National Federation of State
High School Associations

POSITION STATEMENT ON SMOKELESS TOBACCO

National Federation of State High School Associations (NFHS)
Sports Medicine Advisory Committee (SMAC)

Smokeless tobacco is any product in which tobacco is held in the mouth so that nicotine is absorbed through the lining of the mouth. Smokeless tobacco can go by other names, such as chewing, oral and spitting tobacco; or snuff, dip and chew. In general, the two basic types of smokeless tobacco are:

- **Chewing tobacco:** Long strands of loose leaves, plugs or twists of tobacco.
- **Snuff:** Finely ground tobacco packaged in cans or pouches; sold as dry or moist.

Many health hazards are attributed to the use of tobacco products, particularly cigarettes, pipes, cigars and smokeless tobacco. Most people are able to associate diseases such as heart disease and lung cancer with cigarette smoking, while the adverse effects of smokeless tobacco may seem comparatively benign. Many may think that smokeless tobacco is less dangerous than cigarettes and other products where tobacco is burnt and nicotine absorbed through the lungs; however, significant oral, dental and systemic health consequences and even death are associated with smokeless tobacco. It contains 28 known carcinogens including formaldehyde (used in embalming), polonium-210 (a radioactive material), cadmium (found in batteries) and other chemicals. Because oral tobacco products are not regulated by the Food and Drug Administration (FDA), there is also no regulation on what is placed in the tobacco product.

The combination of these dangerous substances makes users approximately 50 times more likely to suffer from oral cancers. Other oral health issues include leukoplakia (white mouth lesions that are precancerous), tooth decay from the high levels of sugar found in chew, stained and discolored teeth, bad breath, and gum disease and recession (and eventually tooth loss). Users are also at risk for other health problems, including cancer of the kidney, pancreas and digestive system. Smokeless tobacco has been shown to act as an autonomic and hemodynamic stimulus by increasing heart rate, blood pressure and epinephrine levels. Smokeless tobacco users have higher daytime heart rates than nonusers and have twice the risk of dying from cardiovascular disease.

Smokeless tobacco use is often initiated and established during adolescence. It is estimated that a container of spit tobacco has as much nicotine as 80 cigarettes, and studies have shown that smokeless tobacco users show symptoms of nicotine dependence at least as frequently as cigarette smokers. In the United States in 2012, 3.5 percent of individuals aged 12 or older (9 million people) used smokeless tobacco in the past month. While a recent review concluded that medications, including varenicline and nicotine lozenges, and behavioral interventions may help smokeless tobacco users quit, more research is needed to find effective treatments for adolescents who use smokeless tobacco.

It is most important to **prevent** the use of smokeless tobacco by adolescents. Smokeless tobacco use also serves as a gateway drug for cigarette smoking among young adult males, with both past and current users approximately 225 percent more likely to have initiated smoking than nonusers. Evidence shows that smoking can then be a first step toward other substance abuse.

There has always been a link between sports and smokeless tobacco. While the personal risks to a smokeless tobacco user are numerous, the societal effect of using smokeless tobacco has a much larger impact. Young children and teenagers who see their role models using chew during sports, races and rodeos - in person or in the media - often do so without knowing the health risks or addiction risk.

A 1991 college population study demonstrated just about 50 percent of varsity baseball players and 25 percent of intramural baseball players used one or both forms of smokeless tobacco, and the mean age for initiation of all tobacco products was 15. The Harvard College Alcohol Survey in 1999 showed that unlike cigarettes, smokeless tobacco use was more common among intercollegiate athletes. A large NCAA study published in 2001 showed that for the eight categories of substance use, smokeless tobacco was the third-most widely used at 22.5 percent (behind alcohol and marijuana), with wide variations according to sport. In rural areas, prevalence of smokeless tobacco use is about three times that of urban areas, and again is higher among subgroups of male students, such as rodeo athletes (42%), smokers (32%), wrestlers (19%), baseball players and Future Farmers of America members (18%), and football players (16%).

