Where There's No Smoke, There's Still Fire

DISSOLVABLE SMOKELESS TOBACCO

While perhaps one of the lesser-known cancers, oral cancer still packs a heavy punch. Every day, 100 new cases of oral cancer are diagnosed in the United States, and every hour, one person dies from the disease, according to the Oral Cancer Foundation (OCF). Research has shown that most oral cancers are linked to lifestyle choices—specifically, the consumption of tobacco products. In fact, the OCF says that tobacco use is responsible for 75 percent of oral cancers. This includes any kind of tobacco: cigarettes, pipes, cigars, and smokeless tobacco products. And with an increasing number of cities and towns banning cigarette smoking in public places, more and more smokers are turning to smokeless tobacco products to get their nicotine fix, which is perhaps good news for nonsmokers who don't want to breathe in cigarette smoke.

But a new smokeless tobacco product being introduced by tobacco companies could pose a potentially serious health threat to children and teenagers: dissolvable smokeless tobacco pellets. Because of its resemblance in both shape and packaging to breath mints, these pellets could easily be mistaken for candy by young children and lead to accidental nicotine poisoning, according to a recent study published online by *Pediatrics* journal. In addition, these pellets could provide an avenue to nicotine addiction for older kids and teenagers, which is especially troubling in light of recent findings that, for the first time, more Massachusetts youths admit to using smokeless tobacco products—including dissolvable tobacco—over cigarettes.

The *Pediatrics* study—a collaboration of the Harvard School of Public Health (HSPH), the Northern Ohio Poison Control Center, the Centers for Disease Control and Prevention, and the Food and Drug Administration—warns that dissolvable tobacco pellets could prove dangerous to children if ingested. The study looked at one new brand of these pellets currently being test-marketed by cigarette manufacturer R.J. Reynolds in three cities (Portland, Oregon; Columbus, Ohio; and Indianapolis, Indiana). The company is also test-marketing dissolvable tobacco sticks, which are the size and shape of toothpicks, and dissolvable tobacco strips, which are similar to breath-freshening strips.

The pellets, which are made of finely ground tobacco with mint and cinnamon flavoring, dissolve in the mouth and look like breath mints or bite-sized candy, making them particularly dangerous for young children if parents leave them in easily accessible places, like a table, countertop, or open purse, where they could be picked up and consumed, say researchers.

"This product is called a 'tobacco' product, but in the eyes of a 4-year-old, the pellets look more like candy than a regular cigarette," says MDS member Dr. Gregory Connolly, director of the Tobacco Control Research Program at HSPH and the study's lead author. "Nicotine is a highly addictive drug, and to make it look like a piece of candy is recklessly playing with the health of children."

Ingestion of tobacco products by infants and children is one of the major reasons for calls to poison control centers, and, according to the study, these pellets each contain 1 mg of nicotine. Small children can experience nausea and vomiting from as little as 1 mg of nicotine. The researchers examined how much nicotine ingestion leads to symptoms of poisoning in children and how many pellets it would take to reach that level. Using median body weights, they discovered that a one-year-old could suffer mild-to-moderate symptoms of nicotine poisoning by swallowing 8 to 14 pellets, while ingesting 10 to 17 pellets could result in severe toxicity or death.

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As with all other tobacco products, including cigarettes and chewing or snuff tobacco, the pellets are labeled and regulated for sale to adults only, but labels and laws don't always prevent teenagers and adolescents from trying—and becoming addicted to—tobacco products. And a big concern about this new line of smokeless tobacco products is their resemblance to breath mints and the fact that kids and teens could be popping pellets right in public, with parents and teachers none the wiser because there are no telltale traces of cigarette smoke odor. And that's a serious concern because the earlier kids experiment with tobacco, the more likely are their chances of developing an addiction—and potential health problems, such as oral cancer—since nicotine is a highly addictive substance. According to the Massachusetts Department of Public Health, a whopping 82 percent of adult smokers in Massachusetts had their first cigarette before age 19.

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So, where there's no smoke, there's still fire, because these dissolvable tobacco products contain almost as much nicotine as cigarettes—each cigarette can contain anywhere from 1.89 mg to 3.2 mg of nicotine, according to a 2004 study by the Massachusetts Department of Public Health. These new dissolvable tobacco products contain between 0.6 mg and 3.1 mg of nicotine, according to the U.S. Food & Drug Administration (FDA), making them as much, if not more, of a health threat as cigarettes.

ALARMING TREND

A recent survey of Massachusetts youths by the Massachusetts Departments of Public Health and Elementary and Secondary Education found that a dangerous trend emerging in recent years is the increased use of smokeless tobacco and other tobacco products, including dissolvable tobacco. This survey found that use of smokeless tobacco among high school students in 2009 was 17.6 percent, which, for the first time, was higher than the rate of cigarette smoking (16.0 percent).

"For the first time, we're seeing youth using these addictive 'other tobacco products' at a greater rate than cigarettes," says Russet Morrow Breslau, executive director of Tobacco Free Mass, a privately funded coalition that advocates for funding and policies that support tobacco prevention.

Many kids and teens may believe that these smokeless tobacco products are safer than cigarettes, but the fact is, they are not. Parents, teachers, and coaches should regularly talk to kids about the dangers of nicotine addiction and the potential risk of oral cancer. Smokeless tobacco is absorbed quickly and directly through the inside of the mouth, making it very dangerous and potentially deadly. Research has shown that more than half of smokeless tobacco users have noncancerous or precancerous lesions in their mouth, with their chance of getting oral cancer being 400 percent greater than for nonusers.

Many of these smokeless tobacco products are still new and just in the test-marketing phase, so time will have to tell the health implications of their use. In the meantime, the FDA is closely monitoring the products.

So while these dissolvable tobacco products may be a substitute form of nicotine for adult smokers in settings where smoking is banned, the truth is, there really is still no such thing as harmless tobacco.