

## Your Disease Risk – Prevalence Estimates

Estimates for U.S. adult men and women. Numbers are for women and men combined unless otherwise noted.

### Race

White	70%
African American	13%
American Indian and Alaska Native	1%
Asian	3%
Native Hawaiian and Pacific Islander	0.1%

### Family History (yes)

Bladder cancer (1 <sup>st</sup> degree relative)	2% <sup>1</sup>
Breast cancer	
Mother or sister	6% <sup>2-4</sup>
Mother and sister	1% <sup>2</sup>
Colon cancer (1 <sup>st</sup> degree relative)	5% <sup>3,4</sup>
Diabetes	23.7% <sup>5</sup>
Endometrial cancer	2% <sup>3,4,6</sup>
Heart attack (Note: Heart attack prevalence; ≥ 1 relative, any age)	46% <sup>7</sup>
Heart attack/stroke (Note: Heart attack prevalence; ≥ 1 relative, any age)	46% <sup>7</sup>
Kidney cancer (1 <sup>st</sup> degree relative)	2% <sup>8</sup>
Lung cancer (1 <sup>st</sup> degree relative)	5% <sup>3,9</sup>
Osteoporosis/fracture (Note: Prevalence based on maternal/paternal history of hip fracture ≥ 65 years.)	
Hip	4%
Other	8%
Ovarian cancer (1 <sup>st</sup> degree relative)	1% <sup>4</sup>
Pancreatic cancer (1 <sup>st</sup> degree relative)	2% <sup>2</sup>
Prostate cancer (1 <sup>st</sup> degree relative)	5% <sup>10</sup>
Skin melanoma (1 <sup>st</sup> degree relative)	2% <sup>2</sup>
Stomach cancer (1 <sup>st</sup> degree relative)	4.5% <sup>11,12</sup>

### Screening

Meets colon cancer screening guidelines	57% <sup>13</sup>
Pap test within the last three years	83% <sup>14</sup>

### Height, Weight, and Body Mass Index (BMI)

	<i>Women</i>	<i>Men</i>
Height (ages 45-55)	>5'7" 10.4%	>5'10" 39.8%
Large waist size (yes)	>35 in. 45.3% <sup>15</sup>	>40 in. 26.5% <sup>15</sup>
Weight gain since age 18 in postmenopausal women on PMH	22-44 lbs. 6% <sup>16</sup> >45 lbs. 4%	
BMI for cancer calculations (ages 40-59)	≥30 40% <sup>17</sup>	≥30 35% <sup>17</sup>
BMI for CHD calculations	<25 50% 25-28: +2 20% ≥29: +3 30% Estimated from <sup>18</sup>	<25 40% 25-29: +2 40% ≥30: +3 20% Estimated from <sup>19</sup>
BMI for diabetes calculations	<23 35% 23-24: +2 15% 25-26: +3 10% ≥27: +4 40% Estimated from <sup>18</sup>	<23 20% 23-24: +2 20% 25-30: +3 45% ≥31: +4 15% Estimated from <sup>19</sup>
BMI for osteoporosis calculations	<18 4% 18-24 46% 25-29 25% ≥30 25% Estimated from <sup>18, 20</sup>	<18 1% 18-24 39% 25-29 40% ≥30 20% Estimated from <sup>19, 20</sup>

### Smoking and Alcohol Use

	<i>Women</i>	<i>Men</i>
Passive smoke (Regular/heavy general exposure)	10% Estimated from <sup>21</sup>	15% Estimated from <sup>21</sup>
Passive smoke (50-59 year olds) (Lived with a smoker most of life)	11.4% <sup>22</sup>	4.8% <sup>22</sup>
Smoking status		
Current	24% <sup>23, 24</sup>	29% <sup>23, 24</sup>
Never	48%	23%
Former	28%	48%
Number of cigarettes/day		
<15	9% <sup>23, 24</sup>	11% <sup>23, 24</sup>
15-25	10%	12%
>25	5%	6%
Former smoker		
Quit < 2 years ago at 14 or fewer/day	3	4
Quit < 2 years ago at 15-25/day	2	4
Quit < 2 years ago at more than 25/day	1	2
Quit 2-10 years ago at 14 or fewer/day	3	4
Quit 2-10 years ago at 15-25/day	2	4
Quit 2-10 years ago at more than 25/day	1	2
Quit 10-20 years ago at 14 or fewer/day	3	4
Quit 10-20 years ago at 15-25/day	2	4
Quit 10-20 years ago at more than 25/day	1	2
Quit >20 years ago	10	18
	Estimated from <sup>23, 24</sup>	Estimated from <sup>23, 24</sup>
Cigar use (≥1/day)	.1% <sup>23</sup>	5.5% <sup>23</sup>
Alcohol use		
<1/day	89%	80%
1/day	9%	15%

