



# Smoke

do not turn your life into dust



# Why this booklet?

The consumption of cigarettes has doubled worldwide from the '60s up till now. But in the last two decades smoking has decreased in Western countries while in developing areas has been increasing by 3,4% every year. Particularly, the 80% of this increase will occur in the Far East, especially China (where already one out of three is a smoker). Women represent a sensitive target for industry, because "only" 9% of them is a smoker in developing countries, compared to 50% of men.

**Tobacco is one of the most dangerous substances for health: those who smoke are more likely to develop more than 50 serious diseases, including cancer.** Nine out of ten cases of lung cancer are caused by the carcinogenic substances contained in cigarettes! **If you smoke, it is important to stop as soon as possible:** each week with a cigarette is equivalent to one day of life lost. This booklet is packed with information about the damage of this habit and tips on how to go back to deep breaths, reducing the risk of illness, including cancer.



## Who we are

The **Insieme Contro il Cancro** Foundation is a non-profit organization born to fight against cancer across the board, by implementing communication and education campaigns, research activities, prevention (including healthy lifestyle, screening), diagnosis and treatment, rehabilitation and social reintegration of people affected by cancer.



The World Health Organization (WHO) has classified smoking as a disease from pharmacological addiction, together with alcohol and heroin abuse.

# Nicotine

The “need of nicotine”, the psychoactive component of tobacco, is a real **psychological addiction**. In fact, it has all the requirements established by the Diagnostic and Statistical Manual of Mental Disorders (DSM): withdrawal symptoms, persistent desire to quit smoking, reduced activities due to smoking, continuous use despite physical and psychological problems. Nicotine gives the “taste” and the pleasure of smoking but at the same time is also responsible for many damages to health. In every cigarette, depending on the type, there are between 0,5 and 2 milligrams of nicotine. A relaxing effect, an increase of attention and a decreased appetite are among the “benefits” of this substance.

But nicotine also produces **numerous side effects** such as nausea, vomiting, tremors, increased heart rate and blood pressure changes. Also important is the rapidity of its absorption (much higher than the one of cigar and pipe's tobacco): in fact, the nicotine of cigarettes reaches the brain in just 8 seconds after the first inhalation.

# What's in a cigarette?

## CARBON MONOXIDE

bonds to hemoglobin instead of oxygen; it raises blood platelets concentration making blood more viscous, increasing thrombosis risks

Tobacco's combustion produces 3,900 substances seriously harmful for the body. The main ones are:

## NICOTINE

A pure drop of nicotine is fatal to humans: it increases heart rate (a smoker's heart reaches 10,000 beats per day more than a no smoker's one); it is a vasoconstrictor, i.e. it increases the pressure with effects on the entire body (this is the causes of 34% of deaths from vascular reasons). In addition, it can cause dizziness, nausea, vomiting

## POLONIUM-210

is a radioactive element, present for about 30 % in the blood of smokers. It is a chemical element that is absorbed by tobacco plants through fertilizers, inhaled and retained by the bronco-pulmonary system

