

## Smoking and your eyes

Most people know that smoking is not good for their health, but many people are surprised to learn that smokers are more at risk of losing their vision.

Smoking can lead to vision loss and blindness which can severely impact on a person's quality of life, affecting driving, reading and recognising faces.

### How does smoking damage the eyes?

Tobacco smoke contains over 7,000 chemicals, many of which are toxic.<sup>1</sup> When you inhale these chemicals they enter your blood stream and damage the blood vessels throughout your body.<sup>2</sup> These chemicals cause damage to the macula, which is part of the retina at the back of your eye. The retina changes light and images into nerve signals to your brain, and the macula makes your vision sharper and more detailed.<sup>3</sup>

Toxins in tobacco smoke damage the cells in your eye, slowly killing them. They also change the blood flow in the eye and make it harder for the eye to get rid of waste products around the retina. As these waste products build up they interfere with the supply of nutrients to the retina.<sup>2,3</sup>

Damage to the eye is often permanent. It can lead to loss of sight from serious diseases such as age-related macular degeneration (AMD) and cataracts.

**Stopping smoking is one of the most important things you can do to protect your eyesight.**

### Smoking causes these diseases:

#### Age-related macular degeneration (AMD)

AMD refers to damage to the macula which leads to a loss of detailed central vision. AMD can make tasks such as reading, driving, watching television and recognising faces very difficult.<sup>4</sup> AMD is the leading cause of blindness in Australia.<sup>5</sup> It has no cure, but some treatments can slow down the worsening of some types of AMD.

Stopping smoking is the main way to reduce your risk of AMD.<sup>3,6,7</sup> People who smoke are about twice as likely to develop AMD than someone who has never smoked.<sup>3,6,7</sup> They are also more likely to lose vision earlier due to AMD than people who don't smoke.<sup>3</sup>

## **Cataract**

A cataract is a clouding of the lens, which makes vision blurry and may lead to blindness if not removed.<sup>2</sup> They usually develop as people age. People who smoke are up to two times as likely to develop cataracts compared to someone who has never smoked. Stopping smoking slows down the development of cataracts and reduces your risk of getting them.<sup>2, 8</sup>

## **Smoking is linked to other eye diseases and conditions:**

### **Contact lens related problems**

People who smoke and wear contact lenses have an increased risk of developing infection and inflammation in the eye compared to people who don't smoke.<sup>9-12</sup> Both these conditions can lead to scarring and possible loss of vision over time.

### **Inflammatory eye disease (uveitis)**

Inflammation can occur in one or more parts of the eye and may cause redness, pain, sensitivity to light and blurred or decreased vision. People who smoke are more likely to have inflammatory eye disease than people who have never smoked.<sup>13, 14</sup> Inflammation tends to be more severe in people who smoke and to recur more quickly.<sup>15</sup>

### **Graves' disease (thyroid eye disease)**

Graves' disease is a fairly rare autoimmune disease. Smoking increases the risk of developing complications of the eye associated with this disease.<sup>2, 16, 17</sup>

Symptoms include bulging of the eyeball, double vision, optic nerve disease and inflammation. People with Graves' disease who smoke tend to suffer worse symptoms than non-smokers and don't respond as well to treatment.<sup>2, 17-19</sup>

### **Retinal blood clots**

This occurs when the blood vessel providing the inflow of blood to the retina in the eye becomes blocked. It can bring on a sudden loss of vision, but it can also occur without symptoms. Smoking increases the risk for this condition.<sup>20-22</sup>

### **Smoking during pregnancy**

Smoking during pregnancy has been linked to inward or outward turning eyes (squint, cross-eyes or wall-eyes) and long sightedness in young children.<sup>23, 24</sup> Stopping smoking before or early in pregnancy may reduce this risk.<sup>23</sup>

### **Smoking and eye health in people with diabetes**

People with diabetes can develop diabetic retinopathy (DR), in which damage to the blood vessels at the back of the eye may lead to vision loss and blindness.

Good management of diabetes, blood sugar levels (glycaemic control), blood pressure and cholesterol can reduce the risk of DR.<sup>25</sup> People with type 1 diabetes who smoke are more likely to have poorer glycaemic control and an increased risk for DR.<sup>25-27</sup> People who stop smoking can achieve better glycaemic control and lower their risk of DR.<sup>26</sup>

Smoking is a cause of type 2 diabetes.<sup>3</sup> People with type 2 diabetes are at risk of DR.<sup>28</sup>

## Secondhand smoke

Secondhand smoke irritates the eyes of people who don't smoke. It causes many symptoms including stinging eyes, burning or prickling sensations, watery eyes and redness.<sup>29</sup>

## Stopping smoking

Stopping smoking and avoiding secondhand smoke are important to eye health. Stopping smoking immediately removes a huge source of damaging chemicals that harm your eyes.<sup>2</sup> People who have stopped smoking have lower risks than smokers for serious eye diseases including AMD and cataracts.<sup>2, 3, 8</sup>

While some of the effects of smoking are reversible, it also causes gradual and permanent damage. The earlier you quit, the better for your eyes and your health.<sup>2, 3</sup>

## Where can I go for more information?

Ask your doctor or eye health professional about having regular eye tests to help detect eye problems as early as possible to prevent vision loss. To find out more about eye health and vision, visit [www.visioninitiative.org.au](http://www.visioninitiative.org.au)

For advice or help to stop smoking:

- Your **doctor** is an important source of information, particularly if you have an illness, or you are taking any other medicines.
- Your **pharmacist** can give you advice about stopping smoking.
- **Quitline 13 7848**: The Quitline is a friendly, confidential telephone service. Your Quitline counsellor is trained to listen carefully and provide practical advice just for you. You can call the Quitline for the usual cost of a local call from your phone or ask us to call you at no cost (Quitline callback). Talking with a Quitline counsellor can increase your chance of stopping smoking successfully.<sup>30, 31</sup>

## Online resources

**Quit website** [www.quit.org.au](http://www.quit.org.au). Build your personal quit plan with easy-to-find information suited to you. You'll find tips, distractions, a cost calculator and stories from ex-smokers.

**QuitCoach** [www.quitcoach.org.au](http://www.quitcoach.org.au). QuitCoach is a free web-based computer program that asks you questions and helps you quit by giving free personal advice tailored to your needs.

**QuitTxt** provides regular SMS messages including tips and encouragement to help you keep on track throughout your quit attempt. To begin, all you need to do is register and complete a brief questionnaire at [www.quit.org.au/quittxt](http://www.quit.org.au/quittxt).

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