Enclosed Places Are Dangerous Places — study guide

Enclosed spaces kill because you cannot see the danger: the air can be lethally low in oxygen with no warning at all. This guide explains why the atmosphere is the hazard, how the body responds, and the rules that prevent a death or a failed rescue.[1]

Why enclosed spaces are dangerous

An enclosed space is dangerous because its atmosphere lacks adequate oxygen — and may also hold toxic or asphyxiant gases. Oxygen depletion on board happens through processes such as oxidation (rusting), combustion, bacterial decay of organic matter, and the release of inert gas. Entering an unchecked, low-oxygen space causes loss of consciousness and death.

Oxygen and the body

Normal air contains about **20.9%** oxygen. The body's cells need a constant supply of oxygen, which they get from the oxygen dissolved in the blood; the saturation level matters for every function. In an atmosphere low in oxygen a person feels the same as when drowning or being strangled. Survival time collapses as the level falls: at about **10%** oxygen survival is roughly **20–30 minutes**, and at about **5%** it is only **30–60 seconds**. You cannot guess or estimate the level — the only way to know is by accurate measurement with a calibrated instrument.

Anyone can meet a low-oxygen space

Seafarers are not the only ones at risk: miners, mountaineers and high-altitude military pilots also encounter dangerously low oxygen (pilots at 10,000 m, for example, work with very low ambient oxygen levels). The lesson is the same everywhere — low oxygen is invisible and gives no reliable warning.

Before entry

A proper entry is a controlled entry. Before going in, carry out the safety checks — including checking your radio (communications) and confirming the atmosphere has been tested. Work under a permit, with a rescue plan and trained personnel. A crew member following an officer into a space carries a **lifeline**, and communication with those inside is maintained at all times.

Rescue

Enclosed-space rescues are where would-be rescuers die. The dangers of an unplanned rescue are that the rescuer will die too. The first thing to be done before any rescue attempt is made is to **raise the alarm** — never rush in unaided.

Key rules for entry

© 2026 maritimetest.com · free study guide

The key rules are the familiar ones: test the atmosphere before entry and keep monitoring; isolate the space; use a permit; have a competent, trained team and a Standby Person outside; keep rescue equipment ready; and follow the rescue plan if something goes wrong.[1][2]

Key facts to remember

- Enclosed spaces are dangerous because the atmosphere lacks adequate oxygen (and may hold toxic gas).
- Normal air ≈20.9% oxygen. At ~10% survival is ~20–30 min; at ~5% only ~30–60 seconds.
- Oxygen cannot be guessed — measure it with a calibrated instrument.
- Oxygen depletion: oxidation/rusting, combustion, bacterial decay, inert gas.
- Before entry: check radio/communications, test the atmosphere, work under a permit with a lifeline and a rescue plan.
- On an emergency the first action is to raise the alarm — an unplanned rescue kills the rescuer.

Sources

1. IMO Resolution A.1050(27) — Revised recommendations for entering enclosed spaces aboard ships.
2. Code of Safe Working Practices for Merchant Seafarers (COSWP) — Maritime and Coastguard Agency (MCA).