Smokerlyzer®

Breath Carbon Monoxide (CO) Monitors

Helping people to quit smoking one breath at a time

NicheMedical
Solutions in Respiratory Care & Diagnosis

WHAT IS A SMOKERLYZER?®

Smokerlyzers are a range of breath CO monitors and testers which measure the small amounts of CO in exhaled breath. The more you smoke, the higher your CO reading will be.

The reading is given in ppm, which is the number of CO molecules in a million parts of air. The ppm reading can also tell you how much CO is in the blood (the %COHb) reading). %COHb is the percentage of red blood cells carrying CO instead of oxygen. The amount of CO in an unborn baby's blood is referred to as %FCOHb (percentage of foetal carboxyhaemoglobin). Some of the Smokerlyzer® range can analyse %FCOHb as an incentive to stop smoking and comply with new NICE guidelines for smoking in pregnancy.

What Is Carbon Monoxide (CO)?

CO is a poisonous gas that you cannot smell or see. It is formed by combustion and is produced in car exhaust fumes, faulty gas boilers and tobacco smoke.

- When you inhale smoke from a cigarette, CO is absorbed into your blood through the lungs.
- Oxygen is carried around the body by red blood cells.
- CO binds with haemoglobin in the red blood cells to form carboxyhaemoglobin. (COHb), preventing red blood cells from carrying oxygen.
- CO binds with haemoglobin 200 times more readily than oxygen.
- A very heavy smoker may have 10% of their blood cells taken up by CO, depriving the body of oxygen.

What CO does to your body

Heart: To compensate for the shortage of oxygen, the heart has to work harder (beat faster) to get enough oxygen to all parts of the body. The heart itself receives less oxygen, increasing the risk of heart damage.

Circulation: COHb causes the blood to thicken and arteries become coated with a thick, fatty substance. This causes circulation problems and high blood pressure, with increased risk of a heart attack and stroke. Hands and feet can become colder as less blood circulates to the extremities.

Breathing: The reduced supply of oxygen means you can easily become out of breath when exercising, because there is little oxygen available for the increased demand. A lack of oxygen can also cause tiredness and a lack of concentration.

Pregnancy: Oxygen is required by a foetus for healthy growth, but the supply of vital oxygen is reduced when the mother smokes. This increases the risk of low birthweight, birth defects and even Sudden Infant Death Syndrome. A recent clinical study established a direct link between an expectant mother's breath CO level and the amount of COHb in their unborn baby's blood.

Why monitor CO?

CO testing is a quick, non-invasive and cost-effective means of validating the smoking status of a significant number of clients. Smoking is the single greatest avoidable risk factor for lung cancer.

Carbon monoxide monitors offer tobacco treatment specialists an independent clinical tool which provides valuable evidence in identifying, educating, assessing and treating tobacco-dependent patients.

Monitoring patients' CO levels helps to work out their level of nicotine dependence: the more they smoke, the higher their reading will be, indicating a higher dependence on nicotine.

Lung disease is a significant and growing health issue for Australians and Smoking is the major cause of lung diseases such as Lung cancer and COPD.

Lung cancer

Lung cancer was the 5th most commonly diagnosed cancer in Australia in 2014. It is estimated that it will remain the 5th most commonly diagnosed cancer in 2018.[1]

In 2014, there were 11,556 new cases of lung cancer diagnosed in Australia (6,695 males and 4,861 females). In 2018, it is estimated that 12,741 new cases of lung cancer will be diagnosed in Australia (7,212 males and 5,529 females). In 2018, it is estimated that the risk of an individual being diagnosed with lung cancer by their 85th birthday will be 1 in 17 (1 in 14 males and 1 in 21 females).[1]

In 2016, lung cancer was the leading cause of cancer death in Australia. It is estimated that it will remain the most common cause of death from cancer in 2018.[1]

In 2016, there were 8,410 deaths from lung cancer in Australia (5,023 males and 3,387 females). In 2018, it is estimated that this will increase to 9,198 deaths (5,229 males and 3,969 females). In 2018, it is estimated that the risk of an individual dying from lung cancer by their 85th birthday will be 1 in 23 (1 in 19 males and 1 in 28 females).[1]

COPD

- In 2014-15 more than 600,000 Australians (2.6%) reported having COPD with the condition being slightly more common in males (301,500) than females (297,900).[2]
- In 2015, there were 7,991 deaths due to COPD, which represents 5% of all deaths in that year.[3] COPD was the 3rd leading cause of death worldwide in 2010 with deaths tending to be highest in the late Winter months (July-August) in Australia.[4]
- From 2007 to 2011, the mortality rate among Indigenous Australians was 2.6 times that of non-Indigenous Australians.[4] Similarly, Indigenous Australians were nearly 3 times more likely to die from COPD as non-Indigenous Australians during the period 2007-2011.[4]
- Between 1979 and 2011, deaths due to COPD approximately halved for males while for females the rate increased between 1979 and 1997 and then declined. For people aged 55 and over, mortality rates increased with remoteness, with the highest rates in remote/very remote areas. The rate among Indigenous Australians was 2.3 times that of non-Indigenous Australians.[4]

References:

1. Cancer Australia Government Website 2018 2. Australian Bureau of Statistics 2015. 4364.0.55.001 - National Health Survey: First Results, 2014-15. Viewed 25 July 2016. 3. Australian Bureau of Statistics 2016. Viewed 25 November 2016. 4. Australian Institute of Health and Welfare 2014. Mortality from asthma and COPD in Australia. Cat. no. ACM 30. Canberra: AIHW.

