

# Dirty air and your lungs

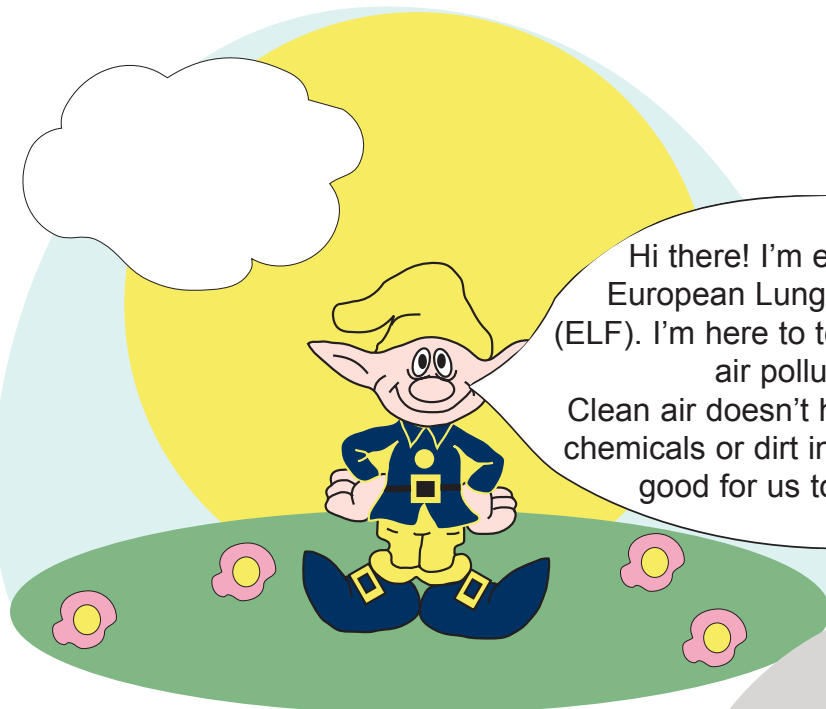


Health &  
Environment  
Alliance



EUROPEAN  
LUNG FOUNDATION

This factsheet is intended to teach children between the ages of 5 and 11 about outdoor air pollution, how it can affect our lungs and how we can prevent it.

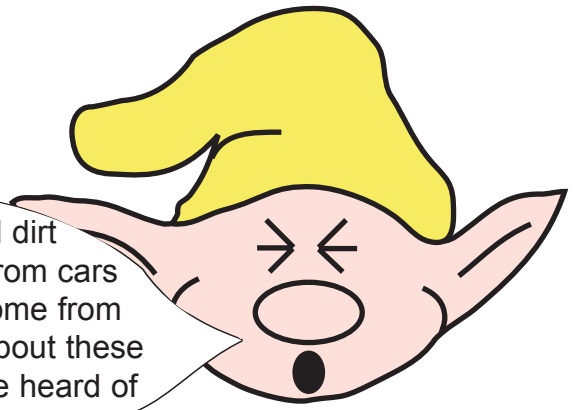


Hi there! I'm elf from the European Lung Foundation (ELF). I'm here to tell you all about air pollution. Clean air doesn't have any nasty chemicals or dirt in it. Clean air is good for us to breathe.



Air pollution is air that has bits of dirt and nasty chemicals in it. Sometimes you can feel and see pollution going into the air – it's the dark smelly fumes that come out of car exhausts and factory chimneys. But sometimes air pollution is invisible.

## What are the main pollutants called?



The nasty chemicals and dirt in air pollution mainly come from cars and factories, but they can come from other places too. Read more about these pollutants below. Maybe you've heard of some of them before....

### Sulphur dioxide

- A gas with no colour.
- Has a strong smell, like rotten eggs.

### Ozone

- A gas with no colour.
- Ozone belongs high in the sky to protect us from the sun, and up there it is good ozone.
- When it is nearer to the earth it is bad ozone.
- Bad ozone is made with the help of the sun, so levels are higher in the summer.

### Nitrogen dioxide

- A brownish-red gas.
- You can sometimes see it in the air when it is smoggy.

### Particulate matter

- Very small bits in the air.
- It can be solid or liquid and the bits are much smaller than the thickness of a strand of your hair.
- It can make the air look dirty or hazy.

## How many words about pollution can you find here?

P	A	R	T	I	C	U	L	A	T	E
M	N	P	S	J	X	E	D	W	F	O
W	G	O	U	L	D	N	C	A	R	S
A	C	L	L	V	Y	I	O	B	N	L
C	M	L	P	M	A	T	T	E	R	V
K	C	U	H	I	Z	R	A	N	Y	U
R	S	T	U	A	B	O	U	O	B	H
T	T	I	R	Q	G	G	Z	Z	F	D
D	I	O	X	I	D	E	E	O	H	X
S	E	N	P	P	F	N	Q	K	I	R
F	A	C	T	O	R	Y	J	A	I	R



## What does pollution do to our lungs?

Our lungs contain thousands of little tubes called airways, which look like the branches of a tree.

