



The Centre for Offshore and Remote Medicine (MEDICOR) was established in 1982. Its mandate is to carry out research and development projects related to all health aspects of offshore oil, marine, diving and space industries, as well as other industries involved with remote operations, environmental stresses or hazards.

MEDICOR, a department of the Faculty of Medicine and a Centre of Excellence within Memorial University of Newfoundland, is an integral part of the university's Ocean Studies Program.

Areas of Expertise

MEDICOR's areas of expertise include:

- remote medicine
- marine medicine
- environmental medicine
- offshore oil & gas industry
- occupational medicine
- commercial diving consulting
- commercial diving education and training
- environmental gas analysis
- diving accident investigation

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Facilities

MEDICOR is housed in the Health Sciences Centre, Faculty of Medicine, Memorial University of Newfoundland, and covers an area of approximately 432 square metres (4,800 square feet) that includes a laboratory, a classroom and a hyperbaric unit.



MEDICOR's laboratory is equipped with mass spectrometry, gas chromatography, physiological monitoring devices and related support equipment. MEDICOR is also establishing laboratory facilities for the identification and determination of environmentally hazardous substances.

The Hyperbaric Unit, covering an area of approximately 67.5 square metres (750 square feet), contains four chambers interconnected with a "wet pot" that allows simulated in-water deep diving. The unit is fully equipped for hyperbaric oxygen therapy and decompression therapy and research. It has a saturation diving capability of 304.8 metres (1,000 feet) of seawater equivalent.



Research & Development

MEDICOR directs research efforts to the medical concerns of industries operating in remote locations. Examples include a major study on offshore health conducted for the Royal Commission on the Ocean Ranger Marine Disaster and a study of thermally protective buoyant immersion garments. Other research

projects include developing methods for measuring gases in biological fluids, monitoring the onset of oxygen toxicity, and developing a new method to elucidate the uptake and distribution of inert gases in diving. The hyperbaric unit is used to research aspects of diving technology, such as equipment evaluation, and the medical applications of hyperbaric oxygen therapy. MEDICOR welcomes proposals for contract research.

Academic Research

MEDICOR's research programs include:

- development of new methods of measuring toxic volatile compounds and gases in body fluids
- mechanisms of decompression sickness and the uptake and elimination of breathing gases
- contamination of health care facilities with anesthetics or other gases
- workplace air contamination
- human performance in high pressure environments and the use of hyperbaric oxygen for treatment of medical conditions
- offshore safety and survival

Medical Treatments

Through a joint arrangement with the Eastern Health, MEDICOR provides emergency treatment for diving accidents and other conditions requiring hyperbaric oxygen therapy. Consulting services may be provided to other physicians on request.



Hyperbaric Oxygen Therapy is used to treat the following conditions:

- decompression sickness and arterial gas embolism
- carbon monoxide poisoning
- gas gangrene
- osteoradionecrosis
- soft tissue injury
- chronic osteomyelitis
- radiotherapy
- wound healing

Education and Training

MEDICOR develops and offers symposiums, seminars and courses for doctors, nurses, rig medics and other health care workers in remote and offshore medicine and diving medicine, develops and offers training courses for commercial divers and government inspectors.

Consulting

MEDICOR provides consulting expertise to various industry, government, education and health agencies. Previous clients include:

- The Canada-Newfoundland Offshore Petroleum Board
- The Canada Oil and Gas Lands Administration
- Workplace Health, Safety and Compensation Commission
- Department of Labour, OH&S Inspections
- RCMP
- Private Industry