



E-Bulletin



Issue 22

April 2011

The E - Bulletin is a service provided from the in-house team of physicians (Specialists, GP's & the In-house Training Center) at the **CEDARS – Jebel Ali International Hospital** in order to raise awareness about health issues.

Smoking and its ill effects

Smoking is a practice in which a substance, most commonly tobacco or cannabis, is burned and the smoke is tasted or inhaled. This is primarily practiced as a route of administration for recreational drug use, as combustion releases the active substances in drugs such as nicotine and makes them available for absorption through the lungs.

The most common method of smoking today is through cigarettes, primarily industrially manufactured but also hand-rolled from loose tobacco and rolling paper. Other smoking implements include pipes, cigars, bidis, hookahs, vaporizers and bong.



Active ingredients



There are more than 4,000 ingredients in a cigarette other than tobacco. Common additives include yeast, wine, caffeine, beeswax and chocolate. Here are some other ingredients:

- Ammonia: Household cleaner
- Angelica root extract: Known to cause cancer in animals
- Arsenic: Used in rat poisons
- Benzene: Used in making dyes, synthetic rubber
- Butane: Gas; used in lighter fluid
- Carbon monoxide: Poisonous gas
- Cadmium: Used in batteries
- Cyanide: Deadly poison
- DDT: A banned insecticide
- Ethyl Furoate: Causes liver damage in animals
- Lead: Poisonous in high doses
- Formaldehyde: Used to preserve dead specimens
- Methoprene: Insecticide
- Megastigmatrienone: Chemical naturally found in grapefruit juice
- Maltitol: Sweetener for diabetics
- Naphthalene: Ingredient in mothballs
- Methyl isocyanate: Its accidental release killed 2000 people in Bopal, India in 1984
- Polonium: Cancer-causing radioactive element

Cigarette smoke contains over 4,000 chemicals, including 43 known cancer-causing (carcinogenic) compounds and 400 other toxins.

These include: Nicotine, Tar, Carbon monoxide, Formaldehyde, Ammonia, Hydrogen cyanide, Arsenic, and DDT, etc

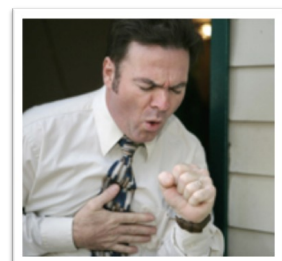
CEDARS - Jebel Ali International Hospital, Dubai, UAE. Tel: 04-881-4000 Fax: 04-881-4001

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Smoke containing nicotine is inhaled into the lungs, and the nicotine reaches your brain in just six seconds.

While not as serious as heroin addiction, addiction to nicotine also poses very serious health risks in the long run.



QUIT SMOKING

A cigarette is the only consumer product which when used as directed kills its consumer.

NICOTINE: Main addictive factor

Nicotine is highly addictive.

Nicotine affects many different parts of the body at the same time.

After just one puff of a cigarette it begins to act on the central nervous system, brain and other parts of the body.

It actually stimulates your system, even though it makes you feel relaxed.

Nicotine affects chemicals in the brain and, after a puff, you usually feel good

for a moment or two, which is why many smokers view smoking as stress relief when under pressure.

Some areas of the brain are pleasure related and when stimulated give the feeling of relaxation and reduced anxiety.

Efforts to provide treatment using Nicotine Replacement Therapy (NRT) have also lead to incidents of nicotine gum addiction and other nicotine addictions.

NICOTINE withdrawal symptoms

Over time as you continue to smoke, your body learns to depend on nicotine. As a result when you stop smoking you get 'nicotine cravings' one of many different nicotine withdrawal symptoms. Cravings and withdrawal symptoms when you quit smoking are a common experience.

It is the way your body reacts when it stops getting nicotine and all the other chemicals in tobacco smoke.

Not every smoker is affected to the same degree. Some will experience severe nicotine withdrawal symptoms but generally the symptoms will come and go over a period of a few days and most are gone within three weeks.

Cravings. Each one lasts 3 -5 minutes, and may be strong. Over time however, cravings will happen less often. More about cravings below.

Headaches (occasional), indigestion, nausea, diarrhea and sore throats rarely last more than four days.

Try usual over the counter remedies for these symptoms.

Insomnia and an increased tendency to dream.