Pollution in the air can harm our lungs and airways as we breathe lots of air in and out of our lungs every day.

Pollution is bad for everybody's lungs but especially for young lungs (like yours!), elderly lungs and for sensitive lungs (like the lungs in people with asthma).

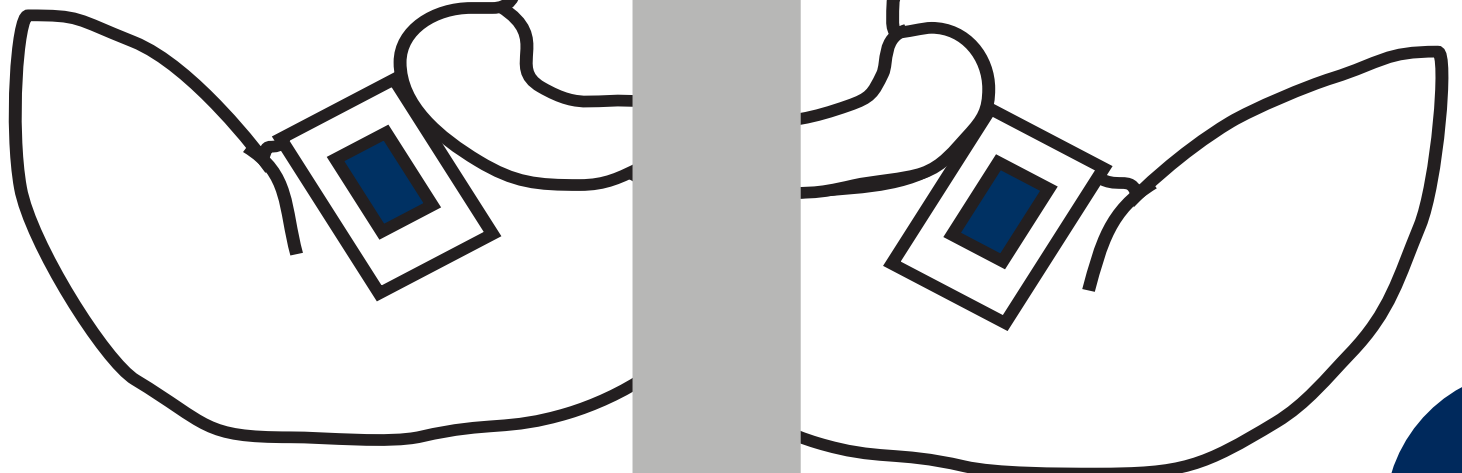
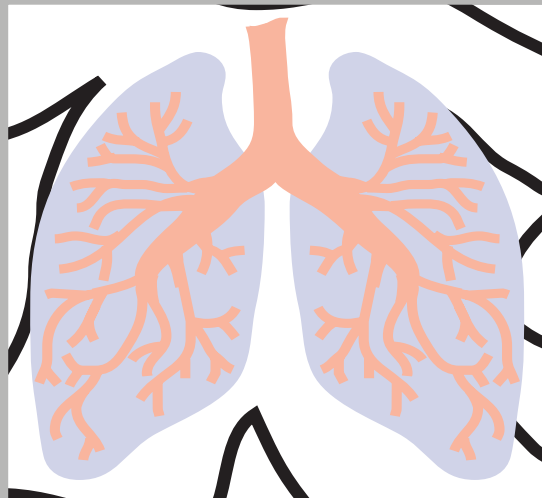
## Why don't you colour me in?

What can pollution do to the lungs?

1. Bits can get into the lungs and damage them.
2. Makes the lining of your airways red and swollen.

How can you tell if it's happening?

1. Hurts to breathe in and out.
2. Tickles your nose and throat.
3. Makes you cough.
4. Makes breathing harder.
5. Makes asthma worse.



**The European Union, which brings together 27 countries in Europe, sets the standards that protect us from polluted air. But how can we protect our lungs from air pollution?**



1. Find out what the pollution levels are where you live from the weather forecast or a website like [www.eea.europa.eu/map/ozone/welcome](http://www.eea.europa.eu/map/ozone/welcome) which tells you about ozone.
2. Try not to walk along streets with lots of traffic fumes from cars and trucks.
3. Play outside in the morning as pollution levels get higher in the afternoon, especially in summer.
4. If we breathe harder, more air pollutants will get into our lungs. Because of this, it might be better to be less active (i.e. walk rather than run) when pollution levels are high.
5. If you have asthma or a lung condition, take extra care.
6. If you get any symptoms of damage to your lungs, like a cough, pain in the chest, trouble breathing or a wheezy noise when you breathe, you should tell your parents.

**What can we do to reduce pollution and make the air clean?**

1. Try and walk, cycle or take public transport with your family and friends rather than driving to places in the car.
2. If you are in the car with your parents, ask them to turn off the engine if the car has stopped and ask them to drive slowly.
3. Talk to your parents about ways to save energy at home, such as turning off lights when you are not in a room.

Can you think of any other ideas?

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