



## Tobacco Use

Worldwide, smoking killed nearly 5 million people in 2000, with men more than 3 times as likely to die as women.<sup>308</sup> By 2030, global annual smoking deaths are expected to double to 10 million,<sup>309</sup> but even that number may be too low. The Global Youth Tobacco Survey challenges the estimate of 10 million deaths and has found that the gap in tobacco use by males and females is narrowing<sup>310 311</sup> which would then increase the overall impact of tobacco on mortality ([www.cdc.gov/Tobacco/global/GYTS.htm](http://www.cdc.gov/Tobacco/global/GYTS.htm)).

Although cigarette consumption in the United States fell to its lowest point in 2005 ([www.naag.org](http://www.naag.org)), tobacco use remains the number one actual cause of death in this country.<sup>312</sup> Yet many states, including Missouri, failed to take advantage of the Master Settlement Agreement funds from the tobacco industry to support smoking prevention and cessation activities. Missouri spent only 0.7% of the funds allocated in recent years on tobacco control.<sup>313</sup> The American Lung Association (ALA) estimates that the economic costs due to smoking were \$3,841,000,000 in Missouri and \$1,465,000,000 in Kansas. The ALA gave both states a grade of “F” for their tobacco control efforts.<sup>314</sup> And, while the Master Settlement Agreement brought significant revenues to states, the settlement caused no major harm to the tobacco industry; some features of the settlement may

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<sup>308</sup> Ezzati M, Lopez AD. 2004. Regional, disease specific patterns of smoking-attributable mortality in 2000. *Tobacco Control* 13:388-395.

<sup>309</sup> Peto R, Lopez AD. 2001. Future worldwide health effects of current smoking patterns. In: Koop CE, Pearson CE, Schwarz MR, eds. *Critical Issues in Global Health*. San Francisco, CA: Jossey-Bass.

<sup>310</sup> Global Youth Tobacco Survey Collaborating Group. 2003. Differences in worldwide tobacco use by gender: findings from the Global Youth Tobacco Survey. *J School Health* 73:207-215.

<sup>311</sup> Mochizuki-Kobayashi Y et al. 2006. Use of cigarettes and other tobacco among students aged 13-15 years – worldwide, 1999-2005. *MMWR* 55:553-556.

<sup>312</sup> Mokdad AH et al. 2004. Actual causes of death in the United States, 2000. *J Am Med Assoc* 291:1238-1245.

<sup>313</sup> United States Government Accountability Office. 2005. Tobacco settlement. States' allocations of fiscal year 2004 and expected fiscal year 2005 payments. GAO-05-312.

<sup>314</sup> American Lung Association. 2006. State of tobacco control 2005. <http://lungaction.org/reports/tobacco-control05.html>



actually have increased company value and profitability.<sup>315</sup>

In 2004 and 2006, US Surgeon General Richard Carmona issued reports summarizing the health consequences of smoking (Table 81)<sup>316</sup> and the health effects of involuntary exposure to tobacco smoke (Table 82).<sup>317</sup> The Centers for Disease Control and Prevention (CDC) reported that, during 1997-2001, cigarette smoking and exposure to tobacco smoke resulted in approximately 438,000 premature deaths in the US, 5.5 million years of potential life loss, and \$92 billion in productivity losses annually.<sup>318</sup>

**Table 81 The four major conclusions from the Surgeon General's 2004 report on the health consequences of smoking.**

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**Conclusions**

1. Smoking harms nearly every organ of the body, causing many diseases and reducing the health of smokers in general.
  2. Quitting smoking has immediate as well as long-term benefits, reducing risks for diseases caused by smoking and improving health in general.
  3. Smoking cigarettes with lower machine measured yields of tar and nicotine provides no clear benefit to health.
  4. The list of diseases caused by smoking has been expanded to include abdominal aortic aneurysm, acute myeloid leukemia, cataract, cervical cancer, kidney cancer, pancreatic cancer, pneumonia, periodontitis, and stomach cancer
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Overall smoking prevalence among US adults continues to decline<sup>319</sup> and has decreased by almost 50% since the first Surgeon General's Report in 1964 that linked smoking to various lung diseases. Yet, tobacco use remains the number cause of preventable death. It is estimated that 8.6 million

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<sup>315</sup> Sloan FA, et al. 2004. Impacts of the Master Settlement Agreement on the tobacco industry. *Tobacco Control* 13:356-361.

