

# CAMPAIGN For TOBACCO-FREE Kids<sup>®</sup>

## BENEFITS FROM QUITTING TOBACCO USE

*“Smoking cessation has major and immediate health benefits for men and women of all ages.”*  
– U.S. Surgeon General<sup>1</sup>

Despite reductions in smoking prevalence achieved since the first Surgeon General's report on the consequences of smoking in 1964, smoking remains the leading cause of preventable death in the United States.<sup>2</sup> Approximately 45 million Americans and more than 1.2 billion people worldwide continue to use tobacco.<sup>3</sup> Smoking accounts for over 400,000 deaths in the United States each year, and is a major risk factor for the four leading causes of death: heart disease, cancer, stroke, and chronic obstructive pulmonary disease.<sup>4</sup>

Numerous studies have demonstrated that quitting smoking improves health and the quality of life. Smoking cessation has well-documented health benefits including increased longevity and decreased morbidity and mortality from coronary artery disease, stroke, chronic obstructive pulmonary disease, peptic ulcer disease, and cancer. Pregnant women who stop smoking can increase their chances of giving birth to healthy babies. Smokers who quit also improve the health of those around them by reducing their exposure to secondhand smoke.

Smokeless tobacco refers to snuff and chewing tobacco. According to the National Survey on Drug Use and Health, the prevalence of lifetime smokeless tobacco use is 21.3% in the total population, with 37.2% of men and 6.7% of women having ever used smokeless tobacco.<sup>5</sup> Smokeless tobacco is addictive and is associated with an increased risk of oral diseases, including cancer, and cardiovascular diseases.<sup>6</sup> Effective interventions to quit using smokeless tobacco exist, including over-the-counter nicotine replacement therapies, prescription drugs, and counseling.<sup>7</sup>

### **Benefits of Smoking Cessation**

**Smoking cessation improves longevity.** Data obtained from the Cancer Prevention Study II, a study conducted by the American Cancer Society, demonstrated increases in life expectancy among those who quit smoking, even those who quit later in life. The study found:

- Life expectancy among smokers who quit at age 35 years exceeds that of continuing smokers by 6.9 to 8.5 years for men and 6.1 to 7.7 years for women. Smokers who quit at younger ages realize greater life extensions.
- Life expectancy among smokers who quit at age 45 years surpasses that of those who continue to smoke by 5.6 to 7.1 years for men and 5.6 to 7.2 years for women.
- Among 55 year-olds whom quit smoking, men experience a 3.4 to 4.8 year increase, and women, a 4.2 to 5.6 year increase in life expectancy in comparison to those who continue to smoke.
- Even those who quit much later in life gain some benefits: among smokers who quit at age 65 years, men gain 1.4 to 2.0 years of life, and women gain 2.7 to 3.7 years.<sup>8</sup>

**Smoking cessation reduces morbidity and mortality from respiratory disease.** Respiratory disease morbidity and mortality is known to decrease after smoking cessation, mediated through a reduced decline in forced expiratory volume in one second (FEV<sub>1</sub>), a measure of lung function, even among subjects with established COPD.<sup>9</sup>

**Smoking cessation reduces tobacco-related cancer risk.** Smoking cessation is well known to reduce cancer risk, although there is a considerable time lag before decreases in cancer incidence are seen.<sup>10</sup> According to a study done at Oxford University and supported by the British Heart Foundation and the Imperial Cancer Research Fund, it has been estimated that quitting smoking before 35 years of age is associated with a greater than 90 percent reduction in tobacco-attributable cancer risk.<sup>11</sup> The risk of lung cancer in individuals who use to smoke decreases progressively with the number of years of abstinence, but always remains higher than that of those who have never smoked.<sup>12</sup>

**Smoking cessation reduces the risk of stroke.** The Center for Chronic Disease Prevention and Health Promotion in Washington, D.C. asserts that smoking cessation reduces the risk of both stroke and brain hemorrhage.<sup>13</sup> According to the Nurses' Health Study, the risk of suffering a stroke among female cigarette smokers declines soon after cessation, and the benefits are independent of the age at starting and the number of cigarettes smoked per day.<sup>14</sup> The Framingham Study, involving both men and women, suggests that most of the benefit of quitting occurs within 5 years following cessation.<sup>15</sup>