Fortunately, there has been a declining trend in smokeless tobacco use among adolescent males that parallels recent declines in smoking among that same group. In 2007, estimates for smokeless tobacco use indicated that an estimated 13 percent of male and 2.3 percent of female high school students were users. There has been a substantial increase over time in the percentage of 8^{th} -, 10^{th} -, and 12^{th}-grade students who perceive that regular smokeless tobacco use is harmful, which parallels their perceptions of cigarette smoking. Education can

make a difference. When athletes understand that substance use will hamper performance, they are less likely to engage in this behavior. If athletes are made aware of the long-term effects of smokeless tobacco use on their health and physical abilities, when the effects are not immediately perceived, perhaps they will be less likely to use.

In order to prevent and reduce tobacco addiction in high school athletes, comprehensive school policies should include **enforcement** of tobacco-free campus environments, prohibition of tobacco use at all school facilities and events, and encouragement and help students and staff who wish to quit using tobacco. Alcohol and substance use prevention and treatment programs should also address tobacco use.

The Centers for Disease Control and Prevention (CDC) has developed guidelines for school-based health programs to prevent tobacco use and addiction. These guidelines stress the importance of providing prevention education during the years when the risk of becoming addicted to tobacco is greatest, and offer opportunities for positive role modeling.

A coordinated school health program involving teachers, coaches, students, families, administrators and community leaders is an effective way to deliver consistent messages about tobacco use, including smokeless tobacco. These programs can dramatically decrease the likelihood that a young person will be a regular tobacco user as an adult.

References:

Campaign for Tobacco-Free Kids. The path to tobacco addiction starts at very young ages. Campaign for Tobacco-Free Kids, Washington DC. 2015. Available at: “http://www.tobaccofreekids.org/research/factsheets/pdf/0127.pdf”. Accessed September 17, 2016.

Ebbert JO, Elrashidi MY, Stead LF. Interventions for smokeless tobacco use cessation. The Cochrane Library. 2015.

Gingiss PL, Gottlieb NH. A comparison of smokeless tobacco and smoking practices of university varsity and intramural baseball players. Addictive Behaviors. 1991 Jan 1;16(5):335-40.

Green GA, Uryasz FD, Petr TA, Bray CD. NCAA study of substance use and abuse habits of college student-athletes. Clinical Journal of Sport Medicine. 2001 Jan 1;11(1):51-6.

Guidelines for School Health Programs to Prevent Tobacco Use: Summary. http://www.cdc.gov/healthyyouth/tobacco/pdf/tobacco_summary.pdf. Accessed September 17, 2016.

Haddock CK, Vander Weg M, DeBon M, Klesges RC, Talcott GW, Lando H, Peterson A. Evidence that smokeless tobacco use is a gateway for smoking initiation in young adult males. Preventive Medicine. 2001 Mar 31;32(3):262-7.

Nelson DE, Mowery P, Tomar S, Marcus S, Giovino G, Zhao L. Trends in smokeless tobacco use among adults and adolescents in the United States. American Journal of Public Health. 2006 May;96(5):897-905.

Post A, Gilljam H, Rosendahl I, Bremberg S, Rosaria Galanti M. Symptoms of nicotine dependence in a cohort of Swedish youths: a comparison between smokers, smokeless tobacco users and dual tobacco users. Addiction. 2010 Apr 1;105(4):740-6.

Rigotti NA, Lee JE, Wechsler H. US college students' use of tobacco products: results of a national survey. JAMA. 2000 Aug 9;284(6):699-705.

Walsh MM, Langer TJ, Kavanagh N, Mansell C, MacDougal W, Kavanagh C, Gansky SA. Smokeless tobacco cessation cluster randomized trial with rural high school males: Intervention interaction with baseline smoking. Nicotine & Tobacco Research. 2010 Jun 1;12(6):543-50.

Approved October 2016