2/day	1%	3%
≥3/day	1%	2%
	Estimated from <sup>25</sup>	Estimated from <sup>25</sup>

### Cholesterol

	<i>Women</i>	<i>Men</i>
Total cholesterol level		
≤159	14%	15%
160-199	35%	35%
200-239	30%	32%
240-279	15%	13%
≥280	6%	4%
	Estimated from <sup>26</sup>	Estimated from <sup>26</sup>
High total cholesterol (yes)	19.1% <sup>25</sup>	17.2% <sup>25</sup>
HDL level		
≤39	12.5%	30%
≥40	87.5%	70%
	Estimated from <sup>26</sup>	Estimated from <sup>26</sup>

### Physical Activity and Diet

Physical activity for ≥3 hours/week (ages 45-60)	Women <sup>27, 28</sup> 19.4%	Men <sup>27, 28</sup> 18.9%
Animal fat		
≥5 servings of animal fat/day	25%	
≥3 servings of red meat/week	50%	
Saturated fat	71% <sup>29</sup>	
Butter, lard, red meat, cheese or whole milk ≥2 servings/day (proxy measure: ≥10% total calories from saturated fat)		
Transunsaturated fat	Women 40%	Men 40%
Stick margarine, vegetable shortening, store-bought baked goods (cookies, cakes, pies), or deep fried fast foods on most days	Estimated from <sup>30</sup>	Estimated from <sup>30</sup>
Mono and polyunsaturated fat	15%	
Salad dressing or liquid vegetable oil on most days	Estimated from <sup>31</sup>	
Dairy	Women	Men
<1 serving/day	56% <sup>32</sup>	42% <sup>32</sup>
1-2 servings/day	34%	48%
≥3 servings/day	10%	10%
High glycemic index food (≥3 refined starch servings/day)	40%	
	Estimated from <sup>33</sup>	
Fruits/Vegetables		
≥5 servings of fruits and vegetables/day	26% <sup>34</sup>	
≥3 or more servings of vegetables/day	25%	
Tomato-based foods (≥5 servings/week)	25%	
Nuts (~3 servings/week)	12%	
	Estimated from <sup>35</sup>	
Fish intake (≥2 servings/week)	35% <sup>36</sup>	
Whole grains (≥3 servings/day)	Women 11% <sup>37</sup>	Men 5% <sup>37</sup>

## Reproductive Factors

Menarche ≤15 years old	11% <sup>38, 39</sup>
First intercourse ≤15 years old (women ages 40-44)	3.3% <sup>40</sup>
Opposite-sex sexual partners (women ages 15-44) <3 lifetime male partners ≥3 lifetime male partners	42% <sup>41</sup> 58%
Sexually transmitted infection (lifetime, not including HIV/AIDS)	12.2% <sup>42</sup>
Current oral contraceptive user (women ages 40-44)	4.2% <sup>43</sup>
Barrier contraceptive use (dominant method over lifetime)	10.7% <sup>43</sup>
Tubal ligation (women ages 40-44)	35.1% <sup>44</sup>
Hysterectomy (women ages 40-44)	16% <sup>44</sup>
Lifetime live births (completed fertility; women ages 40-44) None ≥3	19% <sup>45</sup> 29%
First birth ≥35 years old	5% <sup>39</sup>
Breast feeding > 1 year (total for all births)	13% <sup>39</sup>
Menopause ≥55 years of age	26% <sup>39</sup>

