Smoking - effects on your body
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Summary

- Tobacco smoke contains over 70 known cancer-causing chemicals.
- Smoking harms nearly every organ in your body.
- Smoking when you are pregnant causes harm to your unborn baby.
- Children exposed to second-hand smoke in their first year of life have a greater risk of illness and sudden unexpected death in infancy (SUDI).

Nicotine is the addictive drug in tobacco smoke that causes people who smoke to continue to smoke.

Along with nicotine, people who smoke inhale about 7,000 other chemicals in cigarette smoke. Many of these chemicals come from burning tobacco leaf. Some of these compounds are chemically active and trigger profound and damaging changes in the body.

Tobacco smoke contains over 70 known cancer-causing chemicals. Smoking harms nearly every organ in the body, causing many diseases and reducing health in general.

Dangerous chemicals in tobacco smoke

Highly damaging components of tobacco smoke include:

- tar – is the word for the solid particles suspended in tobacco smoke. The particles contain chemicals, including cancer-causing substances (carcinogens). Tar is sticky and brown, and stains teeth, fingernails and lung tissue.
- carbon monoxide – is a poisonous gas. It is odourless and colourless and, in large doses, quickly causes death because it takes the place of oxygen in the blood. In people who smoke, the carbon monoxide in their blood makes it harder for oxygen to get to their organs and muscles.
- oxidizing chemicals – are highly reactive chemicals that can damage the heart muscles and blood vessels of people who smoke. They react with cholesterol, leading to the build-up of fatty material on artery walls. Their actions lead to heart disease, stroke and blood vessel disease.
- metals – tobacco smoke contains several metals that cause cancer, including arsenic, beryllium, cadmium, chromium, cobalt, lead and nickel.
- radioactive compounds – tobacco smoke contains radioactive compounds that are known to be carcinogenic.

Effects of smoking tobacco on the body

Inhaling tobacco smoke causes damage to many of the body’s organs and systems.

Effects of smoking on the respiratory system

The effects of tobacco smoke on the respiratory system include:

- irritation of the trachea (windpipe) and larynx (voice box)
- reduced lung function and breathlessness due to swelling and narrowing of the lung airways and excess mucus in the lung passages
- impairment of the lungs’ clearance system, leading to the build-up of poisonous substances, which results in lung irritation and damage
- increased risk of lung infection and symptoms such as coughing and wheezing
- permanent damage to the air sacs of the lungs.

Effects of smoking on the circulatory system

The effects of tobacco smoke on the circulatory system include:

- raised blood pressure and heart rate
- constriction (tightening) of blood vessels in the skin, resulting in a drop in skin temperature
- less oxygen carried by the blood during exercise
- ‘stickier’ blood, which is more prone to clotting
- damage to the lining of the arteries, which is thought to be a contributing factor to atherosclerosis (the build-up of fatty deposits on the artery walls)
- reduced blood flow to extremities (fingers and toes)
- increased risk of stroke and heart attack due to blockages of the blood supply.

Effects of smoking on the immune system

The effects of tobacco smoke on the immune system include:

- greater susceptibility to infections such as pneumonia and influenza
- more severe and longer-lasting illnesses
- lower levels of protective antioxidants (such as vitamin C), in the blood.

Effects of smoking on the musculoskeletal system

The effects of tobacco smoke on the musculoskeletal system include:

- tightening of certain muscles
- reduced bone density.

Effects of smoking on the sexual organs

The effects of tobacco smoke on the male body include an increased risk for:

- lower sperm count
- higher percentage of deformed sperm
- genetic damage to sperm
- impotence, which may be due to the effects of smoking on blood flow and damage to the blood vessels of the penis.

The effects of tobacco smoke on the female body include:

- reduced fertility, menstrual cycle irregularities, or absence of menstruation
- menopause reached one or two years earlier
- increased risk of cancer of the cervix
- greatly increased risk of stroke and heart attack if the person who smokes is aged over 35 years and taking the oral contraceptive pill.

**Other effects of smoking on the body**

Other effects of tobacco smoke on the body include:

- irritation and inflammation of the stomach and intestines
- increased risk of painful ulcers along the digestive tract
- reduced ability to smell and taste
- premature wrinkling of the skin
- higher risk of blindness
- gum disease (periodontitis).

**Effects of smoking on babies**

The effects of maternal smoking on an unborn baby include:

- increased risk of miscarriage, stillbirth and premature birth
- weaker lungs
- low birth weight, which may have a lasting effect on the growth and development of children. Low birth weight is associated with an increased risk of heart disease, high blood pressure, and diabetes in adulthood
- increased risk of cleft palate and cleft lip
- increased risk of attention deficit hyperactivity disorder (ADHD).