<sup>316</sup> US Department of Health and Human Services. 2004. *The Health Consequences of Smoking: A Report of the Surgeon General*. Atlanta GA: Department of HHS, CDC, NCCDPHP, Office on Smoking and Health.

<sup>317</sup> US Department of Health and Human Services. 2006. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. Atlanta, GA. Department of HHS, CDC, NCCDPHP, Office on Smoking and Health.

<sup>318</sup> Amour BS et al. 2005. Annual smoking-attributable mortality, years of potential life lost, and productivity losses – United States, 1997-2001. *MMWR* 54:625-628.

<sup>319</sup> Trosclair A et al. 2005. Cigarette smoking among adults – United States, 2003. *MMWR* 54:509-513.



people in this country have at least one serious illness caused by smoking, and exposure to tobacco smoke is projected to contribute to some 440,000 deaths each year.<sup>320</sup> Among current smokers, chronic lung disease accounts for 73% of smoking-related conditions and, among former smokers, 50% of smoking related conditions.

**Table 82 The six major conclusions from the Surgeon General's 2006 report on the health consequences of involuntary exposure to tobacco smoke.**

<b>Conclusions</b>	
1.	Secondhand smoke causes premature death and disease in children and in adults who do not smoke.
2.	Children exposed to secondhand smoke are at an increased risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma. Smoking by parents causes respiratory symptoms and slows lung growth in their children.
3.	Exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer.
4.	The scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke
5.	Many millions of Americans, both children and adults, are still exposed to secondhand smoke in their homes and workplaces despite substantial progress in tobacco control.
6.	Eliminating smoking in indoor spaces fully protects nonsmokers from exposure to secondhand smoke. Separating smokers from nonsmokers, cleaning the air, and ventilating buildings cannot eliminate exposures of nonsmokers to secondhand smoke.

Nationally, over half of adults (54.3%) have never smoked cigarettes.<sup>321</sup> Of the remainder, about half are current smokers and half are former smokers. Smoking cessation lowers the death rate even among middle-aged smokers with mild lung disease.<sup>322</sup> Men are more likely to have begun smoking before the age of 16 years old and are more likely to smoke more cigarettes per day than women. A recent survey of US smokers found that they believed they had a lower risk of developing lung cancer than the average smoker.<sup>323</sup> Furthermore, their perceived risk of lung cancer and of cancer in general

<sup>320</sup> American Lung Association. 2005. Lung disease data in culturally diverse communities: 2005. [www.lungusa.com](http://www.lungusa.com).

<sup>321</sup> National Center for Health Statistics. 2004. Health behaviors of adults: United States, 1999-2001. Vital and Health Statistics, Series 10, Number 219. 80 pg. [www.cdc.gov/nchs](http://www.cdc.gov/nchs)

<sup>322</sup> Anthonisen NR et al. 2005. The effect of a smoking cessation intervention on 14.5-year mortality: a randomized clinical trial. *Ann Intern Med* 142:233-239.

<sup>323</sup> Weinstein ND, Marcus SE, Moser RP. 2005. Smokers' unrealistic optimism about their risk. *Tobacco Control* 14:55-59.



barely increased with the number of cigarettes smoked per day. More than half of these smokers believed that exercise undoes most smoking effects.

In 2006, a survey commissioned by the Kansas City Health Department asked 1,234 residents if they smoked (20.3% said yes) and if they lived with someone who smokes (18.2% said yes).<sup>324</sup> They also were asked whether they believed smoking or breathing in someone else's tobacco smoke can cause various health problems (Table 83).