MICRO+ SMOKERLYZER™

One CO monitor for all your testing needs

Ideal for Clinical Trials and for in-depth stop smoking advice delivered by: Specialist Clinics, Drug and Alcohol Services, Community Health, Smoking in Pregnancy Services

Features and Benefits

- Brand new easy to use interface.
- The most accurate Smokerlyzer® available for Clinics and Clinical trials.
- Results shown instantly in exact ppm and %COHb, making recording and interpreting Patients' results quick and easy.
- Create and store Patient details.
- Uses D-Pieces (Bacterial/Viral Filters) to filter out 99.9% of airborne viruses and bacteria.
- Antimicrobial Technology additives employed to eradicate bacteria and viruses on the surface of the Smokerlyzer device.
- Five-year warranty for absolute peace of mind.

ORDER CODE: BEMICROADV

PICO SMOKERLYZER™

A firm favourite for motivation, validation and education

Ideal for in-depth stop smoking advice delivered by: Specialist Clinics, Drug and Alcohol Services, Community Health, General Practice, Pharmacies

Features and Benefits

- Brand new easy to use interface.
- Results shown instantly in exact ppm and %COHb, making recording and interpreting Patients' results quick and easy.
- Uses D-Pieces (Bacterial/Viral Filters) to filter out 99.9% of airborne viruses and bacteria.
- Antimicrobial Technology additives employed to eradicate bacteria and viruses on the surface of the Smokerlyzer device.
- Five-year warranty for absolute peace of mind.

ORDER CODE: BEPICOADV

PICOBABY SMOKERLYZER™

Breath Carbon Monoxide (CO) Monitoring for Maternity

Ideal for in-depth stop smoking advice delivered by: Smoking in Pregnancy Services, Maternity Wards, Community Health

Features and Benefits

- Specifically designed for use in Pregnancy.
- Results shown instantly in exact ppm, %COHb and %FCOHb making recording and interpreting Patients' results quick and easy.
- Brand new easy to use interface.
- Uses D-Pieces (Bacterial/Viral Filters) to filter out 99.9% of airborne viruses and bacteria.
- Antimicrobial Technology additives employed to eradicate bacteria and viruses on the surface of the Smokerlyzer device.
- Five-year warranty for absolute peace of mind.

ORDER CODE: BEPICOBABY

iCOquit PERSONAL SMOKERLYZER™

The world's first Smokerlyzer® breath CO monitor for your smartphone

Personal Bluetooth Carbon Monoxide CO monitor which helps you take control of your smoking cessation journey.

Features and Benefits

- A portable CO monitor that can fit in your pocket.
- Connects to app on your phone or tablet.
- Send your results to your doctor, smoking cessation advisor, family member or friend.
- One person use, private, tailored, individual experience.
- Monitors your progress, encouraging you to quit smoking.

ORDER CODE: BEiCO-PACK

SPECIFICATION & TECHNICAL DATA

Model	Micro+	piCO	piCObaby
Concentration range:	0–500ppm	0-150ppm	0-150ppm
Display:	Full colour touchscreen	Full colour touchscreen	Full colour touchscreen
Detection principle:	Electrochemical sensor	Electrochemical sensor	Electrochemical sensor
Repeatability:	<3% difference on consecutive readings	<3% difference on consecutive readings	<3% difference on consecutive readings
Hydrogen cross-sensitivity:	<5%	<5%	<5%
Calibration:	Optional*	Optional*	Optional*
Batteries:	3 × AA (LR6 or equivalent) alkaline batteries	3 × AA (LR6 or equivalent) alkaline batteries	3 × AA (LR6 or equivalent) alkaline batteries
T90 Response time:	<17 seconds	<17 seconds	<17 seconds
Operating temperature range:	0-40°C (storage 0-50°C)	0-40°C (storage 0-50°C)	0-40°C (storage 0-50°C)
Operating/Transport/ Storage Pressure	800-1200mbar	800-1200mbar	800-1200mbar
Operating humidity:	10-90% (storage 0-95%) non-condensing	10-90% (storage 0-95%) non-condensing	10-90% (storage 0-95%) non-condensing
Sensor operating life:	5 years (5 year warranty)	5 years (5 year warranty)	5 years (5 year warranty)
Sensor sensitivity:	1ppm	1ppm	1ppm
Sensor Drift:	<10% per annum	<10% per annum	<10% per annum
Dimensions:	Approx. 34 x 75 x 140mm	Approx. 34 x 75 x 140mm	Approx. 34 x 75 x 140mm
Weight:	Approx. 200g (including batteries)	Approx. 200g (including batteries)	Approx. 200g (including batteries)
Monitor Construction:	Case: Polycarbonate/ABS blend, Antimicrobial Technology Additives, D-Piece: Polypropylene	Case: Polycarbonate/ABS blend, Antimicrobial Technology Additives, D-Piece: Polypropylene	Case: Polycarbonate/ABS blend, Antimicrobial Technology Additives, D-Piece: Polypropylene

* Information available on request.

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