

THE LINK

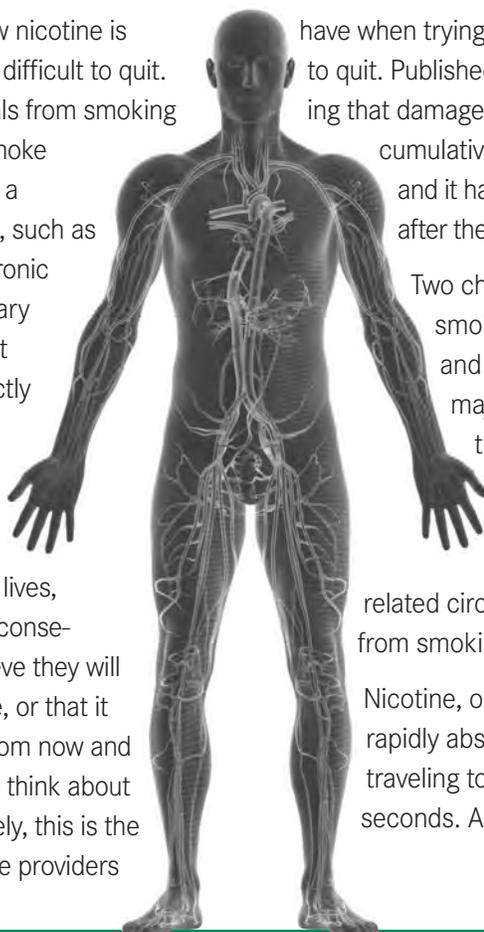
Connecting facts and ideas
for those working to create
an environment in Maine that
supports tobacco-free living.

 Healthy Maine Partnerships
Maine Center for Disease Control and Prevention

SUMMER ISSUE 2010

Smoking and Vascular Disease A Greater Risk than Cancer

Tobacco users know nicotine is addictive, making it difficult to quit. They know chemicals from smoking and secondhand smoke exposure will cause a number of diseases, such as lung cancer and chronic obstructive pulmonary disease (COPD). But what does that exactly mean? Tobacco users will often give examples of people who smoked their entire lives, and never suffered consequences. They believe they will not develop disease, or that it will happen years from now and they, “don’t need to think about it now.” Unfortunately, this is the challenge healthcare providers



have when trying to convince patients to quit. Published research is reporting that damage from tobacco has a cumulative effect on your body, and it happens within seconds after the first puff or chew.

Two chemicals in tobacco smoke, carbon monoxide and nicotine, have a major role in damaging the circulatory system. The fact is that more patients die from smoking-related circulatory disease than from smoking-related cancers.

Nicotine, once in the lungs, is rapidly absorbed into the blood, traveling to the brain within seconds. A vasoconstrictor,

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Making Tracks to a Tobacco-Free Campus University System

The University of Maine in Orono will join the growing list of U.S. colleges and universities, and the first Maine university, to adopt a tobacco-free campus policy, effective January 1, 2011.

As the state’s flagship campus, the University of Maine seeks to create a culture that promotes a safe and healthy environment to learn, work, and live. UMaine is invested both in academic achievement and in developing life skills that will promote individual and community wellness. By establishing a tobacco-free campus environment, UMaine will be a leader in the prevention of tobacco addiction.

Additionally, the American College Health Association (ACHA) issued a September 2009 statement encouraging colleges and universities nationwide “to be diligent” in their efforts to achieve a 100% indoor and outdoor campus-wide tobacco-free environment. Moreover, the committee recommends that the entire University System of seven colleges follow the lead of the flagship campus and adopt a tobacco-free campus policy.

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New Health Care Benefits for Pregnant Women Smokers

The Patient Protection and Affordable Care Act (PPACA) was signed into law by President Obama on March 23, 2010 to expand health coverage, control health care costs, and improve health care delivery systems. The major provisions will take place by 2014, but some will begin immediately.

Effective October 1, 2010, MaineCare will be required to enact Coverage of Comprehensive Tobacco Cessation Services for Pregnant Women on Medicaid (Title IV, Subtitle B, 3.12 Section 4107), which requires the state to provide tobacco cessation services to pregnant smokers at no cost.

Included are diagnostic, therapy and counseling services, and prescription and nonprescription tobacco cessation agents approved by the FDA for use by pregnant women; all treatment will be based on the 2008 Public Health Service Guide, or other effective, recognized guides.