**Table 83 Responses of 1,234 Kansas City residents to questions on tobacco smoke and health**

Do you believe that smoking is the cause of	Yes	No	Don't know
Heart disease	78.4%	9.7%	11.8%
Lung cancer	90.4%	4.3%	5.3%
Stroke	72.4%	10.2%	17.4%
Low birthweight	72.0%	7.3%	20.7%
Impotence in men	41.8%	10.6%	47.6%
Do you believe that breathing in someone else's tobacco smoke can cause			
Heart disease	67.8%	13.8%	18.4%
Lung cancer	79.4%	9.7%	10.9%
Respiratory problems in children	85.1%	5.9%	8.9%
Sudden infant death syndrome	45.9%	13.3%	40.8%

One of the consequences of smoking that is often overlooked is its effect on dental health. Cigarette smoking accounts for approximately half of all cases of periodontal disease in the US which, in turn, is associated with issues related to the retention of natural teeth. Among smokers  $\geq 65$  years old, there is a lower prevalence of tooth retention than among non-smokers or former smokers. In Missouri during 2002, the age-adjusted percentage of persons  $\geq 65$  years old who have most of their natural teeth (loss of 5 or fewer teeth) was 44.6%, while 26.4% had lost all their natural teeth.<sup>325</sup>

Based on the National Survey on Drug Use and Health, the CDC reported that, for persons  $\geq 12$  years

<sup>324</sup> Kansas City Health Department. 2006 Community Health Planning and Assessment Survey. [www.kcmo.org](http://www.kcmo.org).

<sup>325</sup> Centers for Disease Control and Prevention. 2003. Retention of natural teeth among adults – United States, 2002. *MMWR* 52:1226-1229.



old, Native Americans had the highest prevalence of smoking for both youth and adults.<sup>326</sup> For youths, 12-17 years of age, Native Americans had the greatest prevalence (27.9%) followed by whites (16%). Hispanics had an overall prevalence rate of 10.8% and Asians 8.1%. Among whites, females had a greater prevalence of cigarette smoking (17.2%) than males (14.9%). This was reversed for blacks, Asians, and Hispanics among whom males had the higher prevalence than females.

Among adults, Native Americans had the greatest prevalence of cigarette smoking (40.4%) while the Chinese had the lowest (12.3%). Prevalence for blacks (25.7%) and whites (27.4%) were similar. Among adults, smoking prevalence was greater among men in all racial and ethnic populations except Native Americans, Puerto Ricans, and Cubans.

In general, smoking rates in the nation are highest among persons with 9 to 11 years of education and lowest among those with  $\geq 16$  years of education.<sup>327</sup> Those living below the poverty level have a higher prevalence of smoking than persons above the poverty level. What is lacking, however, is good information on the smoking prevalence of foreign-born individuals.<sup>328 329</sup> From the limited data available, except for male Asians, the foreign-born have significantly lower rates of smoking than do US-born members of the same racial and ethnic group.

Based on national 2004 BRFSS data, the median prevalence of smoking for persons at least 18 years of age was 20.9% (23.2% for males, 19.2% for females).<sup>330</sup> For Missouri, the rate was 24.1% with men having a higher rate than women (26.1% vs 22.3%). For Kansas, the rate was 19.8% overall — 22.1% for men, and 17.6% for women. In 2005, among high school students in Missouri,

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<sup>326</sup> Centers for Disease Control and Prevention. 2004. Prevalence of cigarette smoking among 14 racial/ethnic populations – United States, 1999-2001. *MMWR* 53:49-52.

<sup>327</sup> Bombard J et al. 2004. State-specific prevalence of current cigarette smoking among adults – United States, 2003. *MMWR* 53:1035-1037

<sup>328</sup> Baluja KF et al. 2003. Inclusion of immigrant status in smoking prevalence statistics. *Am J Public Health* 93:642-646.

<sup>329</sup> Acevedo-Garcia D et al. 2004. Undoing an epidemiological paradox: the tobacco industry's targeting of US immigrants. *Am J Public Health* 94:2188-2193.