## BENZOPYRENE

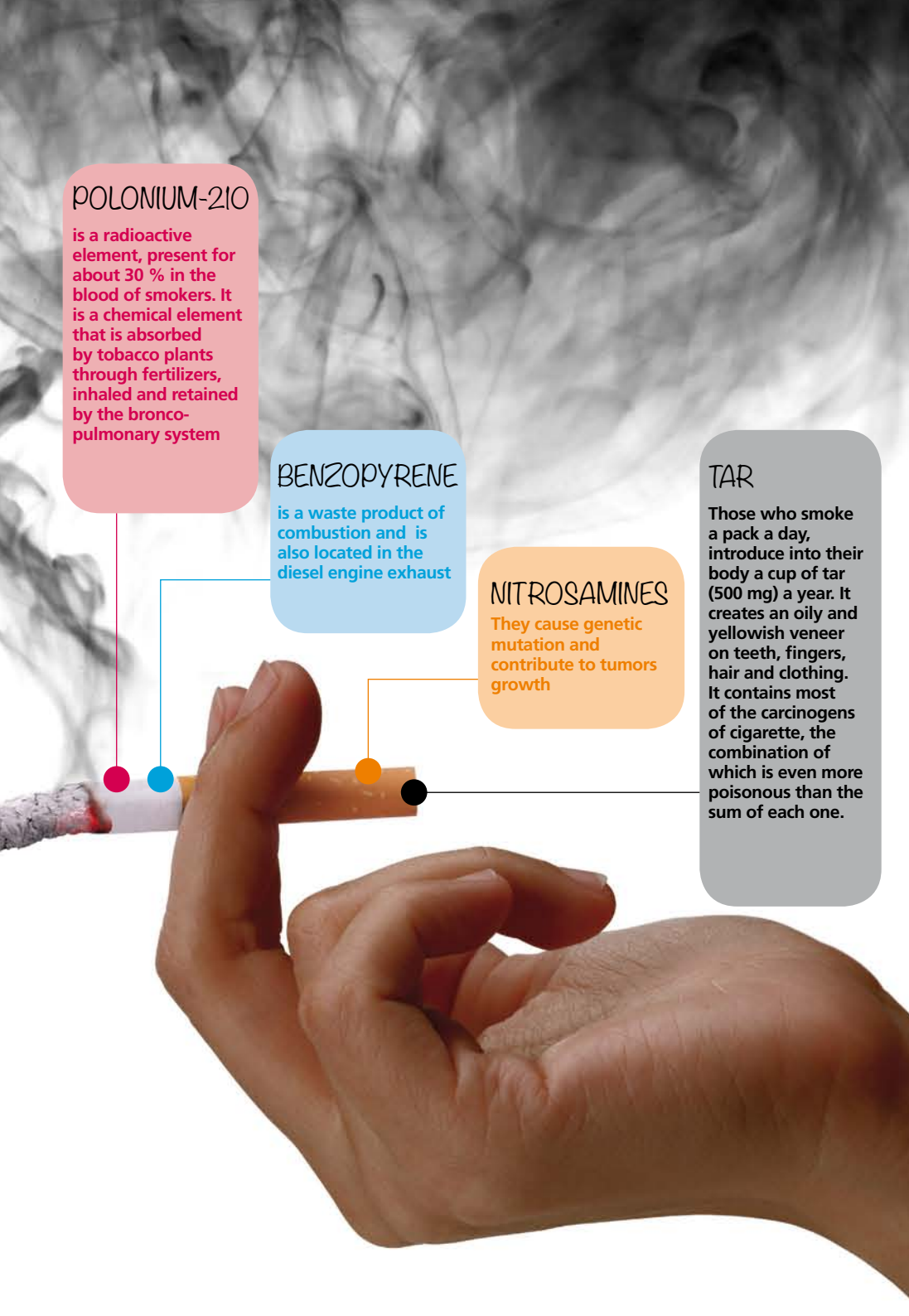
is a waste product of combustion and is also located in the diesel engine exhaust

## NITROSAMINES

They cause genetic mutation and contribute to tumors growth

## TAR

Those who smoke a pack a day, introduce into their body a cup of tar (500 mg) a year. It creates an oily and yellowish veneer on teeth, fingers, hair and clothing. It contains most of the carcinogens of cigarette, the combination of which is even more poisonous than the sum of each one.



# The dangers of smoking and the risk of cancer

One smoker out of two has about 10-15 year lower life expectancy because of cancer, especially lung cancer.

But there are many other body parts that are at risk, including oral cavity, pharynx, larynx, esophagus, pancreas, uterine cervix, urinary tract, kidneys.

Anyway, **lung cancer is the most common and preventable one, because most of the time it is connected to smoking.** This disease affects 38,000 people every year in Italy, with a gradual and alarming rise in the incidence in women: compared to some years ago, in fact, women smoke a lot more. It is a very difficult cancer to treat, so it's good to minimize the risk by simply throwing away your cigarette!

**A person who smokes a pack a day will consume 500,000 of it in his life!**  
**Knowing that a cigarette releases about 1/100 grams of particles, at the end over 5 kg of toxic substances will be released in the lungs!**





## But what exactly happens to our respiratory system when we smoke?

The hot smoke inhaled progressively alters the mucosal lining of the bronchi and paralyzes the tiny hairs that protect them. These tiny hairs are used to repel dust, secretions and inhaled microbes. But the continuous smoking alters them until they disappear. This makes it impossible to "clean up" the lungs from all impurities.

The only useful tool is the cough, but it fails to complete all its task. This brings us to the final stage, where the inflammation turns the lining of the bronchi and paves the way to cancer. Why haven't you given up yet?



In the United States, where a systematic fight against this habit has been implemented since the 70s, a dramatic reduction in the number of new cases and in the number of deaths from lung cancer, especially in males, has been registered.

# Passive smoking

Unfortunately, even those who have never lit a cigarette have to deal with those of others.

Secondhand smoke is a great enemy of our health, but it is often underrated. We tend to consider it as a minor risk, but it is not so, especially for children. In fact:



- ✓ it increases by 20% the probability of suffering from coronary heart disease and heart attacks
- ✓ those who have smoke-addicted colleagues who smoke at work have about 19% greater risk of being affected by cancer
- ✓ a smoker's partner has more than 20-30% chances to get lung cancer

If you just cannot do without it, **smoke only in open areas and away from other people (especially children and pregnant women).**

If you see someone with a lit cigarette in an enclosed public place invite him to turn it off. Remind him that what he is doing, as well as being harmful for you, is illegal.