**Smoking cessation reduces the risk of coronary artery disease (CAD).** A study in the *New England Journal of Medicine* demonstrated that the risk of developing coronary artery disease could be reduced by one-half after one year of abstinence from smoking. After two years, the risk of CAD equals that of people who have never smoked.<sup>16</sup> Among men who have quit smoking for at least five years, mortality from CAD decreases to almost the level of subjects who have never smoked.<sup>17</sup> In the Nurses' Health Study, subjects who smoked in the past had a 24 percent reduction in cardiovascular disease mortality after two years of smoking cessation. Furthermore, after ten to fourteen years of smoking cessation, the adverse effects on mortality from CAD resolve completely.<sup>18</sup>

**Smoking cessation reduces the risk of giving birth to low birth-weight babies.** The Center for Chronic Disease Prevention and Health Promotion asserts that women who stop smoking prior to starting their second trimester of pregnancy reduce their risk of having a low birth-weight baby to that of non-smoking women.<sup>19</sup>

**Smoking cessation improves symptoms of Chronic Obstructive Pulmonary Disease (COPD).** The Lung Health Study, a project supported by the National Heart, Lung, and Blood Institute, showed that smoking cessation results in a significant reduction in the prevalence of cough, sputum production, wheezing, and shortness of breath in individuals with COPD. The beneficial effects in the reduction of the prevalence of chronic cough from smoking cessation occur within the first year of stopping smoking.<sup>20</sup>

**Smoking cessation reduces the risk of peptic ulcer disease (PUD).** Individuals who smoke are more prone to develop ulcers in the stomach and small intestine, and their ulcers tend to be more severe and occur more often than those in non-smokers. Smokers with PUD who stop smoking experience an improvement in their disease in comparison to those who continue to smoke.<sup>21</sup>

**Smoking cessation decreases the risk of hip fracture.** A study done at Harvard University and supported by the National Institutes of Health demonstrated that there is a 17 percent increased risk of hip fracture in smokers compared with non-smokers at age 60 years. Smoking cessation leads to a decline in this risk. The benefits of cessation do not occur until ten or more years following cessation and are partly explained by weight gain accompanying smoking cessation.<sup>22</sup> Hip fractures contribute significantly to morbidity and mortality in the elderly.

### **Timeline of Quitting Benefits**

*At 20 minutes after last cigarette:* blood pressure and pulse rate drops; body temperature rises toward normal.

*At 8 hours after quitting:* carbon monoxide level in blood drops to normal; oxygen level rises to normal.

*At 24 hours after quitting:* chance of a heart attack decreases.

*At 48 hours after quitting:* nerve endings start regrowing; ability to smell and taste is enhanced.

*After 2 weeks to 3 months:* circulation improves; walking becomes easier; lung function improves.

*After 1 to 9 months:* decrease in coughing, sinus congestion, fatigue, shortness of breath.

*After 1 year:* excess risk of coronary heart disease is decreased to half that of a smoker.

*After 5 to 15 years:* stroke risk is reduced to that of people who have never smoked.

*After 10 years:* risk of lung cancer drops to as little as one-half that of continuing smokers; risk of cancer of the mouth, throat, esophagus, bladder, kidney, and pancreas decreases; risk of ulcer decreases.