<sup>330</sup> Kuiper N et al. 2005. State-specific prevalence of cigarette smoking and quitting among adults – United States, 2004. *MMWR* 54:1124-1127.



23.7% were current smokers ([www.dhss.mo.gov/SmokingAndTobacco/youth\\_use.html](http://www.dhss.mo.gov/SmokingAndTobacco/youth_use.html)).

The 2003 Missouri BRFSS information showed that 22.1% of persons in Clay County, 26% in Jackson County, and 22.1% in Platte County were current smokers. For Kansas City residents, the rate was 27.9% compared to the Kansas City Metropolitan Region prevalence of 24.6% and the 26.4% rate statewide. A community health assessment for the lesbian, gay, bisexual and transgendered community in the Kansas City metropolitan area found a much higher prevalence of smoking, 38.4%, in that population.<sup>331</sup>

BRFSS data from 2002-2003 were used to demonstrate that among Missourians who have asthma, 28.4% remained active smokers and that 19.9%-36.4% were exposed to secondhand smoke (depending on the setting).<sup>332</sup>

Two of the Yr 2010 national health objectives are to reduce the prevalence of any tobacco use during the preceding month to  $\leq 21\%$  and the prevalence of current cigarette use to  $\leq 16\%$  among high school students. Nationally, in 2004, 11.7% of middle school students reported using any tobacco product in the prior 30 days with cigarettes (8.1%) the most common product.<sup>333</sup> The rates were higher among high school students, 28% using any tobacco products with 22.3% using cigarettes.

Locally, the Kauffman Foundation had sponsored a series of annual surveys of youth in the Kansas City area; those efforts subsequently were assumed by the Partnership for Children. The data from these surveys show statistically significant continuing declines of smoking among 8<sup>th</sup>, 10<sup>th</sup> and 12<sup>th</sup> graders (Figure 81), although the 2004-2005 data saw a rise in 12<sup>th</sup> graders who ever used cigarettes ([www.pfc.org](http://www.pfc.org)). More than 25% of students who smoked reported having their first cigarette when they were  $\leq 11$  y old, and 40% between the ages of 12 and 14. During the 2004-2005 school year, current cigarette use (smoking at least part of one cigarette or more during the prior 30 days) prevalences,

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<sup>331</sup> Kansas City Health Department and the Lesbian and Gay Community Center of Greater Kansas City. 2004. THE PULSE: A health assessment of the lesbian, gay, bisexual, & transgendered (LGBT) community in the Kansas City, Missouri, bi-state metropolitan area. [www.kcmo.org/health](http://www.kcmo.org/health)

<sup>332</sup> Yun S et al. 2006. Active and passive smoking among asthmatic Missourians: implications for health education. *Prev Med* 42:286-290.

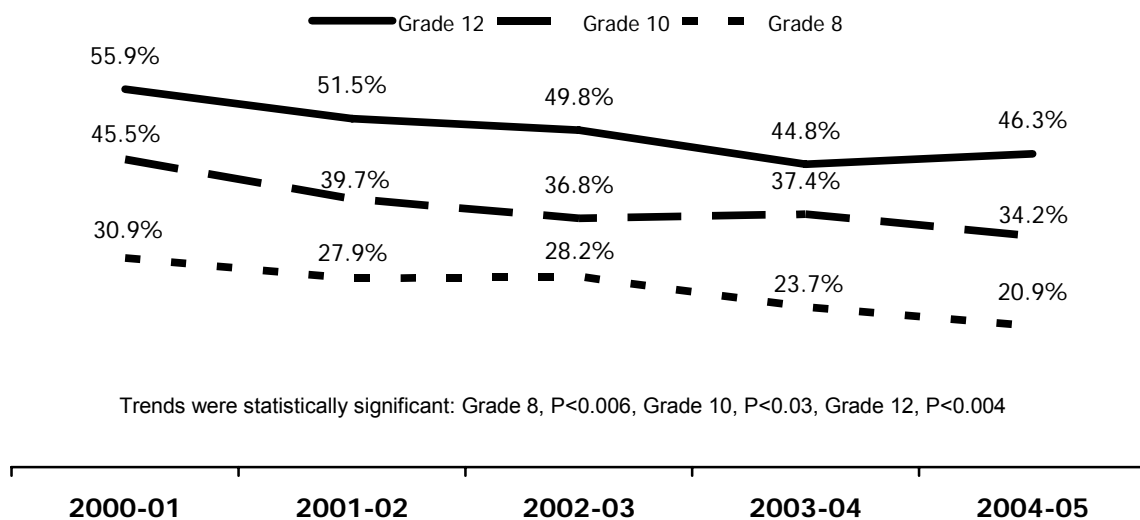
<sup>333</sup> Bloch AB et al. 2005. Tobacco use, access, and exposure to tobacco in media among middle and high school students – United States, 2004. *MMWR* 54:297-301.