## Other Risk Factors

Fair skin color (Note proxy: Severe/some burn with exposure)	37% <sup>46</sup>	
Natural blue, green, or hazel eyes	32%	
Natural blond or red hair	13% <sup>47</sup>	
Repeated sunburn during childhood	Women 17% <sup>48-50</sup>	Men 20%
Moles on arms 3mm or greater 0 1-5 6-10 ≥11	62% <sup>16</sup> 32% 3% 2%	
Lived in a large city for the last 10 years	75.2% <sup>51</sup>	
Chronic pancreatitis	.04% <sup>52-54</sup>	
Diabetes	8.1% <sup>55</sup>	9.3% <sup>55</sup>
Hypertension	27.5% <sup>56</sup>	29.8% <sup>56</sup>
Inflammatory bowel disease	.1% <sup>57</sup>	
H. pylori infection	35% <sup>58</sup>	
Treated H. pylori infection (assuming 90% of cases are treated in the US)	32% <sup>58</sup>	
Blood group A	48.5% <sup>59</sup>	
Rheumatoid arthritis	2%	
Osteopenia (on BMD test) Ages <50 Ages 50-64 Ages ≥65	Women 8% 27.5% 25%	Men 12% 21.5% 25%
Osteoporosis (on BMD test) Ages <50 Ages 50-64 Ages ≥65	Women 2% 10% 25%	Men 0% 3.5% 15%

## Medicine/Supplements

Multi/B-complex vitamin (on most days)	60%	
Vitamin D (on most days)	1% Estimated from <sup>60</sup>	
Calcium supplement (on most days)	Women 8% <sup>61</sup>	Men 2% <sup>61</sup>
Vitamin A (≥5000 IU on most days)	15% Estimated from <sup>62</sup>	20% Estimated from <sup>62</sup>
Vitamin E (on most days)	5% <sup>61</sup>	4% <sup>61</sup>
Vitamin K (green leafy vegetables on most days)	14% <sup>31</sup>	12.4% <sup>31</sup>
Regular aspirin use > 15 years	13%	11%
Immunosuppressive drug use	.0007% <sup>63, 64</sup>	
Postmenopausal hormones (PMH) current use Women ages 50-74 Women ages 65-74	15% <sup>65</sup> 12%	
PMH use <5 years (women ages 50-74) (Note: Assuming 2:1 ratio of estrogen + progesterone to estrogen alone; half of users take for >5 years) Estrogen + progesterone	5% <sup>65</sup>	
PMH use ≥5 years (women ages 50-74) (Note: Assuming 2:1 ratio of estrogen + progesterone to estrogen alone; half of users take for >5 years) Estrogen alone Estrogen + progesterone	2.5% <sup>65</sup> 5%	
Tamoxifen/Raloxifene use < 5 years (women ages 35-79)	1.25% <sup>66, 67</sup>	
Tamoxifen/Raloxifene use ≥5 years (women ages 35-79) (Assumption: half who take any go on to finish the 5 year course)	1.25% <sup>66, 67</sup>	

1. Sturgeon SR, Hartge P, Silverman DT, Kantor AF, Linehan WM, Lynch C, et al. Associations between bladder cancer risk factors and tumor stage and grade at diagnosis. *Epidemiology* 1994;5(2):218-25.
2. Colditz G. Personal Communication.
3. Cramer DW, Hutchison GB, Welch WR, Scully RE, Ryan KJ. Determinants of ovarian cancer risk. I. Reproductive experiences and family history. *J Natl Cancer Inst* 1983;71(4):711-6.
4. Slattery ML, Kerber RA. Family history of cancer and colon cancer risk: the Utah Population Database. *J Natl Cancer Inst* 1994;86(21):1618-26.
5. Meigs JB, Cupples LA, Wilson PW. Parental transmission of type 2 diabetes: the Framingham Offspring Study. *Diabetes* 2000;49(12):2201-7.
6. Gruber SB, Thompson WD. A population-based study of endometrial cancer and familial risk in younger women. Cancer and Steroid Hormone Study Group. *Cancer Epidemiol Biomarkers Prev* 1996;5(6):411-7.
7. Pankow JS, Folsom AR, Province MA, Rao DC, Eckfeldt J, Heiss G, et al. Family history of coronary heart disease and hemostatic variables in middle-aged adults. Atherosclerosis Risk in Communities Investigators and Family Heart Study Research Group. *Thromb Haemost* 1997;77(1):87-93.
8. Schlehofer B, Pommer W, Mellempgaard A, Stewart JH, McCredie M, Niwa S, et al. International renal-cell-cancer study. VI. the role of medical and family history. *Int J Cancer* 1996;66(6):723-6.