*After 15 years:* risk of coronary heart disease is now similar to that of people who have never smoked; risk of death returns to nearly the level of people who have never smoked<sup>23</sup>

### **Benefits From Quitting Smokeless Tobacco Use**

Cessation of smokeless tobacco use decreases the risk of diseases and health problems associated with its use, including the following:

- *Oral and Nasal Cancer*- oral cancer at the site where the tobacco is usually placed (inside the lip, under the cheek or tongue) and nasal cancer in nasal snuff users
- *Erythroplasia* - red patches in the mouth that are likely to develop into cancer
- *Leukoplakia* - white plaques in the mouth that can be pre-malignant
- *Gingivitis & Gingival Recession*- inflammation of the gums and recession of the gum line
- *Staining of the teeth, Tooth loss and Halitosis* (bad breath)
- *High cholesterol*
- *High blood pressure and Hypertension*
- *Low blood potassium* (leading to irregular heart rhythms)
- *Chest pain*
- *Heart attack*
- *Stroke.*<sup>24</sup>

It is firmly established that any smoker or other user of tobacco products is harming their body and facing enormous health risks, including possible premature death. On the other hand, users who successfully quit immediately start to improve their health and dramatically increase their chances of leading longer and healthier lives.

*National Center for Tobacco-Free Kids, November 5, 2003 / Matthew Barry*

[Factsheet initially drafted by Dr. Stacey Cohn, while on a special internship with the Campaign from Georgetown Medical School's Pediatric Residency Program.]

**Related Campaign for Tobacco-Free Kids Factsheets ([www.tobaccofreekids.org](http://www.tobaccofreekids.org))**

***Resources for Quitting Smoking***

***How Safe Are Novel Nicotine Products?***

***Medicare and Medicaid Costs & Savings From Covering Tobacco Cessation***

[These and other Campaign for Tobacco-Free Kids factsheets on cessation are on the TFK website at: <http://tobaccofreekids.org/research/factsheets/index.php?CategoryID=25>.]