Smoking and Vascular Disease *Continued from page 1*

nicotine narrows the diameter of the blood vessels. As a stimulant, it raises blood pressure by 5–10 mmHg for 15–30 minutes and increases the heart rate by 20 beats per minute for up to an hour. Although brief, over time these effects on the blood flow contribute to vascular injury. Multiple cigarettes smoked within one hour increases these effects. When nicotine reaches the brain, it causes the body to release stored fats and cholesterol into the bloodstream. Smokers, compared to nonsmokers, tend to have higher LDL (bad cholesterol) levels and lower HDL (good cholesterol) levels which increases the risk of heart attack and stroke.

Carbon monoxide, like nicotine, affects the circulatory system by damaging the endothelial cells that line the blood vessels. These cells keep the blood flowing smoothly throughout the body. Carbon monoxide also has the ability to release fats and cholesterol into the bloodstream. Once the cells are damaged, fats, cholesterol and plaque, released by both carbon monoxide and nicotine, attach to the blood vessels, resulting in narrowing and hardening of the vessels throughout the entire body. Depending on where the blockage occurs, the effects of smoking are evident in diseases such as arteriosclerosis, peripheral vascular disease, Buerger's disease, wrinkles, and hair loss. Blood clots can also form, leading to serious conditions, such as strokes.

Carbon monoxide also affects the hemoglobin molecules that carry oxygen throughout the body to tissues and cells. Carbon monoxide has an affinity for the hemoglobin molecule that is 230 times stronger than oxygen; the result is that the oxygen molecule cannot attach to the cell. The heart has to respond by pumping harder to get oxygen throughout the body. The smoker, as a result, has to exert more physical effort to attain a given task than a nonsmoker. The heart in particular must work harder, especially during rigorous exercise.



The good news is that blood vessel functions will eventually return to normal after the smoker quits. Within 5 to 15 years,

the risk of having a stroke will return to that of someone who never smoked. The risk of cardiovascular (heart) disease, a cause of about one-third of smoking-related premature deaths, is also reduced. Quitting smoking results in health benefits that can be felt immediately. The blood pressure and heart rate drops to normal in 20 minutes, the carbon monoxide in the bloodstream drops by half, and within 48 hours the chance of having a heart attack also decreases. The body's circulation will improve drastically between 2 weeks and 3 months. Yes, smoking is an addiction and may take multiple attempts to quit, but the benefit of health is a great reward.

UMaine announced its plan to move toward this outcome in July 2007 when President Robert Kennedy appointed a committee to determine the University's readiness to adopt a tobacco-free policy and to examine "best practices" for implementation. More than twenty individuals and two department head co-chairs were appointed to the Tobacco-Free Campus Committee on behalf of the University President and Provost. Committee members consisted of both smoking and nonsmoking students, faculty, interested community members, and staff representing many departments.

The co-chairs facilitated the primary committee function to review the

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current tobacco policy, to explore other universities and what they had done to become tobacco-free, assess readiness for a tobacco-free campus, develop environments supportive of a tobacco-free lifestyle, build the infrastructure to support tobacco treatment services, and to examine best practices for implementation.

Bangor Region Public Health and Wellness, the local Healthy Maine Partnership, has been a supportive committee presence and voice at the University since 2002. Moreover, they



provided technical assistance in developing an environmental system that ensures best practice, plus promotes and supports a wellness tobacco treatment program. In collaboration with the Partnership For A Tobacco-Free Maine, tobacco treatment training scholarships were provided to clinical providers in the health and counseling centers, alcohol and drug education program (ADEP) and the wellness department to provide intensive tobacco treatment services to staff and students.

During this planning and assessment phase, the committee members met with over 500 people to discuss the potential policy change and how it might affect students, faculty, staff and the public. Since the announcement, UMaine has implemented an information and education campaign, and has begun working with students and employees who wish to break their addiction to tobacco products.

Smoking has long been prohibited in UMaine's buildings, including student

dorms, and the new policy will extend the ban to the campus grounds and University property in other parts of Maine. The ban also includes the parking areas and privately owned vehicles on campus grounds, while also encompassing all tobacco products, including smokeless, spitless, and cigars.

Voluntary policy compliance will be expected starting January 1, 2011, with mandatory compliance and enforcement to begin January 1, 2012. University officials will continue to examine policies at other higher education institutions and develop its own enforcement plan over the next year or more. It is the strong recommendation of the committee that the policy must be enforced, and students, staff, and faculty be guided by the same regulations for tobacco use on campus as applied to any other infractions. Visitors, vendors, contractors, and the public will be gently reminded of the campus policy and asked to comply voluntarily.

