



ALMA STREET,
PEASLEY CROSS,
ST HELENS, MERSEYSIDE.
WA9 3AR

The Dangers of Carbon Dioxide

1000ppm	0.1%		Prolonged exposure can affect powers of concentration
5000 ppm	0.5%		The normal international Safety Limit (HSE, OSHA)
10,000ppm	1%		Your rate of breathing increases very slightly but you probably will not notice it.
15,000ppm	1.5%		The normal Short Term Exposure Limit (HSE, OSHA)
20,000ppm	2%		You start to breathe at about 50% above your normal rate. If you are exposed to this level over several hours you may feel tired and get a headache.
30,000ppm	3%		You will be breathing at twice your normal rate. You may feel a bit dizzy at times, your heart rate and blood pressure increase and headaches are more frequent. Even your hearing can be impaired.
40,000-50,000ppm	4-5%		Now the effects of CO ₂ really start to take over. Breathing is much faster - about four times the normal rate and after only 30 minutes exposure to this level you will show signs of poisoning and feel a choking sensation.
50,000-100,000ppm	5-10%		You will start to smell carbon dioxide, a pungent but stimulating smell like fresh, carbonated water. You will become tired quickly with laboured breathing, headaches, tinnitus as well as impaired vision. You are likely to become confused in a few minutes, followed by unconsciousness.
100,000ppm-1,000,000ppm	10-100%		Unconsciousness occurs more quickly, the higher the concentration. The longer the exposure and the higher the level of carbon dioxide, the quicker suffocation occurs.