- <sup>1</sup> Office of Smoking & Health, U.S. Centers for Disease Control & Prevention (CDC), U.S. Department of Health and Human Services (HHS), *The Health Benefits of Smoking Cessation*, 1990, <http://profiles.nlm.nih.gov/NN/B/B/C/T/>.
- <sup>2</sup> *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service*, PHS publication 1103, 1964, [http://www.cdc.gov/tobacco/sgr/sgr\\_1964/sgr64.htm](http://www.cdc.gov/tobacco/sgr/sgr_1964/sgr64.htm). McGinnis, JM et al., "Actual causes of death in the United States," *JAMA*, 270: 2207-2212, 1993.
- <sup>3</sup> HHS, *Healthy People 2010: Understanding and Improving Health*, 2001.
- <sup>4</sup> CDC, "Smoking attributable mortality and years of potential life lost-United States, 1988," *Morbidity & Mortality Weekly Report (MMWR)* 40: 62-71, 1991. <http://www.cdc.gov/mmwr/preview/mmwrhtml/00001886.htm>. McGinnis, JM et al., "Actual causes of death in the United States," *JAMA*, 270: 2207-2212, 1993.
- <sup>5</sup> Substance Abuse and Mental Health Services Administration, (SAMHSA), HHS, *Results from the 2002 National Survey on Drug Use and Health*, <http://www.samhsa.gov/oas/nhsda.htm#NHSDAinfo>
- <sup>6</sup> Goldman, C., *Textbook of Medicine*, 21st edition, 34-35, 2000.
- <sup>7</sup> Fiore MC, et al., *Treating Tobacco Use and Dependence*. U.S. Public Health Service Clinical Practice Guideline, June 2000, [http://phs.os.dhhs.gov/tobacco/treating\\_tobacco\\_use.pdf](http://phs.os.dhhs.gov/tobacco/treating_tobacco_use.pdf).
- <sup>8</sup> Taylor DH Jr, Hasselblad V, Henley SJ, Thun MJ, Sloan FA., "Benefits of Smoking Cessation for Longevity," *American Journal of Public Health*, 92(6): 990-996, June 2002, [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=12036794&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12036794&dopt=Abstract).
- <sup>9</sup> Godtfredsen NS, et al., "Smoking Reduction, Smoking Cessation, and Mortality," *American Journal of Epidemiology*, 156(11): 994-1001, December 1, 2002, [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=12446255&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12446255&dopt=Abstract).
- <sup>10</sup> Godtfredsen NS, et al., "Smoking Reduction, Smoking Cessation, and Mortality," *American Journal of Epidemiology*, 156(11): 994-1001, December 1, 2002.
- <sup>11</sup> Peto, R, et al, "Smoking, smoking cessation, and lung cancer in the UK since 1950: combination of national statistics with two case-control studies," *British Medical Journal* 321: 2323-9, 2000.
- <sup>12</sup> Samet JM., "The health benefits of smoking cessation," *Med Clin North Am*, 76: 399-414, 1992, [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=1548968&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=1548968&dopt=Abstract).
- <sup>13</sup> Office of Smoking & Health, CDC, *The Health Benefits of Smoking Cessation*, 1990, <http://profiles.nlm.nih.gov/NN/B/B/C/T/>.
- <sup>14</sup> Kawachi I, et al., "Smoking Cessation in Relation to Total Mortality Rates in Women: A Prospective Cohort Study," *Annals of Internal Medicine*, 119(10): 992-1000, November 15, 1993, [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8214996&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8214996&dopt=Abstract).
- <sup>15</sup> Wolf PA, et al., "Cigarette smoking as a risk factor for stroke. The Framingham Study," *Journal of the American Medical Association*, 259(7):1025-29, 1988, [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=3339799&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=3339799&dopt=Abstract).
- <sup>16</sup> Rosenberg L, Kaufman DW, Helmrich SP, Shapiro S., "The risk of myocardial infarction after quitting smoking in men under 55 years of age," *N Engl J Med*, 313:1511-1514, 1985.
- <sup>17</sup> Tverdal A, Thelle D, Stensvold I, Leren P, Bjartveit K., "Mortality in relation to smoking history: 13 years' follow-up of 68,000 Norwegian men and women 35-49 years," *J Clin Epidemiol*, 46: 475-487 1993.
- <sup>18</sup> Godtfredsen NS, Holst C, Prescott E, Vestbo J, Osler M., "Smoking Reduction, Smoking Cessation, and Mortality: A 16-year Follow-up of 19,732 Men and Women from the Copenhagen Centre for Prospective Population Studies," *American Journal of Epidemiology*, 156(11): 994-1001, December 1, 2002.
- <sup>19</sup> The Health Benefits of Smoking Cessation. Washington, DC: Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health; 1990. DHHS publication CDC 90-8416.
- <sup>20</sup> Kanner RE, Connert JE, Williams DE, Buist AS., "Effects of Randomized Assignment to a Smoking Cessation Intervention and Changes in Smoking Habits on Respiratory Symptoms in Smokers with Early Chronic Obstructive Pulmonary Disease: The Lung Health Study," *American Journal of Medicine*, 106(4): 410-416, April 1999.
- <sup>21</sup> The Health Benefits of Smoking Cessation. Washington, DC: Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health; 1990. DHHS publication CDC 90-8416.
- <sup>22</sup> Cornuz J, Feskanich D, Willett WC, Colditz GA., "Smoking, Smoking Cessation, and Risk of Hip Fracture in Women," *American Journal of Medicine*, 106(3): 311-314, March 1999.
- <sup>23</sup> American Cancer Society, *When Smokers Quit – The Health Benefits of Quitting*, [http://www.cancer.org/docroot/SPC/content/SPC\\_1\\_When\\_Smokers\\_Quit.asp](http://www.cancer.org/docroot/SPC/content/SPC_1_When_Smokers_Quit.asp). HHS, *The Health Benefits of Smoking Cessation: A Report of the Surgeon General*, 1990, <http://sgrreports.nlm.nih.gov/NN/B/B/C/T/>. HHS, *The Health Consequences Of Smoking – Nicotine Addiction: A Report of the Surgeon General*, 1988, [http://www.cdc.gov/tobacco/sgr\\_1988.htm](http://www.cdc.gov/tobacco/sgr_1988.htm).
- <sup>24</sup> Goldman, C, *Textbook of Medicine*, 21st edition, 34-35, 2000. Benowitz, N, "Pharmacology of smokeless tobacco use: Nicotine addiction and nicotine-related health consequences," *Smokeless tobacco or health: an international perspective*, HHS, Public Health Service, National Institutes of Health, 219-28, 1993.