For more information and links to resources please visit the UMaine website www.umaine.edu/tobaccofree

For more information and help to adopt a tobacco-free campus policy for your college or university, please visit the Maine Tobacco-Free College Network at www.mainetobacco-freecollegenetwork.org

or contact your local District Tobacco Coordinator and local Healthy Maine Partnership at www.healthymainepartnerships.org

The Science of Addiction: Why is it really so hard to quit?

Making the choice to quit using tobacco is difficult. Nicotine is extremely addictive, and quitting causes unpleasant symptoms. Remember that even if a tobacco user fails to quit on the first, second, or third attempt, don't give up on them. It can take several attempts to quit before being successful.

People who smoke or use smokeless tobacco are addicted to nicotine, the psychoactive drug in tobacco products that produces dependence. Nicotine dependence is one of the most common forms of chemical dependence in the United States.

Most people who use tobacco want to quit, but they often cannot. Among current U.S. adult smokers, 70% report that they want to quit completely. Nicotine stimulates the release of many chemicals in the body:

1) **Adrenaline** increases heart rate, raises blood pressure, increases respiration, and releases glucose into the bloodstream. Insulin production is then stimulated to regulate the amount of sugar into the bloodstream. However, nicotine also inhibits the release of insulin from the pancreas, preventing it from doing its job. As a result, more sugar is present in the bloodstream, which gives the body a rush of energy. During withdrawal, lower sugar in the bloodstream increases hunger, and lower adrenaline leads to fatigue.

2) **Acetylcholine** is the key neurotransmitter that influences respiration, heart rate, memory, alertness, and muscle movement. Nicotine binds onto the acetylcholine receptor sites, making it a stimulant, and in turn, releases Dopamine.

3) **Dopamine** is a neurotransmitter associated with pleasant feelings. It's the reward chemical that makes us feel good. Dopamine's job is to reinforce the good things we do, such as eating when we're hungry. When nicotine releases dopamine, our brain is fooled into thinking we're doing something positive. During withdrawal, lower dopamine can cause anxiety or depression.

4) **Endorphins** are natural painkillers, so they produce a sense of well-being and relaxation. Nicotine also tells the brain to make more endorphins.

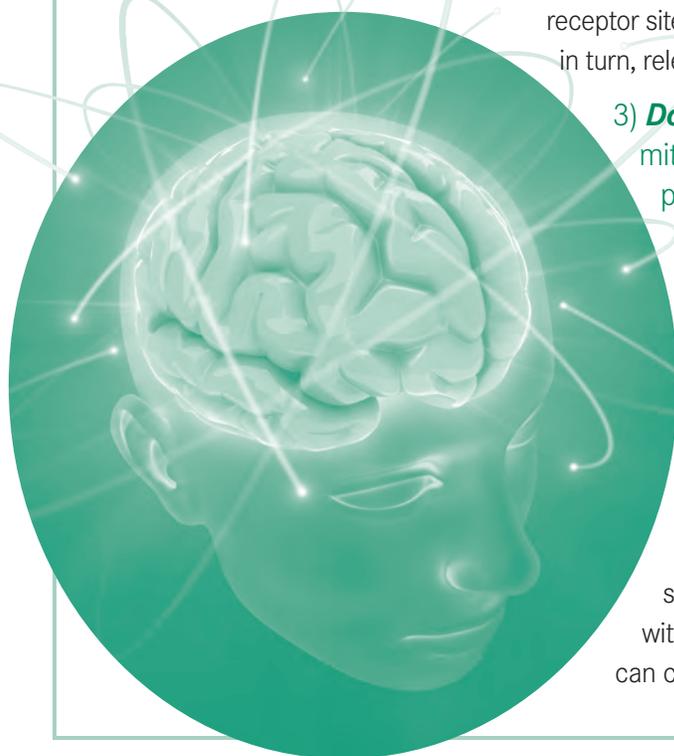
5) **Glutamate** is a neurotransmitter whose function is related to learning and memory. Its role is to remind users how great they felt while nicotine was in their system.

In addition to the physical effects of smoking are the effects of behavioral conditioning, which is also tied to the brain's synaptic connections. Smokers positively associate smoking with meals, coffee, social experiences or handling smoking materials. These all become cues for smoking.

Over time, the human body increases its tolerance for nicotine's effects and the tobacco user needs more tobacco to get the desired effect. This process, called developing a tolerance, causes the body to adjust to the nicotine by adapting its neurotransmitter receptors. With repeated exposure to nicotine, tolerance develops, but the number of binding sites on the chemical receptors increases, causing additional craving for nicotine.