Passive smoking (exposure of the non-smoking mother to second-hand smoke) can also harm the fetus.

If a parent continues to smoke during their baby’s first year of life, the child has an increased risk of ear infections, respiratory illnesses such as pneumonia and bronchitis, sudden unexpected death in infancy (SUDI) and meningococcal disease.

**Diseases caused by long-term smoking**

A person who smokes throughout their life is at high risk of developing a range of potentially lethal diseases, including:

- cancer of the lung, mouth, nose, larynx, tongue, nasal sinus, oesophagus, throat, pancreas, bone marrow (myeloid leukaemia), kidney, cervix, ovary, ureter, liver, bladder, bowel and stomach
- lung diseases such as chronic bronchitis and chronic obstructive pulmonary disease, which includes obstructive bronchiolitis and emphysema
- heart disease and stroke
- ulcers of the digestive system
- osteoporosis and hip fracture
- poor blood circulation in feet and hands, which can lead to pain and, in severe cases, gangrene and amputation
- type 2 diabetes
- rheumatoid arthritis.

**Where to get help**

- Your GP (doctor)
- Your pharmacist
- Quitline Tel. 13 QUIT (13 7848)

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**Tips to quit smoking**

betterhealth.vic.gov.au
1. Giving up smoking can be hard, but you can do it. Although it may seem daunting, it can take a few attempts to be successful. Don’t be put off – just making the decision to quit is a step in the right direction. Try these few simple tips to help you on your way.

2. **Deciding to quit**

   List all your reasons for quitting, (e.g. you may want to save money, gain better health, or protect loved ones from the [health risks of passive smoking](https://www.betterhealth.vic.gov.au/Health/ConditionsAndDisorders/passive_smoking)). The more powerful the reason, the more likely you will stay motivated.

   Hint: put your list somewhere visual (such as the fridge or on your phone), and refer to it whenever you feel tempted to ‘light up’.

3. **Pick a quit date**

    Pick a ‘quit date’ and stick to it. Make sure to choose a day where you’re less likely to be under pressure. Plan something nice to occupy your time. [Quit Victoria](https://www.quit.org.au) suggests
taking a couple of weeks to prepare. Attempt some practice runs – try not to smoke on occasions when you normally would (e.g. work break times and at the pub). Instead, go to places that have no association with smoking. Ditch your lighter and refuse any offers of cigarettes.

Hint: get rid of all cigarettes and ashtrays in the house, car and anywhere else the night before your ‘quit date’. If there are other smokers in the household, suggest they join you. If they can’t, ask them to smoke outside or somewhere away from you.

4. Be strategic

Work out the best way to quit smoking. Don’t be afraid to ask for professional help – seek guidance and support from a doctor or trained quitting advisor. They can help with managing strong emotions and set us on track. The more motivated you are, the more likely you are to be successful. There is loads of support out there – including online, phone and SMS tools. Make a decision on whether to go ‘cold turkey’ (which means stopping abruptly), use nicotine replacement therapy, attend a course or try a combination of strategies. Doctors can prescribe medication together with counselling to help with withdrawal symptoms.

5. Coping with cravings

Once you’ve made the decision to quit, the first couple of weeks can be the hardest. You may feel tense, tired and irritable as your body adjusts. If you feel the urge to ‘light up’ try the simple four Ds – delay acting on the urge to reach for a cigarette, take a few deep breaths, drink water, and do something else until the craving passes.

Remember: After about a month, strong cravings tend to happen less often, and not every day.
6. **Reward yourself**

Every time you resist the urge to smoke, you’re one step closer to breaking your nicotine habit for good so reward yourself for your hard work. Reflect on your efforts and how healthy you are becoming – after a couple of days you’re almost nicotine free and the carbon monoxide in your blood will have dropped. By three months, circulation and immune function will improve and coughing and wheezing will ease. You’ll also feel less stressed. By a year, your lungs will be healthier. Hint: treat yourself with the money you’ve saved – get a massage, see a movie, buy something nice. You’re doing it tough, it’s the least you can do. Remember, if you smoke a packet a day that’s a saving of around $10,000 in one year!

7. **Plan for tough situations**

Giving up the ciggies means a huge change in routine for most smokers. In the first few weeks, try to steer clear of alcohol and any other triggers. For many, cigarettes and alcohol go hand-in-hand. Avoid places where people smoke and try to keep busy. Do something else to unwind – listen to music, meditate, keep active, connect with other non-smokers or try a new hobby. Replace workplace cigarette breaks with a walk around the block, or ‘freshen up’ in the bathroom – brush your teeth, notice how much better your mouth feels since quitting. Be kind to yourself, take it one day at a time.