Tea and coffee contain caffeine and, without nicotine (stimulant), your body absorbs much more caffeine (also a stimulant), which can make you restless, irritable and sleepless for a while.

Try drinking less tea and coffee, make your cups weaker.

Consider coffee substitutes, water, fruit juice and caffeine-free cola drinks.

Coughing most commonly caused by the cilia that line your lungs cleaning out the tar and mucus.

Irritability, depression or anxiety are closely connected to the physical action of nicotine leaving your body and will lessen over one to three weeks.

Increased appetite and possible weight gain.

Tiredness and lack of concentration.

SMOKER'S FACTS | Cigarette smoking has been identified as the most important source of preventable morbidity and premature mortality in the United States and the world | 3,000 nonsmoking adults die of diseases caused by exposure to second hand smoke every year | Secondhand smoke causes coughing, phlegm, chest discomfort and reduced lung function in nonsmokers | Mothers who smoke can pass nicotine to their children through breast milk |

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What makes cigarettes so irresistible?

It is for the **nicotine** in tobacco that the smoker smokes, the chewer chews, and the dipper dips. Hence, nicotine is in a cigarette.

In contrast to other drugs, nicotine delivery from tobacco carries an ominous burden of chemical poisons and cancer-producing substances that boggle the mind. Many toxic agents are in a cigarette. However, additional toxicants are manufactured during the smoking process by the chemical reactions occurring in the glowing tip of the cigarette. The number is staggering: more than 4,000 hazardous compounds are present in the smoke that smokers draw into their lungs and which escapes into the environment between puffs.

The burning of tobacco generates more than 150 billion tar particles per cubic inch, constituting the visible portion of cigarette smoke. According to chemists at R. J. Reynolds Tobacco Company, cigarette smoke is 10,000 times more concentrated than the automobile pollution at rush hour on a freeway. The lungs of smokers, puffing a daily ration of 20 to 60 low to high tar

cigarettes, collect an annual deposit of one-quarter to one and one-half pounds of the gooey black material, amounting to a total of 15 to 90 million pounds of carcinogen-packed tar for the aggregate of current American smokers. Hence, tar is in a cigarette.

But visible smoke contributes only 5-8% to the total output of a cigarette. The remaining bulk that cannot be seen makes up the so-called vapor or gas phase of cigarette "smoke." It contains, besides nitrogen and oxygen, a bewildering assortment of toxic gases, such as **carbon monoxide, formaldehyde, acrolein, hydrogen cyanide, and nitrogen oxides**, to name just a few. Smokers efficiently extract almost 90% of the particulate as well as gaseous constituents (about 50% in the case of carbon monoxide) from the mainstream smoke of the 600 billion cigarettes consumed annually in the U.S. In addition, 2.25 million metric tons of side stream smoke chemicals pollute the enclosed air spaces of homes, offices, conference rooms, bars, restaurants, and automobiles in this country. Hence, pollution is in a cigarette.



The more you inhale, the better it feels - and the greater the damage to your lungs.

"More than 4,000 hazardous compounds are present in the smoke that smokers draw into their lungs"

"Cigarette smoke is 10,000 times more concentrated than the automobile pollution at rush hour on a freeway"

Physiological facts

Nicotine in small doses acts as a stimulant to the brain. In large doses, it's a depressant, inhibiting the flow of signals between nerve cells. In even larger doses, it's a lethal poison, affecting the heart, blood vessels, and hormones. Nicotine in the bloodstream acts to make the smoker feel calm.

As a cigarette is smoked, the amount of tar inhaled into the lungs increases, and the last puff contains more than twice

as much tar as the first puff. Carbon monoxide makes it harder for red blood cells to carry oxygen throughout the body. Tar is a mixture of substances that together form a sticky mass in the lungs.

Most of the chemicals inhaled in cigarette smoke stay in the lungs. The more you inhale, the better it feels - and the greater the damage to your lungs.



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Types of smokers

Skinny Smoker - Your motivation to smoke is tied up with your body image, a trait that's especially common among women.

Sneaky Smoker - You can't (or won't) kick the habit, but you're ashamed of it, so you sneak cigarettes when your family and friends aren't around.

Rebel Smoker - you smoke because it's unhealthy and against the rules. You probably picked up the habit in your teens - an age when rebelliousness is linked to smoking, research shows.