When a person stops using nicotine, the brain neurons, that have adapted to nicotine by increasing or decreasing their number of receptors, are still present. Withdrawal symptoms happen because the body has been altered and, without the drug, cannot function as it has become used to functioning. Over time without the drug, the withdrawal symptoms subside, and the brain reverses to its original state.

Smoking is a highly efficient form of drug addiction. Inhaled nicotine enters the





circulation system rapidly and gets to the brain in seconds. Rapid rates of absorption cause a strongly felt “rush” and reinforce the effects of the drug. The smoking process, besides providing rapid reinforcement, also allows for self-regulation, making it possible for a smoker to obtain desired effects without acute toxicity. This means that with cigarettes, smokers can self dose without overdosing.

Tobacco addiction is a chronic condition that often requires repeated intervention. Brief intervention, counseling, behavioral therapy and medication can be effective treatments.

Another good resource is the article *Nicotine Addiction* (New England Journal of Medicine 362:24, June 17, 2010).

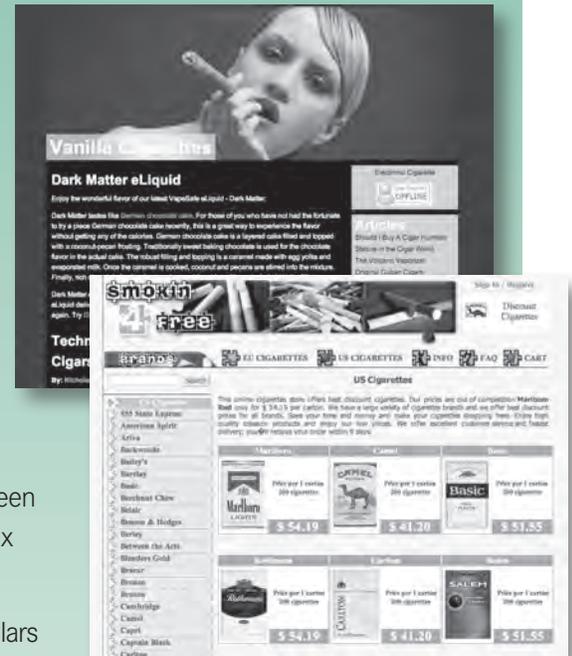
New Law Clamps Down on Internet Tobacco Sales

The Prevent All Cigarette Trafficking (PACT) Act is a federal law that went into effect June 29, 2010. This new law gives state, local, and tribal governments new rights to ensure taxes on cigarettes and smokeless tobacco are collected on internet and mail-order sales. Another key component of this law is stopping tobacco sales to children by having to enter ID information at purchase and verifying this at delivery. Certain methods of distribution, which had been previously exploited by minors and tax evaders, have also been improved.

States have been losing millions of dollars a year through internet tax evasion. All cigarette and smokeless tobacco state taxes must now be paid and delivered to the state prior to delivery. Other safeguards include making it illegal to send these products through the U.S. Postal Service, with few minor exceptions; the Postal Service does not have sufficient capacity for checks on ID. Internet sellers must register with the states, and if found to be operating illegally, will be placed on a federal do not deliver list. The U.S. Department of Justice is responsible for the enforcement.

The PACT Act is one of the newest tools to help prevent and reduce the use of tobacco. The addition of these previously unpaid taxes directly reduces tobacco consumption and uptake, particularly with youth. Total cigarette consumption by youth is decreased by roughly 7% for every 10% increase in the total price of cigarettes. These new changes will help prevent youth, who are often tech-savvy, from obtaining tobacco from the internet.

This new law is a win-win for tobacco control; it lessens the economic burden on governments by removing a means of tax evasion and contributes greatly to prevention of youth tobacco consumption, a priority in battling tobacco, still the leading preventable cause of death in the U.S.



WELCOME TO PTM

Vincent Bryant is the new PTM Office Assistant. He comes to PTM from the Office of MaineCare Services where he worked for over 5 years. Being a former smoker, he feels honored to be working for such a great program. He also enjoys playing the drums, which he has been doing for over 20 years.

Maine Awarded National Contract For Compliance

In June 2010, the U.S. Food and Drug Administration (FDA) Center for Tobacco Products awarded two states, Maine and Massachusetts, with a compliance and enforcement contract to increase the enforcement of state and federal tobacco laws. The approximately \$750,000 over one year will assist PTM and John Archard, Tobacco Enforcement Coordinator, to increase compliance checks at stores to limit the accessibility of tobacco products to young people. Stores will also be checked for compliance with federal advertising and labeling restrictions. These funds will enable the inspection of every licensed cigarette retailer in Maine. Preventing youth from ever starting tobacco use is one of the best interventions to stop them from becoming the next generation of “hooked” tobacco users.

