

## BREATH CARBON MONOXIDE MONITORS

### THE CO MONITOR AS AN ASSESSMENT TOOL

An important assessment tool that addiction professionals may use with their patients who smoke is a carbon monoxide (CO) monitor. A CO monitor is a device that measures the amount of carbon monoxide in a person's blood. The carbon monoxide (CO) monitor demonstrates an immediate and noninvasive measurement of one of the harmful consequences of smoking.

The test is simple and only requires a person to breathe into the monitor and within seconds it yields a personalized reading. The person utilizing the device exhales a deep breath into a cardboard tube attached to a meter. The reading on the meter provides an estimate of the amount of carbon monoxide in the blood (as opposed to oxygen).



### A QUICK GUIDE TO USING A CO MONITOR

- Use a new cardboard tube for each patient. Explain the whole procedure to your patient before you begin.
- Turn the CO monitor on. (A background reading will show—usually 0-3ppm).
- Press ‘zero’ button (even if the background reading is 0). Monitor shows ‘go’.
- Ask your patient to take a deep breath and hold it for 15 seconds.
- Press “go” as your patient takes a deep breath. Monitor counts down 15 seconds to 0.

As soon as 0 is reached, patient seals lips around cardboard tube and blows slowly out through the tube, emptying the lungs of as much air as possible. Monitor counts up to reading. Wait for the reading on the monitor to peak - the highest number reached is your patient's reading in ppm (parts per million). The percentage of the patient's blood which is carrying CO instead of oxygen can be seen if required by pressing % button.

- Explain what the readings mean.
- Turn the CO monitor off between patients.

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### WHAT THE READINGS MEAN

The normal level of CO for a nonsmoker depends on background levels in the air, but it is usually between 0 and 6 parts per million. The level of CO for a person who smokes is usually much higher. A person's level of CO varies according to the time of day, the amount of tobacco used, and how the smoke is inhaled. A person who uses a pack of cigarettes per day will commonly have a CO level of about 20 parts per million. A two-pack-a-day user may have a level of about 40 parts per million or greater.

0-6 ppm	Non-smoker
7-10ppm	Light smoker
11-20ppm	Medium smoker
21+ ppm	Heavy smoker

The good news is that after discontinuing smoking, CO levels drop by 50 percent every five to six hours. Usually, carbon monoxide levels return to normal within a few days.

### WHAT'S YOUR CO SCORE? THE CO MONITOR AS A MOTIVATIONAL TOOL

CO monitors are best used as a motivational tool to build patient confidence or self-efficacy. CO monitors can fortify patient beliefs that they can succeed at resolving their tobacco dependence.

Checking your CO score should be like participating in a Weight Watchers weigh-in. The long term objective is to simply lower your score to one that indicates improved health. A tremendous amount of positive coaching, information, tools, and motivation are part of the recipe for success at beating tobacco dependence.

### VALUE ADDED

Many patients who use NRT as an adjunctive therapy to become tobacco-free are often underdosed.

This oftentimes occurs if the patient underreports their daily usage levels of cigarettes. Using a CO monitor helps give the clinician an additional tool to assess the patient's level of dependence.

### LEARN MORE ABOUT CO MONITORS

To learn more about CO monitors, visit <http://www.breathcotest.com/faq.asp>.

Some of the text in this handout was adapted from information available on the web pages of Manchester Stop Smoking Service located at <http://www.stopsmokingmanchester.co.uk/docs/PROFencouraging.pdf>.