were 59% for 8<sup>th</sup> graders and between 62% and 64% among high school students in the bistate metropolitan area. These local data are supported by national information released in April 2006 ([www.monitoringthefuture.org](http://www.monitoringthefuture.org)). That report found that smoking rates among American teens continued to decline, but that the rate of decline had decelerated sharply. According to the CDC, in 2005, 23.0% of high school students were current smokers and 9.4% were frequent smokers.<sup>334</sup>

The Kauffman Teen Survey also found that the percentage of students that have used smokeless tobacco had increased at all grade levels: 29% in 8<sup>th</sup> grade, 29% in 10<sup>th</sup> grade, and 31% in 12<sup>th</sup> grade. More than 1 in 8 users of smokeless tobacco were girls and 8<sup>th</sup> grade girls reported the highest use rate among girls.

**Figure 81 Lifetime cigarette use among teenagers by grade level, Kansas City metropolitan area; data from Kauffman Teen Surveys**



<sup>334</sup> Centers for Disease Control and Prevention. 2006. Cigarette use among high school students – United States, 1991-2005. *MMWR* 55:724-726.



The CDC estimates that each pack of cigarettes sold costs society \$7.18 in medical care and lost productivity.<sup>335</sup> Therefore, it is in society's best interest to decrease the prevalence of smoking. To accomplish this goal, there are two basic approaches. Since more than a third of current smokers began smoking prior to 16 years of age, one approach is to discourage primarily youth from adopting tobacco usage.<sup>336</sup> This can be accomplished via a mix of educational and monetary approaches. However, adolescents 12-17 y of age in Missouri and Kansas see less than 0.5 state-funded anti-tobacco television advertisements per month, compared to 10 per month in Utah.<sup>337</sup> Simply raising the taxes on cigarettes and other tobacco products can be effective in discouraging youth from starting to smoke and motivate adults to stop as the cost of smoking becomes more expensive. Studies have shown that a 10% increase in the price of cigarettes reduces smoking by 7% for youth and consumption by 4% for adults. Missouri's cigarette tax is one of the lowest in the nation at \$0.17, while in Kansas the tax is \$0.79. Nationally, in 2003, Missouri was 45<sup>th</sup> in the cigarette tax rate and Kansas was 21<sup>st</sup>.

The second approach is to get current smokers to stop smoking. In general, about 42% of current smokers attempted to stop smoking in the prior year. Older people may be more successful than younger individuals in quitting smoking and their smoking cessation is associated with different subject characteristics from those that predict successful cessation in younger populations, suggesting that older smokers may have unique reasons to stop smoking.<sup>338</sup> While smoking cessation is a desirable outcome, the benefits from cessation may not be the same for women and men. The Lung Health Study, supported by the National Heart, Lung, and Blood Institute, found that, in general, women's lung function improves significantly more than men's after sustained smoking cessation, although the differences narrow over time.<sup>339</sup> The decline in lung function in those who continued to smoke was similar for men and women.

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<sup>335</sup> Centers for Disease Control and Prevention. 2002. Annual smoking attributable mortality, years of potential life loss, and economic costs – United States, 1995-1999. *MMWR* 51:300-303.