Maine CDC Programs Collaborate to Produce Diabetes Resources

The Partnership For A Tobacco-Free Maine, the Maine Diabetes Prevention & Control Program, the Maine Cardiovascular Health Program, and Healthy Communities Program at Maine CDC have collaborated to develop new materials for persons diagnosed with diabetes. The purpose of the new materials is to raise awareness that individuals with diabetes who use tobacco, or are exposed to second-hand smoke, are at risk for greater complications, including heart disease.

A brochure and magnet describe the negative effects of tobacco use, offer simple tips on how to quit, and suggest ways to take charge of diabetes for a healthier life. These materials were mailed, in early August, to residents

with diabetes in six counties—Washington, Hancock, Somerset, Oxford, Aroostook, and Piscataquis.

KeepMeWell and 211 materials were included in the packets as additional resources for improving health. A second mailing to MaineCare recipients who have diabetes will be sent in September.

In addition, the team is creating short vignettes of people with diabetes who have successfully quit smoking and want to share

their story. These videos are currently being produced and will be available for viewing at provider offices and other appropriate public settings later this year.

If you would like more information, please contact Cathy Ramaika,

PTM (Catherine.ramaika@maine.gov, 287-4628) or Holly Richards, Maine Cardiovascular Health Program (holly.richards@maine.gov, 287-4298).



American Lung Association of NE Annual Meeting

October 15

27th Annual Peer Leadership Conference
November 11, Augusta Civic Center

7th Annual Maine Anti-Tobacco Youth Summit
November 12, Augusta Civic Center

Great American Smoke Out
November 18

English Students Write Letters For Change

Usually we think of talking to students about tobacco in a health class or science class, but there are many ways to bring tobacco into the classroom. Last spring Erica McCrum, Youth Program Coordinator for Healthy Aroostook, was invited to speak to an English class at Central Aroostook Junior High School about tobacco use in the movies. Mrs. Allen, the teacher for the English class, was doing a unit on “Mediated Persuasion” and wanted to look at how movies that contain smoking actually persuade youth to smoke. The students were urged to write letters to their congressional delegation and the Movie Pictures Association of America (MPAA) to encourage those in charge to change the rating of movies that display tobacco use to an R-rating. A lively debate was held on the pros and cons of this argument, and in the end, 21 letters were sent urging their legislators and the MPAA to make this change.



PTM Educates School Staff on New Tobacco Products

Two PTM staff members participated in the 25th Annual Maine Schoolsite Health Promotion Conference at Sugarloaf in June. They conducted an exhibit and presented at roundtable discussions about the new and emerging tobacco products, such as snus, orbs, and strips. Participation in the event was tremendous. PTM was delighted to have had conversations with so many school staff interested in learning how the



tobacco industry is developing these products to keep youth addicted. Feedback on the resources and exhibit was enthusiastic and positive.



New Version of the Good Work! Kit Available

The Good Work! Kit is the resource that PTM has developed to assist all Maine employers to meet the requirements of the Workplace Smoking Act. The kit has been substantially updated to assure that it is in line with current Maine law. Using a flexible format, the new kit includes sample policies, current laws and rules, ideas for designing a policy, and a policy development checklist. The Good Work! Kit is available on the PTM online store at www.ptmstore.org and can be viewed on the web at www.tobaccofreemaine.org.



Web LINKS

Searching for the latest data? Check out these helpful links:

Tobacco Control State Highlights 2010 available at:
http://www.cdc.gov/tobacco/data_statistics/state_data/state_highlights/2010/index.htm

Tobacco Control State Highlights 2010: Surveillance & Evaluation Supplement at:
http://www.cdc.gov/tobacco/data_statistics/state_data/state_highlights/2010/supplement/index.htm

These include information on the burden of tobacco use and the strategies that have the most impact on reducing tobacco use and preventing initiation of use. Many of the data sources used are new to tobacco control. The second document provides more detailed information about the Highlights indicators and discusses measurement and evaluation considerations relevant to interpreting the findings.

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- Physiological effects of tobacco
- UMaine goes tobacco-free
- New resources available

*The Link is published by the Partnership For A Tobacco-Free Maine (PTM).
The mission of PTM is to reduce death and disability from tobacco use among Maine residents
by creating an environment supportive of a tobacco-free life. For more information,
visit us at www.tobaccofreemaine.org or contact us at (207) 287-4627.*



Maine Center for Disease
Control and Prevention

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John E. Baldacci, Governor

Brenda M. Harvey, Commissioner

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