## What does the Italian law say about smoking ?

A measure of the 16<sup>th</sup> January 2003 and entered into force in early 2005, prohibits the consumption of tobacco products in public places such as bars, restaurants, clubs, offices and schools. You can only smoke in special enclosed rooms that meet certain criteria.

The same goes for the car: a single cigarette turns the car into a gas chamber that causes a sharp increase in the level of fine dust (especially PM2.5 and PM10), volatile organic compounds (for example benzene) and carbon monoxide. 10 minutes after lighting a cigarette, the air inside the vehicle is still very polluted and PM10 is more than 500 micrograms per cubic meters, more than 10 times the daily limit set by the European regulations.

This can cause serious damage to those who suffer from asthma or heart disease. Opening the window is not enough! Ventilating the passenger compartment helps keep down the levels of certain pollutants from the cigarette, but not all of them. You can still breathe foul air by millions of harmful particles.

## ✓ And during pregnancy?

Babies coming can be a great opportunity to quit smoking or to “force” close relatives to do so. Many studies have shown that smoking during pregnancy is a risk factor for miscarriage, premature birth, low birth weight and increase in infant mortality.

Cigarettes also cause a delay in cognitive development in children, which is a major risk compared to respiratory infections and asthma. Finally, mothers who smoke have less and lower quality milk than those who do not.

# How to quit smoking following six rules:

1. Try not to smoke whenever you want, but only at specific intervals. If you miss the programmed time, wait until the next appointment
2. Set a date to turn off the last cigarette and communicate it to friends, family and colleagues for support and encouragement
3. Establish a reward to yourself for stopping smoking for a certain time, perhaps corresponding to the value of savings coming from not buying cigarettes
4. Remove all traces of cigarettes from your environment (packets, ashtrays, lighters), and remove from the house the smell of smoke
5. When the desire of smoking is urgent, drink in small sips, eat light foods (apples, carrots), chew sugarless gum (which also mimics the gesture of opening a pack of cigarettes), take deep breaths
6. Always think about the benefits that you will gain by quitting smoking



# So what are these benefits?



## After quitting smoking for:

<b>20 minutes</b>	your blood pressure, heart rate and temperature of the limbs become regular
<b>2 hours</b>	the nicotine starts to be eliminated from the body through urine
<b>8-12 hours</b>	the levels of carbon monoxide and oxygen return to normal
<b>24 hours</b>	the carbon monoxide is eliminated from the body
<b>2 days</b>	the senses of taste and touch improve: breath, fingers, teeth and hair are cleaner
<b>72 hours</b>	it is easier to breathe after the relaxation of the bronchial tube; an increase in lung capacity is observed and nicotine has been completely eliminated
<b>1 week</b>	you have more strength, energy, breath, enthusiasm and time for yourself. All senses, especially taste, are sharpened. Breath is better, teeth and hair are cleaner. Even the skin has a more rosy color and withdrawal symptoms disappear
<b>3 weeks</b>	work or any activities are easier
<b>1 month</b>	ciliated epithelium of the respiratory tract, which was destroyed by smoke, is rebuilt and mucus is removed from the bronchi. The cough removes harmful substances. The risk of respiratory infections decreases
<b>3-6 months</b>	weight gain problems disappear in 1 out of 3 people
<b>3-9 months</b>	breathing improves (less cough, more breath). Lung function increases by 20-30%. Chronic cough tends to disappear
<b>1 year</b>	the risk of cardiovascular disease, such as heart attack or stroke, decreases significantly. This is because nicotine was acting as a vasoconstrictor on arteries
<b>5 years</b>	cancer risk for the oral cavity and esophagus remains, but it drops by 50%, as well as the possibility of stroke
<b>10 years</b>	the probability of contracting lung cancer is still present but decreased by 40-50%
<b>15 years</b>	the risk of cardiovascular disease and cancer falls and remains only slightly higher than that of non-smokers



- Smoking habit is classified as a disease from pharmacological addition, together with alcohol and heroin abuse
  - The combustion of tobacco produces 3,900 substances seriously harmful for the body
    - Smoking is a direct cause of cancer. Many body parts are at risk: lungs, oral cavity, pharynx, larynx, esophagus, pancreas, uterine cervix, urinary tract, kidneys
    - Secondhand smoke is a great enemy of health, but it is underestimated. It increases by 20% the risk of coronary heart disease and heart attacks and by 19% the chance of developing cancer
    - In Italy it is forbidden to light cigarettes in public places such as bars, restaurants, clubs, offices and schools. Smoking is only permitted in special enclosed rooms that meet certain requirements