<sup>336</sup> Tauras JA et al. 2005. State tobacco control spending and youth smoking. *Am J Public Health* 95:338-344.

<sup>337</sup> Szczycka G et al. 2005. Estimated exposure of adolescents to state-funded anti-tobacco television advertisements – 37 states and the District of Columbia, 1999-2003. *MMWR* 54:1077-1080.

<sup>338</sup> Whitson HE et al. 2006. Patterns and predictors of smoking cessation in an elderly cohort. *J Am Geriatrics Soc* 54:466-471.

<sup>339</sup> Connet JE et al. 2003. Changes in smoking status affect women more than men: results of the Lung Health Study. *Am J Epidemiol* 157:973-979.



While most smoking cessation costs are borne by the smoker, some states offer assistance through Medicaid. Kansas offers assistance via counseling, while Missouri's Medicaid program does not offer any benefits for treatment of tobacco dependence.<sup>340</sup> There are more than 17 smoking cessation programs offered in Kansas City.

In addition to the smoking itself, there is the related issue of protecting individuals from the effects of environmental (second hand) smoke, whether at home,<sup>341</sup> in the work place, or at other venues in the community.<sup>342 343 344</sup> Of 1,234 Kansas Citians surveyed in 2006, 70.2% said smoking was not permitted in the home. Of those who allow smoking in the home, 36.2% permitted it only in designated rooms. Smoking was permitted in designated areas outside of the home by 76.3% of respondents, although 9% of these individuals indicated that permission was conditional. Of the respondents, 74.1% did not permit smoking in their car, van, or truck, while 20.3% indicated that in the prior week they had been a passenger in a vehicle with a person who was smoking.

Many employers, including the City of Kansas City, have policies that restrict smoking in the workplace. As of the 31<sup>st</sup> of May 2005, Kansas City, by ordinance (Chap.34, Article XII), prohibited smoking in non-hospitality industry work settings. This ordinance did not represent a major imposition on workplaces, as a 2003 BRFSS survey conducted by the Missouri Department of Health and Senior Services found that 80% of respondents in the Kansas City metropolitan area reported that smoking was not permitted in their work areas or in common areas of the workplace. About half of the respondents also felt that smoking should be prohibited in the indoor dining areas of restaurants and shopping malls, with nearly 60% reporting they would prohibit smoking in public buildings, indoor

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<sup>340</sup> Centers for Disease Control and Prevention. 2004. State medicaid coverage for tobacco-dependence treatments – United States, 1994-2002. *MMWR* 53:54-57.

<sup>341</sup> Kum-Njii P et al. 2006. Environmental tobacco smoke exposure: prevalence and mechanisms of causation of infections in children. *Pediatrics* 117:1745-1754.

<sup>342</sup> Levy DT et al. 2004. Recent trends in home and work smoking bans. *Tobacco Control* 13:258-263.

<sup>343</sup> The Task Force on Community Preventive Services. 2001. Recommendations regarding interventions to reduce tobacco use and exposure to environmental tobacco smoke. *Am J Prev Med* 20:10-15.

<sup>344</sup> Winickoff JP et al. 2006. A national survey of the acceptability of quitlines to help parents quit smoking. *Pediatrics* 117:e695-e-700.



concerts, and sporting events; only 22% felt it should be prohibited in bars and cocktail lounges. Missouri and Kansas currently have no preemptive state laws related to smoke free indoor air.<sup>345</sup>

The Kansas City 2006 Community Health Planning and Assessment survey found that when it came to restaurants, 71.4% of respondents said they prefer to dine in a non-smoking establishment, and, of those individuals, 75.3% would like all restaurants in Kansas City to be non-smoking. However, only 39.6% of all the respondents said they would like to see all bars in Kansas City be non-smoking.

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<sup>345</sup> Linberger L et al. 2005. Preemptive state smoke-free indoor air laws – United States, 1999-2004. *MMWR* 54:250-254.