CARBON MONOXIDE

WHAT IS IT?

Carbon monoxide (CO) is a poisonous, odourless, tasteless, colourless gas.

WHERE IS IT FOUND?

Carbon monoxide is found wherever there is incomplete combustion. Everyday sources of carbon monoxide are:

- Tobacco smoke
- Second hand smoke
- Exhaust from motor vehicles
- Industrial processes
- Incineration of waste
- Inefficient home heating
- Barbecues
- Fires

HOW DOES CARBON MONOXIDE AFFECT THE BODY?

Carbon monoxide prevents oxygen from being released to the tissues. Normally when we breathe in air, the oxygen in the air combines with hemoglobin. Hemoglobin is the substance in our blood that transports oxygen from our lungs to the tissues of the body. When we breathe in carbon monoxide, however, the carbon monoxide we inhale binds much more readily to the hemoglobin than does oxygen. In fact, the attraction of hemoglobin for carbon monoxide is about 200 times greater than the attraction of hemoglobin for oxygen. Therefore, some oxygen cannot be carried by the hemoglobin and is not distributed to the tissues. This loss of oxygen carrying ability remains for a long period of time. Unlike oxygen which is breathed in and exchanged for carbon dioxide, half of the excess carbon monoxide is still in the bloodstream after three or four hours.

HOW CAN CARBON MONOXIDE LEVELS IN THE BLOOD BE ESTIMATED?

It is possible to estimate the concentration of carbon monoxide in your bloodstream by measuring the carbon monoxide in your expired air. This is done by asking you to inhale and hold your breath for 20 seconds. The reason for holding your breath is to allow the air in your lungs to reach equilibrium with the carbon monoxide in your blood. A small puff of air is exhaled, then the

(over)

remaining air in your lungs is exhaled into a plastic bag. The concentration of CO in your expired air is read in parts per million.

My CO level is _____ parts per million

Date _____

ANALYZING THE RESULTS

If less than 10 ppm	NORMAL
If greater than 12 ppm	COMMON IN SMOKERS AND PEOPLE EXPOSED TO SECOND HAND SMOKE MAY HELP PROMOTE CORONARY ARTERY DISEASE
If greater than 15 ppm	EXERCISE TOLERANCE IS REDUCED FOR THOSE WITH COMPROMISED CARDIO VASCULAR SYSTEMS
If greater than 30 ppm	HEAVY SMOKER
If greater than 35 ppm	REACTION TIME MAY BE SLOWER
If greater than 100 ppm	HEADACHES, FATIGUE LACK OF COORDINATION

UNCONSCIOUSNESS AND DEATH CAN OCCUR WHEN EXPOSED TO EXTREME CONCENTRATIONS

PREGNANT WOMEN AND PEOPLE WITH HEART OR LUNG PROBLEMS SHOULD MINIMIZE THEIR EXPOSURE TO CARBON MONOXIDE

TO REDUCE YOUR CO LEVEL

- Quit smoking
- Reduce your exposure to second hand smoke, exhaust fumes from motor vehicles and other sources of carbon monoxide

For more information contact

THE LUNG ASSOCIATION