

# Carboxyhaemoglobin

<b>Description</b>	<p>Carboxyhaemoglobin (COHb) is a stable complex of carbon monoxide (CO) and haemoglobin that forms in red blood cells when CO is inhaled, and hinders delivery of oxygen to the body.</p> <p>CO is a colourless, odourless, non-irritant gas. It is present in the environment naturally (40% of total), and artificially as a result of human activities (60%). People may be chronically exposed to CO as a result of smoking or from the atmosphere. Other causes include incomplete combustion and inadequate ventilation of domestic natural gas, indoor burning of charcoal for barbecues, propane gas cylinders (forklift trucks), petrol powered generators, and methylene chloride exposure from spray paint (hepatic conversion to CO). In addition, endogenous CO is produced as a result of the breakdown of haem.</p>																		
<b>Indication</b>	<p>Carboxyhaemoglobin is measured as an indirect measure of CO exposure.</p>																		
<b>Additional Info</b>	<p><b>This test is not recommended for GP requests.</b></p>																		
<b>Concurrent Tests</b>	<p>Arterial blood gas analysis</p>																		
<b>Dietary Requirements</b>	<p>N/A</p>																		
<b>Interpretation</b>	<table border="1"> <thead> <tr> <th colspan="2">Carboxyhaemoglobin in Arterial Blood Sample</th> </tr> <tr> <th>(%)</th> <th>Response</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>Shortness of breath on vigorous muscular exertion (Heavy Smokers can achieve this level)</td> </tr> <tr> <td>20</td> <td>Shortness of breath on moderate exertion, slight headache</td> </tr> <tr> <td>30</td> <td>Decided headache, irritation, ready fatigue and disturbance of judgement</td> </tr> <tr> <td>40-50</td> <td>Headache, confusion, collapse and fainting on exertion</td> </tr> <tr> <td>60-70</td> <td>Unconsciousness, respiratory failure and death if exposure continued</td> </tr> <tr> <td>80</td> <td>Rapidly fatal</td> </tr> <tr> <td>&gt;80</td> <td>Immediately fatal</td> </tr> </tbody> </table>	Carboxyhaemoglobin in Arterial Blood Sample		(%)	Response	10	Shortness of breath on vigorous muscular exertion (Heavy Smokers can achieve this level)	20	Shortness of breath on moderate exertion, slight headache	30	Decided headache, irritation, ready fatigue and disturbance of judgement	40-50	Headache, confusion, collapse and fainting on exertion	60-70	Unconsciousness, respiratory failure and death if exposure continued	80	Rapidly fatal	>80	Immediately fatal
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<b>Collection Conditions</b>	<p>Whole blood collected into a heparinised syringe or lithium heparin (gel free) tube is the desired sample type for the analysis of carboxyhaemoglobin.</p> <p><b>For quantitative measurement of carbon monoxide samples need to be sent away to an external laboratory. Please contact the laboratory for further information.</b></p>																		
<b>Frequency of testing</b>	<p>As required</p>																		