Social Smoker - You only smoke in certain situations: at parties, at bars, at night, on the weekends. You're the tobacco equivalent of the social drinker. You might go a bit overboard sometimes (and smoke

a whole pack in a weekend, say), but you don't consider yourself a real smoker.

Stressed-out smoker - You're one of the 47% of smokers who say they light up to relieve stress. When you're racing to meet a deadline at work, or after you've had a fight with your spouse, you reach for a pack of smokes.

Serial Quitter - You tell yourself that every cigarette you smoke will be your last. Quitting smoking - and failing - has become a habit in itself.

Committed Smoker - You don't care if you're damaging your health, and you don't care what people think of you. You love smoking - or just simply can't imagine life without cigarettes.

Harmful effects of smoking

Every year hundreds of thousands of people around the world die from diseases caused by smoking cigarettes - Smoking KILLS.

One in two lifetime smokers will die from their habit. Half of these deaths will occur in middle age.

Tobacco smoke also contributes to a number of cancers.

The mixture of nicotine and carbon monoxide in each cigarette increases heart rate and blood pressure, straining the heart and blood vessels. This can cause heart attacks and stroke. It slows blood flow, cutting off oxygen to feet and hands. Some smokers end up having their limbs amputated.

Tar coats lungs like soot in a chimney and causes cancer. A 20-a-day smoker breathes in up to a full cup (210 g) of tar in a year.

Changing to low-tar cigarettes does not help because smokers usually take deeper puffs and hold the smoke in for longer, dragging the tar deeper into their lungs.

Carbon monoxide robs muscles, brain and body tissue of oxygen, making the whole

body and especially the heart work harder. Over time, airways swell up and let less air into the lungs.

Smoking causes disease and is a slow way to die. The strain of smoking effects on the body often causes years of suffering. Emphysema is an illness that slowly rots your lungs. People with emphysema often get bronchitis again and again, and suffer lung and heart failure.

Lung cancer from smoking is caused by the tar in tobacco smoke. Men who smoke are ten times more likely to die from lung cancer than non-smokers.

Smoking causes fat deposits to narrow and block blood vessels which leads to heart attack

Smoking causes around one in five deaths from heart disease. In younger people, three out of four deaths from heart disease are due to smoking.

Cigarette smoking during pregnancy increases the risk of low birth weight, prematurity, spontaneous abortion, and perinatal mortality in humans, which has been referred to as the fetal tobacco syndrome.

“ Every year hundreds of thousands of people around the world die from diseases caused by smoking cigarettes - Smoking KILLS. ”

Smoking causes the following cancers:
Acute myeloid leukemia
Bladder cancer
Cancer of the cervix
Cancer of the esophagus
Kidney cancer
Cancer of the larynx
Lung cancer
Cancer of the oral cavity (mouth)
Cancer of the pharynx (throat)
Stomach cancer
Cancer of the uterus

Smoking and Respiratory Disease
Smoking causes, lung cancer, lung diseases (e.g., emphysema, bronchitis, chronic airway obstruction) by damaging the airways and alveoli (i.e., small air sacs) of the lungs

Postmenopausal women who smoke have lower bone density than women who never smoked.

Women who smoke have an increased risk for hip fracture than women who never smoked

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Non-smokers exposed to second hand smoke are at greater risk for many of the health problems associated with direct smoking.



Nicotine Lozenge



QUIT SMOKING

*stop, stop, stop...
that is the last word
because it cannot be
reduced without a very
strong self motivation.*



Effects of second hand smoke

Passive smoking (also known as environmental tobacco smoke (ETS), involuntary smoking or second hand smoke) occurs when the exhaled and ambient smoke from one person's cigarette is inhaled by other people. Non-smokers exposed to second hand smoke are at greater risk for many of the health problems associated with direct smoking.

Passive smoking is especially risky for children and babies and can cause low birth weight babies, sudden infant

death syndrome (SIDS), bronchitis, pneumonia, and middle ear infections.

Non smokers living with smokers have about 25% increase in risk of death from heart attack and are also more likely to suffer a stroke, and some research suggests that risk to nonsmokers may be even greater than this estimate. One recent study in the British Medical Journal found that exposure to second hand smoke increases the risk of heart disease among non smokers by as much as 60%.

Nicotine Replacement Therapy

Nicotine Replacement Therapy (NRT) is a type of smoking cessation treatment that uses special products to give small, steady doses of nicotine to help stop cravings and relieve symptoms that occur when a person is trying to quit smoking.