9. Wu AH, Fontham E, Reynolds P, Greenberg R, Buffler P, Liff J, et al. Family history of cancer and risk of lung cancer among lifetime nonsmoking women in the US. *American Journal of Epidemiology* 1961;143:535-42.
10. Whittemore AS, Wu AH, Kolonel LN, John EM, Gallagher RP, Howe GR, et al. Family history and prostate cancer risk in black, white, and Asian men in the United States and Canada. *Am J Epidemiol* 1995;141(8):732-40.
11. La Vecchia C, Negri E, Franceschi S, Gentile A. Family history and the risk of stomach and colorectal cancer. *Cancer* 1992;70(1):50-5.
12. Zanghieri G, Di Gregorio C, Sacchetti C, Fante R, Sassatelli R, Cannizzo G, et al. Familial occurrence of gastric cancer in the 2-year experience of a population-based registry. *Cancer* 1990;66(9):2047-51.
13. Increased use of colorectal cancer tests--United States, 2002 and 2004. *MMWR Morb Mortal Wkly Rep* 2006;55(11):308-11.
14. Solomon D, Breen N, McNeel T. Cervical cancer screening rates in the United States and the potential impact of implementation of screening guidelines. *CA Cancer J Clin* 2007;57(2):105-11.
15. Okosun IS, Prewitt TE, Cooper RS. Abdominal obesity in the United States: prevalence and attributable risk of hypertension. *J Hum Hypertens* 1999;13(7):425-30.
16. Nurses' Health Study. Unpublished data.
17. Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of overweight and obesity in the United States, 1999-2004. *JAMA* 2006;295(13):1549-55.
18. National Center for Health Statistics. Anthropometric Reference Data, United States, 1988-1994: Table 8. Available at: <http://www.cdc.gov/nchs/data/nhanes/t8.pdf>.
19. National Center for Health Statistics. Anthropometric Reference Data, United States, 1988-1994: Table 9. Available at: <http://www.cdc.gov/nchs/data/nhanes/t9.pdf>.
20. Schoenborn CA, Adams PF, Barnes PM. Body Weight Status of Adults: United States, 1997-1998: Centers for Disease Control and Prevention; 2002.
21. Centers for Disease Control and Prevention. Second National Report on Human Exposure to Environmental Chemicals; 2003.
22. Pirkle JL, Flegal KM, Bernert JT, Brody DJ, Etzel RA, Maurer KR. Exposure of the US population to environmental tobacco smoke: the Third National Health and Nutrition Examination Survey, 1988 to 1991. *JAMA* 1996;275(16):1233-40.
23. Giovino GA, Schooley MW, Zhu BP, Chrismon JH, Tomar SL, Peddicord JP, et al. Surveillance for selected tobacco-use behaviors--United States, 1900-1994. *MMWR CDC Surveill Summ* 1994;43(3):1-43.
24. National Center for Health Statistics. Health, United States, 1995. Hyattsville, Maryland; 1996.
25. National Center for Health Statistics. Health, United States, 2003. Hyattsville, MD; 2003.
26. National Center for Health Statistics. National Health and Nutrition Examination Survey III, 1988-94. Available at: <http://www.cdc.gov/nchs/about/major/nhanes/Anthropometric%20Measures.htm>.
27. Centers for Disease Control and Prevention. National Center for Health Statistics, National Health Interview Survey. Public use data tapes; 1991.
28. Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System. Table 5-4; 1992.
29. National Center for Health Statistics. Healthy People 2000 Review, 1998-99. Hyattsville, Maryland: Public Health Service; 1999.
30. Smiciklas-Wright H, Mitchell DC, Mickle SJ, Cook AJ, Goldman JD. Foods Commonly Eaten in the United States: Quantities Consumed Per Eating Occasion and in a Day, 1994-1996. Available at: [www.barc.usda.gov/bhnrc/foodsurvey/Products9496.html](http://www.barc.usda.gov/bhnrc/foodsurvey/Products9496.html).
31. Enns CW, Goldman JD, Cook A. Trends in food and nutrients intakes by adults: NFCS 1977-78, CSF II 1989-91, and CSFII 1994-95. *Family economics and nutrition review* 1997;10(4):2-15.
32. Cook A, Friday JE. Pyramid Servings Intakes By U.S. Children and Adults 1994-96, 1998: U.S. Department of Agriculture; Community Nutrition Research Group; 2000.
33. McKeown NM, Meigs JB, Liu S, Wilson PW, Jacques PF. Whole-grain intake is favorably associated with metabolic risk factors for type 2 diabetes and cardiovascular disease in the Framingham Offspring Study. *Am J Clin Nutr* 2002;76(2):390-8.

