



CO Monitor test

A CO Monitor measures tiny amounts of carbon monoxide in the exhaled breath. This is the CO ppm reading. (CO ppm means the number of CO molecules in a million parts of air.)

This CO ppm reading can tell you how much CO is in the blood. This is the COHb(%) reading. (COHb(%) means the percentage of red blood cells or haemoglobin that is carrying CO instead of oxygen.) Haemoglobin or Hb in the red blood cells carries the oxygen or carbon monoxide.

For example if your CO ppm reading is 30 ppm then it means that 5% of your red blood cells are carrying carbon monoxide.

Notes

The reading you get doesn't tell you exactly how many cigarettes you are smoking.

It tells you more about how much smoke you are inhaling and how much of the cigarette you are smoking.

If you inhale more, your CO reading will be higher. Smoke and inhale less, the reading will be lower. Stop smoking and the reading will be very low.

Different types of tobacco produce different amounts of CO.

Cigars and pipes can give very high CO readings.

Your reading also depends on the time since you last smoked. The CO level in the blood is halved in 4-5 hours.



Further information

If you want to stop smoking and you need some help:

- Ask your pharmacist, family doctor or community nurse for advice and information about local stop smoking support groups or counselling. Nicotine Replacement Therapy (NRT) or Bupropion can help you overcome the withdrawal symptoms. Ask your doctor or pharmacist for details.
- Call a Smokers' Helpline. Some countries have telephone helplines that offer advice, counselling and a free pack of leaflets and information. Ask directory enquiries or the local health department for the numbers.
- Check your local bookshop or library for self-help stop smoking books or search the internet for stop smoking web-sites.

CO Monitor Accessories

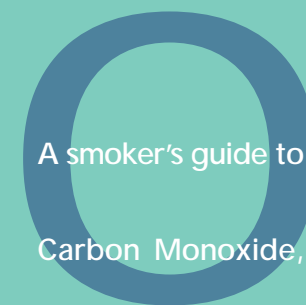
Clement Clarke also supplies cardboard mouthpieces and calibration kits.



For more details, a catalogue and price list contact:



Clement Clarke International Ltd.
Edinburgh Way, Harlow, Essex CM20 2TT, UK
Tel: +44 (0)1279 414969
Fax: +44 (0)1279 456304
E-mail: info@clement-clarke.com
www.clement-clarke.com



A smoker's guide to

Carbon Monoxide,

CO Monitors and

Stopping Smoking



CARBON MONOXIDE

Carbon monoxide or CO is a poisonous gas. CO has no colour and no smell. It is one of the products of combustion. It is found in car exhaust fumes and in tobacco smoke.

Carbon monoxide harms the body

CO is breathed into the lungs from polluted or smoky air or from inhaling tobacco smoke. CO is absorbed into the blood from the lungs. It binds to haemoglobin in red blood cells about 200 times as readily as oxygen. It also reduces the release of oxygen. CO deprives the body of oxygen and the body needs oxygen to live.



Health problems caused by CO

Smokers can have between 2% - 20% of their normal blood oxygen taken up by CO. To compensate for the shortage of oxygen the body has to work harder with less fuel. CO damages health because:

- the smoker's heart beats faster trying to get enough oxygen to the body
- the heart itself gets less oxygen and this increases the risk of damage to the heart muscles and sudden death
- the smoker gets more breathless as the body has little spare oxygen for any extra demands made by any exercise
- the linings of the arteries are more permeable to cholesterol and this causes a fatty build up increasing the risk of circulation problems, heart attack and stroke
- the supply of oxygen needed for the healthy growth of a baby is reduced if a pregnant woman smokes
- the lack of oxygen can affect the ability to concentrate and can cause tiredness
- COHb gives thicker blood

CO – COHb Chart – How much carbon monoxide is in my blood?

How to use the CO Monitor

A CO Monitor measures the carbon monoxide in the lungs and the blood.

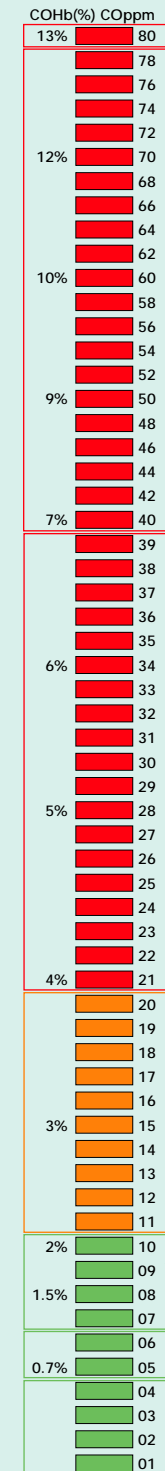
The test is simple. If possible, do the test 10 minutes after the last smoke. Take a deep breath and hold it for 15 seconds. Then blow into the CO Monitor. Blow out completely. The CO reading is shown within seconds. Take the highest reading both in CO ppm and COHb(%). You can read the measures on the CO Monitor and then refer to the chart.

Date:
Name:
Reading:
Comments



The good news

When you stop smoking the level of carbon monoxide in your blood falls almost immediately. It will be the same as a non-smoker's within a couple of days. Your blood will carry more oxygen. You'll have more energy, better circulation and increased concentration.



This level is uncommon. It is found in smokers who are rarely seen not smoking! Above this level serious carbon monoxide poisoning and permanent damage can occur.

Heavy smokers. This includes pipe and cigar smokers, as these contain high levels of CO.

These readings are only found in smokers and indicate that the red blood cells are carrying a lot less oxygen than the body needs. The heart has to work harder and with less oxygen to help it.

A light smoker or a smoker who has not smoked many cigarettes today. Each cigarette raises the CO level.

Smokers can have readings under 10ppm if they have not smoked for some time or do not inhale.

Non-smoker who lives and works with smokers or spends time in traffic fumes. It can be higher for non-smokers who work with cars or who are exposed to a very smoky atmosphere.

Non-smoker living in a town. There are at least 1-2 ppm in the air as a result of industry and vehicle exhausts.

A non smoker living in an unpolluted environment.