent Levels of Longevity in High-Income Countries," to identify factors behind the differences in life expectancy. The report focused on life expectancy at age 50, because at least 90% of newborns in high-income countries now survive to age 50 years. The data were based primarily on an analysis of cause-of-death statistics.

"Smoking appears to be responsible for a good deal of the divergence in female life expectancy," according to the report. The researchers estimated that

78% of the difference in life expectancy between American women and those in other high-income countries was attributable to smoking. Similarly, among men, smoking accounted for 41% of the difference.

The reduction in smoking in the United States over the past 20 years is likely to pay off in improved longevity trends in future decades, the researchers noted. A reduction or increase in smoking rates

appears to take 20-30 years to impact mortality, they added.

Obesity also plays a significant role in the lagging U.S. longevity. Based on data from several studies, obesity accounts for approximately 20%-35% of the difference in longevity between Americans and residents of other countries.

Physical inactivity, social integration, and healthcare systems also likely contribute to increased mortality and dif-

ferences in life expectancy among countries, but evaluation of these risk factors has been limited to observational studies, the researchers noted.

The National Research Council is the principal operating agency of the National Academy of Sciences and the National Academy of Engineering, which are private, nonprofit institutions. The report is available for purchase from the National Academies Press. ■

## Easy to teach<sup>1</sup>

—Can be used in 6 straightforward steps

## Easy to use<sup>1</sup>

—Only long-acting insulin pen in which dose can be set from 1 to 80 units in 1-unit steps, dialed both up and down  
—Once opened, Lantus® SoloSTAR® can be used for up to 28 days and is not refrigerated

## Easy to inject<sup>1</sup>

—Dose cannot be dialed past the number of units left in the pen  
—It is important to keep the injection button pressed all the way in and to **slowly count to 10 before withdrawing the needle from the skin**. After a full injection, the number in the dose window will return to zero. These steps help ensure that the full dose has been delivered  
—To help ensure an accurate dose each time, patients should follow all steps in the Instruction Leaflet accompanying the pen; otherwise they may not get the correct amount of insulin, which may affect their blood glucose

## Important Safety Information for Lantus®

### Contraindications

Lantus® is contraindicated in patients hypersensitive to insulin glargine or one of its excipients.

### Warnings and precautions

Monitor blood glucose in all patients treated with insulin. Insulin regimens should be modified cautiously and only under medical supervision. Changes in insulin strength, manufacturer, type, or method of administration may result in the need for a change in insulin dose or an adjustment in concomitant oral antidiabetic treatment.

Do not dilute or mix Lantus® with any other insulin or solution. If mixed or diluted, the solution may become cloudy, and the onset of action/time to peak effect may be altered in an unpredictable manner. Do not administer Lantus® via an insulin pump or intravenously because severe hypoglycemia can occur. Insulin devices and needles must not be shared between patients.

Hypoglycemia is the most common adverse reaction of insulin therapy, including Lantus®, and may be life-threatening.

Severe life-threatening, generalized allergy, including anaphylaxis, can occur.

A reduction in the Lantus® dose may be required in patients with renal or hepatic impairment.

### Drug interactions

Certain drugs may affect glucose metabolism, requiring insulin dose adjustment and close monitoring of blood glucose. The signs of hypoglycemia may be reduced in patients taking anti-adrenergic drugs (e.g., beta-blockers, clonidine, guanethidine, and reserpine).

### Adverse reactions

Other adverse reactions commonly associated with Lantus® are injection site reaction, lipodystrophy, pruritus, and rash.

## Indications and Usage for Lantus®

Lantus® is a long-acting insulin analog indicated to improve glycemic control in adults and children (6 years and older) with type 1 diabetes mellitus and in adults with type 2 diabetes mellitus. Lantus® should be administered once a day at the same time every day.

Important Limitations of Use: Lantus® is not recommended for the treatment of diabetic ketoacidosis. Use intravenous short-acting insulin instead.

Lantus® SoloSTAR® is a disposable prefilled insulin pen.

**Please see brief summary of full prescribing information for Lantus® on the next page.**

**References:** 1. Data on file, sanofi-aventis U.S. LLC. 2. Lantus Prescribing Information. September 2009.

### Additional Years of Life Expected at Age 50 in the United States vs. Other High-Income Countries

	Women	Men
Australia	35.2	31.6
Canada	34.5	30.8
Denmark	32.0	28.5
England and Wales	33.3	29.9
France	35.9	30.0
Japan	37.3	31.2
Italy	35.2	30.6
Netherlands	33.3	29.5
Sweden	34.1	30.7
United States	33.1	29.3

Note: Based on 2006 data from the Human Mortality Database (accessed Dec. 8, 2010).

Source: National Research Council of the National Academies