34. Stables GJ, Subar AF, Patterson BH, Dodd K, Heimendinger J, Van Duyn MA, et al. Changes in vegetable and fruit consumption and awareness among US adults: results of the 1991 and 1997 5 A Day for Better Health Program surveys. *J Am Diet Assoc* 2002;102(6):809-17.
35. Lin B, Fazio E, Allshouse J. U.S. consumption of tree nuts. *Food Review* 2001;55(2):54-8.
36. Shahar E, Folsom AR, Wu KK, Dennis BH, Shimakawa T, Conlan MG, et al. Associations of fish intake and dietary n-3 polyunsaturated fatty acids with a hypocoagulable profile. The Atherosclerosis Risk in Communities (ARIC) Study. *Arterioscler Thromb* 1993;13(8):1205-12.
37. Cleveland LE, Moshfegh AJ, Albertson AM, Goldman JD. Dietary intake of whole grains. *J Am Coll Nutr* 2000;19(3 Suppl):331S-338S.
38. McPherson CP, Sellers TA, Potter JD, Bostick RM, Folsom AR. Reproductive factors and risk of endometrial cancer. The Iowa Women's Health Study. *Am J Epidemiol* 1996;143(12):1195-202.
39. Whittemore AS, Harris R, Itnyre J. Characteristics relating to ovarian cancer risk: collaborative analysis of 12 US case-control studies. II. Invasive epithelial ovarian cancers in white women. Collaborative Ovarian Cancer Group. *Am J Epidemiol* 1992;136(10):1184-203.
40. National Center for Health Statistics. Fertility, Family Planning, and Women's Health: New data from the 1995 National Survey of Family Growth. Series 23, Number 15, Table 3. Available at: [http://www.cdc.gov/nchs/data/series/sr\\_23/sr23\\_015.pdf](http://www.cdc.gov/nchs/data/series/sr_23/sr23_015.pdf).
41. US Census Bureau. Statistical Abstract of the United States: 2007. 2007.
42. Laumann EO. The social organization of sexuality : sexual practices in the United States. Chicago: University of Chicago Press; 1994.
43. National Center for Health Statistics. Fertility, Family Planning, and Women's Health: New data from the 1995 National Survey of Family Growth. Series 23, Number 19, Table 41. Available at: [http://www.cdc.gov/nchs/data/series/sr\\_23/sr23\\_019.pdf](http://www.cdc.gov/nchs/data/series/sr_23/sr23_019.pdf).
44. National Center for Health Statistics. Fertility, Family Planning, and Women's Health: New data from the 1995 National Survey of Family Growth. Series 23, Number 19, Table 52. Available at: [http://www.cdc.gov/nchs/data/series/sr\\_23/sr23\\_019.pdf](http://www.cdc.gov/nchs/data/series/sr_23/sr23_019.pdf).
45. US Census Bureau. Current Population Survey, June 2002 2004.
46. National Health and Nutritional Examination Survey 2001-2002. Skin reaction to sun after non-exposure. Available at: <http://www.cdc.gov/nchs/about/major/nhanes/frequency/deq.htm#DEQ010>.
47. National Health and Nutritional Examination Survey 2001-2002. Natural hair color age 18. Available at: <http://www.cdc.gov/nchs/about/major/nhanes/frequency/deq.htm#DEQ010>.
48. Engel A, Johnson ML, Haynes SG. Health effects of sunlight exposure in the United States. Results from the first National Health and Nutrition Examination Survey, 1971-1974. *Arch Dermatol* 1988;124(1):72-9.
49. Hall HI, May DS, Lew RA, Koh HK, Nadel M. Sun protection behaviors of the U.S. white population. *Prev Med* 1997;26(4):401-7.
50. Weinstock MA, Colditz GA, Willett WC, Stampfer MJ, Bronstein BR, Mihm MC, Jr., et al. Nonfamilial cutaneous melanoma incidence in women associated with sun exposure before 20 years of age. *Pediatrics* 1989;84(2):199-204.
51. United States Census Bureau. Urban and Rural Population: 1900 to 1990. Table 1. Available at: <http://www.census.gov/population/censusdata/urpop0090.txt>.
52. Holt S. Chronic pancreatitis. *South Med J* 1993;86(2):201-7.
53. Yamada T, Alpers DH. Textbook of gastroenterology. Philadelphia: Lippincott; 1991.
54. Greenberger N, Toskes P. Approach to the patient with pancreatic disease. In: Harrison TR, Wilson JD, editors. Principles of Internal Medicine. 12th ed. New York: McGraw-Hill; 1991. p. 1369-1383.
55. Centers for Disease Control and Prevention. Prevalence of Diabetes and Impaired Fasting Glucose in Adults--United States, 1999--2000. *Morb Mortal Wkly Rep* 2003;52(35):833-837.
56. National Center for Health Statistics. Health, United States, 2002. Hyattsville, MD; 2002.
57. De Dombal FT, World Organization of Gastroenterology. Research Committee. Inflammatory bowel disease. 2nd ed. Oxford ; New York: Oxford University Press; 1993.
58. McQuillan GM, Kruszon-Moran D, Kottiri BJ, Curtin LR, Lucas JW, Kington RS. Racial and ethnic differences in the seroprevalence of 6 infectious diseases in the United States: data from NHANES III, 1988-1994. *Am J Public Health* 2004;94(11):1952-8.