Products

- **Nicotine Gum**

The pieces of gum are usually available in various flavors including fruit, liquorice and mint. Each piece typically contains 2 or 4 mg of nicotine, roughly the nicotine content of 1 or 2 cigarettes. The 4mg strength is the recommended strength for those smoking more than 20 cigarettes a day. Users are directed to chew the gum until it softens and produces a tingling sensation or "peppery" taste. The gum is then "parked," or tucked, in between the cheek and gums. When the tingling ends the gum is chewed again until it returns, and is then re-parked in a new location. These steps are repeated until the gum is depleted of nicotine (about 30 minutes) or until the craving dissipates.

- **Nicotine Inhaler**

Inhalers (or inhalators) consist of a plastic mouthpiece into which a replaceable cartridge is inserted. Users are directed to hold the inhalator like a

cigarette and inhale through the mouthpiece to intake nicotine and relieve withdrawal symptoms, cravings and urges to smoke.

- **Nicotine Lozenge**

Nicotine lozenges are dissolvable tablets that release therapeutic doses of nicotine when placed into the mouth and allowed to dissolve. They should not be chewed or swallowed whole. Users are typically directed place a lozenge in the mouth and allow it to dissolve while periodically alternating placement to each side of the mouth.

- **Sublingual Tablet**

Sublingual simply means dissolves under the tongue. These products work in a similar fashion to lozenges but are placed under the tongue. They should not be chewed or swallowed whole but placed in the mouth beneath the tongue and allowed to dissolve.

- **Nicotine Nasal Spray**

A nicotine-containing liquid that the users self-administer through the nose. Users are directed to insert the spray tip into one nostril, pointing the top towards the back of the nose before pressing firmly and quickly. Maximum recommended dosage for adults: 64 sprays per daily.

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Tips to stop smoking

- **Prepare to stop smoking**

Write down your reasons for stopping and keep the list to hand.

- **Make a date to stop**

Pick your day to stop and stick to it.

- **Get support**

Ask a friend or family for support or to stop smoking with you.

- **Think positive**

You may find you experience withdrawal symptoms once you stop smoking. These are, in fact, the positive signs that your body is free from the effects of tobacco. A cough, irritability and sleep disturbances are some common symptoms. Don't worry, they're all perfectly normal and will disappear within a week or two.

- **Learn to deal with cravings**

Cravings can often happen during the first few days after stopping. A craving gets worse for three to five minutes and then begins to disappear.

So when the craving starts, apply the 4D's.

Delay at least three minutes - the urge will pass.

Drink a glass of water or fruit juice.

Distract yourself – move away from the situation.

Deep breaths. Breathe slowly and deeply.

- **Change your routine**

Smoking is often linked to certain times and situations, such as the first smoke in the morning, and drinking tea, coffee or alcohol. Avoid those situations by doing something different at these times.

Quit Smoking



QUIT SMOKING

“The key is focusing on the positive. Build up the good things in your life and the smoking will go away by itself”

Benefits starts as soon as you stop

- **Within 20 minutes**, your blood pressure and pulse rate will return to normal. Circulation improves in your hands and feet, making them warmer.
- **Within eight hours** of stopping, the oxygen level in your blood will rise to normal and your carbon monoxide level will fall.
- **Within 24 hours**, the chance of you suffering a heart attack and stroke begins to fall.
- **Within 72 hours**, you can hold more air in your lungs. Breathing becomes easier. Your energy levels

increase.

- **Within days**, your blood is less likely to clot.
- **Within five years**, the risk of a heart attack falls to about half that of a smoker.
- **Within 10 years**, you will have about the same risk of heart disease as someone who has never smoked.

There are many more benefits including increased energy and you will be free from the worry that you are damaging your health, as well as that of your family and friends. ❖



Medical Consultant for May 2011



Dr. Jaydip Niyogi
General Practitioner

Dr. Jaydip is a well experienced doctor with more than eight years in clinical practice.

He finished his MBBS from the Calcutta National Medical College and Hospital in India and worked thereafter in various Hospitals in India and Maldives from 2000 to 2008. Dr. Jaydip Niyogi has also undergone Basic Surgical skills Course by the Ethicon Institute of Surgical Education, Royal College of Surgeon of Edinburgh, Indian chapter.

His special interest is in Orthopedic and Surgery.

For further information about our doctors, please call +971 4 881 4000

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