Hint: have a ‘cleanse’ in the first few weeks of quitting – get rid of the scent of stale tobacco in your house, car and anywhere else that’s going to trigger your cravings.
Take it one day at a time

Take it one day at a time. Focus on not smoking today and don’t be swayed into having 'just one'.

Managing weight gain

Although the average weight of ex-smokers is similar to those who have never smoked, many smokers are worried about weight gain. Strong emotions and withdrawal symptoms can make us hungrier. If you think you may be a comfort eater, it’s a good idea to plan ahead. Look for ways to eat healthily, get a good night’s sleep and incorporate 30 minutes of physical activity into your routine each day. Cut down on foods high in fat, salt and sugar and look for healthy snacks. Listen to your body – are you really hungry? Chew on some sugarless gum if cravings are bothering you. Focus on the positives – if you gain a few kilos, quitting smoking is an even bigger boost to your health than gaining a few kilos. If you need help, see a doctor or dietitian.

Hint: don’t substitute cigarettes with caffeine – it can make us anxious and stop us from getting the sleep we need.
**Don't go it alone**

Those who have more success at quitting are the ones who drum up support. Think about what suits you best. Call on family and friends – if you know someone who has ditched the ciggies ask them to be a mentor. If you prefer face-to-face contact, get encouragement and advice from a reputable health professional who is trained as a quit smoking advisor, or attend a course. If access is a problem or you like your privacy, ring Quitline call-back service on 13 7848, sign up to QuitCoach and QuitTxt.

Hint: in Victoria, there is a range of free services and many are available in a variety of languages. If you live elsewhere, check with your doctor or community health service.

**It's okay to fail**

It is okay to slip up – quitting can take a number of attempts. Take note of your triggers and plan how to avoid them in future. Don’t throw it in if you have a setback. Instead, learn from the experience – see it as a practice attempt to bring you closer to your goal.

Remember: people who smoke are battling with three addictions – nicotine, emotional and habitual – and that’s why it can be so tough to give up!
Use tools

Take advantage of the many tools out there and get support when you need it. Some are great at offering encouragement and distraction tips in tough times. Download an app (such as MyQuitBuddy from the App Store or Google Play) – it’s free and personalised. Quit also has Quitline (call 13 7848), it has a handy call-back service – book appointments with a trained professional at times that suit you. If talking is not your thing, sign up to free QuitTxt and QuitCoach.

References

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- What’s in cigarettes and roll-your-own tobacco?, 2017, Quit Victoria.

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Smoking and tobacco

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• Smoking and tobacco basics
• Reasons to stop smoking
• Plan to quit
• Smoking and health conditions
• Smoking risks throughout life

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• e-cigarettes
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  Smoking kills more Victorians every year than road accidents, alcohol and other drugs combined...
• Smoking - the financial cost
  If you want to quit smoking, think about how much of your weekly income is going up in smoke...
• Victoria’s tobacco laws
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  When you decide to quit smoking, it can help to find out what to expect as you work through the process. Some people have only a few mild symptoms when they quit but others find it harder. While...

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• Chronic obstructive pulmonary disease - diagnosis (video)
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  What do the experts say about electronic cigarettes. Electronic cigarettes – or e-cigarettes – simulate the act of smoking, but you don’t burn tobacco when you use them...

• Quitting smoking and managing weight
  You would have to gain over 40 kilograms above your recommended weight to equal the risk of heart disease posed by smoking...

• Smoking - quitting tips
  People who successfully quit smoking see their past attempts as practice and experience...

• Smoking - Understand your smoking addiction (video)

• Top tips to quit smoking
  Tips to help you quit smoking...

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• Smoking and eye disease
  Smoking is thought to be a factor in age-related macular degeneration and blindness...

• Smoking and heart disease
  A smoker's excess risk of heart attack reduces rapidly after only one year of not smoking...

• Smoking and oral health
  People who smoke should visit their dentist regularly to keep their teeth and gums healthy, and have regular oral cancer checks...

• What to expect when you quit smoking
  When you decide to quit smoking, it can help to find out what to expect as you work through the process. Some people have only a few mild symptoms when they quit but others find it harder. While...

Smoking risks throughout life

• Asthma, children and smoking
  Exposure to second-hand smoke increases the risk of children developing asthma and provokes more frequent asthma in children with asthma...

• Chronic obstructive pulmonary disease - diagnosis (video)

• Pregnancy and smoking
  Smoking while pregnant exposes a woman and her unborn child to an increased risk of health problems...

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- **Quit - Never Give Up Giving Up**
- **Tobacco in Australia: facts and issues**

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