59. Bjorkholm E. Blood group distribution in women with ovarian cancer. *Int J Epidemiol* 1984;13(1):15-7.
60. Kaufman DW, Kelly JP, Rosenberg L, Anderson TE, Mitchell AA. Recent patterns of medication use in the ambulatory adult population of the United States: the Slone survey. *JAMA* 2002;287(3):337-44.
61. Slesinski MJ, Subar AF, Kahle LL. Trends in use of vitamin and mineral supplements in the United State: the 1987 and 1992 National Health Interview Surveys. *J Am Diet Assoc* 1995;95(8):921-3.
62. United States Department of Agriculture. Supplementary Data Tables (Table Set 12): USDA's 1994-96 Continuing Survey of Food Intake by Individuals. Beltsville, MD: Food Surveys Research Group; 1999.
63. Pierce GA, Graham WK, Kauffman HM, Jr., Wolf JS. The United Network for Organ Sharing: 1984 to 1994. *Transplant Proc* 1996;28(1):12-5.
64. United States Census Bureau. Current Population Reports P25-917 and P25-1095, Population Paper Listing 21. Statistical Abstract of the United States: 1995. Number 14, Resident Population by age and sex 1995.
65. Wysowski DK, Governale LA. Use of menopausal hormones in the United States, 1992 through June, 2003. *Pharmacoepidemiol Drug Saf* 2005;14(3):171-6.
66. Freedman AN, Graubard BI, Rao SR, McCaskill-Stevens W, Ballard-Barbash R, Gail MH. Estimates of the number of US women who could benefit from tamoxifen for breast cancer chemoprevention. *J Natl Cancer Inst* 2003;95(7):526-32.
67. Melnikow J, Paterniti D, Azari R, Kuenneth C, Birch S, Kuppermann M, et al. Preferences of Women Evaluating Risks of Tamoxifen (POWER) study of preferences for tamoxifen for breast cancer risk reduction. *Cancer* 2005;103(10):1996-2005.