**Word count 768**

**2016 11.08 Health Matters**

**Tobacco and Inflammation**

**Joe**

**This is Health Matters, reporting on smoking and inflammation.**

**Kristen**

**Recent research has found that nicotine is responsible for the premature death of six million people a year worldwide. But tobacco related diseases are not just a matter of emphysema, lung cancer, and throat cancer. Nicotine is responsible for equally serious health problems in other parts of the body. Because nicotine causes inflammation. Recent studies show that nicotine induced inflammation is at the root of multiple chronic diseases.**

**Joe**

**The substance that produces the inflammation is in tobacco. For years it’s been assumed that the most damaging effects of cigarettes come from toxic chemical additives. But research has found it’s an active ingredient in tobacco that triggers an inflammatory response in human cells. The studies conclude that using tobacco is even more dangerous to human health than previously understood.**

**Taushona**

**You may be wondering why the body has an inflammatory response to nicotine. As nicotine is not a virus or a bacteria. The immune system is designed to cope with other threats besides infectious microbes. It works to relieve the body from toxins as well. When a microbe or a substance invades the body, white blood cells releases antimicrobial enzymes and inflammatory molecules. The purpose of these inflammatory molecules is to destroy invading substances that are toxic. Tobacco contains a substance that strongly provokes the body to manufacture inflammatory molecules .**

**Kristen**

**One would hope the inflammatory response would take care of tobacco’s threatening substance. Unfortunately it doesn’t. The chemistry is complicated, but the bottom line is that daily use of tobacco overloads the immune system’s inflammatory reaction. When that happens, the amped-up inflammatory molecules begin to harm the body’s own tissue. This has direct bearing on several inflammatory diseases, including cardiovascular disease, arthritis, cancer and some auto-immune disorders.**

**Joe**

**This new finding about the long term health impacts of nicotine needs to be repeatedly communicated to teenagers and young adults. Early addiction to cigarettes promises a life of compromised health. Even though California law now prohibits selling cigarettes to anyone under 21, teens are still smoking.**

**Taushona**

**In fact, tobacco use is established primarily during adolescence. Nearly 9 out of 10 smokers first tried smoking by age 18. Every day in the U.S. over 5,000 youth either try cigarettes for the first time, or become daily smokers.**

**Kristen**

**The law limiting the sale of tobacco products to people over 21 applies to E-cigarettes -- devices that deliver nicotine with the chemicals removed. E-cigarettes heat a liquid made of nicotine and some additives. This turns it into a vapor that is inhaled instead of smoke. The question is, does inhaling nicotine vapor provide protection from the detrimental inflammation response?**

**Joe**

**Even before the research that links tobacco to inflammation, there was controversy about the safety of E-cigarette. To the point where the FDA has banned the import of several E-cigarette devices. Nevertheless, there are about 500 brands of E-cigarettes and almost 8,000 flavors on the market.**

**Taushona**

**The FDA is evaluating these products for their long term impact. Until it reaches a decision, they will remain on the market. And the date for its decision is two years away.**

**E-cigarettes have become popular among teens in states where they can legally buy tobacco products. But according to the studies linking tobacco to inflammation, nicotine inhaled through the vapor may still have detrimental effects.**

**Kristen**

**The fact is, people regularly using E-cigarettes are still addicted to tobacco. However nicotine is delivered, it’s still not safe. Used during pregnancy in can cause low birth weights, preterm delivery and stillbirth. It harms the fetus and causes lasting consequences for the developing brain and lung functions in newborns.**

**Joe**

**And talking about brain development, human brains continue to develop during adolescence and young adulthood. And the data on how nicotine impacts the adolescent brain is clear and irrefutable. Nicotine use in teens and young adults is associated with lasting cognitive and behavioral impairments, including effects on working memory and attention.**

**Taushona**

**Teenage smoking is a public health issue. Providing them with information on how harmful it is may help some to refrain. But teens who are already addicted to nicotine need help. The long term impacts are too significant.**

**Joe**

**Health Matters is a production of KIDE Hoopa CA.  Produced and written by Cynthia Poten. Engineered by Joseph Orozco.  Our readers were Kristen Marshall, David Moon and Joseph Orozco.  For this audio and more information, visit our download area at  www.kidefm.org. Thank you for listening. Your health adds to the health of our community.**

**Sources and Links**

[**https://www.sciencedaily.com/releases/2016/09/160901124842.htm**](https://www.sciencedaily.com/releases/2016/09/160901124842.htm)

**https://www.sciencedaily.com/releases/2016/09/160901124842.htm**

[**http://www.medicaldaily.com/smoking-and-immune-system-nicotine-causes-increased-inflammatory-response-402975**](http://www.medicaldaily.com/smoking-and-immune-system-nicotine-causes-increased-inflammatory-response-402975)

**http://www.cdc.gov/tobacco/data\_statistics/fact\_sheets/youth\_data/tobacco\_use/**

[**http://www.webmd.com/smoking-cessation/features/ecigarettes-under-fire**](http://www.webmd.com/smoking-cessation/features/ecigarettes-under-fire)

[**http://www.lung.org/stop-smoking/smoking-facts/e-cigarettes-and-lung-health.html?referrer=https://www.google.com/**](http://www.lung.org/stop-smoking/smoking-facts/e-cigarettes-and-lung-health.html?referrer=https://www.google.com/)