



# Shorelines

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Fisheries and Oceans  
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## Mayday relay:

BY MICHELINE BRODEUR

knowledge, technology and  
dedicated people band together  
to save lives

The call came to Art Statham, Coast Guard Marine Communications Officer at Comox Marine Communications and Traffic Services: The 12 m F/V *Agnes May*, was fully engulfed in flames and losing electrical power.

The lone fisherman on board reported he was abandoning ship between McEwan Rock and Fox Islands, off the entrance to Seymour Inlet. There were no further communications from the vessel.

Art broadcast a mayday relay and the *Cape Sutil* lifeboat and crew from Port Hardy responded. *Cape Sutil* was nearly an hour away from the scene. Art knew he had to get help to the scene faster if the fisherman was to survive in the numbing, bone chilling cold of the sea.

In situations like this it is standard procedure to contact vessels in the area to see if they can assist. F/V *Namu* responded, but she was entering Port Hardy, nearly two and a half hours away.

"Vince Kehn, captain of *Inlet Transporter* called in," Art said. "He heard the mayday but wasn't in a position to help. He did know that there was a lodge located in Treadwell Bay, Seymour Inlet, about 40 kilometres northeast of Port Hardy. He told me the lodge had a boat and that they routinely monitored VHF channel 6."

Art got through to Seymour Inlet Lodge and roused the co-owner, Chris Gehlen. Chris advised that he was on his way, and surprised Art by saying he would be accompanied by three search and rescue technicians.

"I thought Chris was talking about lodge staff who were trained in search and rescue," Art said. In fact, the three SAR technicians were from 411 Squadron in Winnipeg who just happened to be at the lodge on a training exercise. The four set out and were on scene in about 20 minutes. They scanned the water and caught occasional glimpses of a flashing light. It turned out to be the emergency

beacon on the fisherman's survival suit. His survival suit was only partially done up, so his suit was full of water and he was having difficulty staying afloat.

"It took the four of us to lift him over the edge," Chris said. "He had at least 30 gallons of water in his suit.

The fisherman was [hypothermic](#), of course, since he had been in the water about 40 minutes. He was unresponsive.

They took him back to Seymour Inlet Lodge and put him to bed with some hot packs to keep him warm until the medic aboard *Cape Sutil* arrived. *Cape Sutil* arrived at the location of the *Agnes May* as she burned to the waterline, and sped on to the lodge.

When they arrived at the lodge, Rescue Specialist Bill Dickey quickly assessed the fisherman, and found no radial pulse.

Bill began [inhalation re-warming treatment](#) ([see article below](#)) and added more hot packs. It took almost an hour and a half to get the fisherman's body temperature back to normal.

By then his clothes had been dried by lodge staff, and the fisherman said he felt fine and wanted to go back to Port Hardy.



So he did, aboard *Cape Sutil*. Coast Guard Officer Sid Jones radioed the position of the wreck to the Comox Centre so that they could issue a notice to shipping, warning mariners of the danger posed by the charred skeleton of the *Agnes May*. To Art, there were several people who qualified as "heroes" that day. "I feel if it was not for Vince Kehn's knowledge of the area, and the quick response by the Seymour Inlet Lodge and 411 Squadron, the master of the *Agnes May* would not be with us today."



# Inhalation re-warming therapy: An effective way to save lives in a pre-hospital environment

BY BOB AYRES

**R**educing the number of hypothermia-related deaths depends in part on providing the best treatment techniques, and inhalation therapy is among the most effective therapies available.

The therapy usually considered is to wrap a hypothermic victim in blankets. This provides insulation, which helps reduce further heat loss, but it has limited benefit in re-warming a severely hypothermic patient.

As rescue personnel and the medical community become more skilled at treating hypothermia, it's clear that a critical part of hypothermia treatment is to stabilize the patient's temperature from the inside out. In a hospital setting this might include peritoneal lavage and blood re-warming as well as inhalation re-warming.

Res-Q-Air is a portable electronic unit that allows rescuers in the field to deliver warm, moist oxygen into the lungs of hypothermia patients.

The Res-Q-Air is a simple design, and the success of the product is due partly to its simplicity. It is compact and relatively light weight, yet it has made the difference between life and death time and time again.

The Res-Q-Air will operate for up to two hours on one charge. It allows the hypothermic casualty to breath on their own, or if required allows rescuers to deliver positive pressure, humidified oxygen right where it is most needed, at a temperature of 43°C.

This treatment prevents further respiratory heat loss and helps to stabilize heart, lung and brain temperatures.

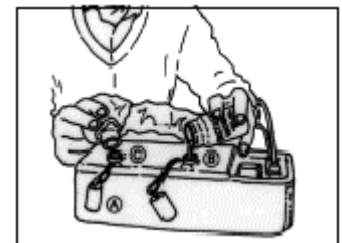
When a person is hypothermic, they must be treated with care or their condition may deteriorate dramatically. If a patient is severely hypothermic, they must be handled with great care.



*70 ml of water and some electricity make Res-Q-Air a simple but potent tool for treating hypothermia*

*Good things come in small packs. Measuring 30 x 8 x 7cm, Res-Q-Air certainly fits the bill.*

[Res-Q-Air link](#)



Two interesting facts about hypothermia

- Over half of hypothermia deaths in British Columbia are related to alcohol intoxication.
- A high percentage of cold water fatalities are due to the cold affecting the person's ability to swim.

Death can occur quickly, particularly if the person is not wearing a PFD.

**R**ough handling or too rapid an attempt at re-warming can return cold blood from the extremities to the core which causes a condition known as "re-warming shock." The blood returning from the extremities can also include metabolic waste products that cause fatal heart arrhythmia.

With hypothermic patients, Coast Guard rescuers apply external heat with thermo-pads, hot packs or heating pads, to the head, neck, trunk and groin along with inhalation therapy.

In general, awareness of hypothermia is growing, thanks in part to the pioneering work done some 20 years ago by the University of Victoria.

The research conducted then is still a major influence in the field of hypothermia.

A group at the University developed survival behaviors such as the HELP and HUDDLE positions, hypothermia prevention clothing such as the UVic Thermo-Float jacket, and inhalation treatment technology originally named heat-treat, and now marketed as Res-Q-Air.

Proper training, equipment and preparation can greatly increase survival times and survival chances in the event of an unexpected cold water immersion.

Rescuers expect people who are rescued to live, provided they are administered appropriate treatment and handled carefully.

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## Testimonials

" Dear Robert:

We used your [RES-Q-AIR](#) unit on a severely hypothermic patient. My patient was a twenty-five year old male who had been treading water in Georgia Strait for three and a half to four hours before being recovered.

I am pleased to report that the RES-Q-AIR unit was extremely effective in stabilizing this patient. The patient's colour, mental state and pulse all showed a marked improvement after twenty minutes of inhalation therapy.

Thank you for supplying us with this most valuable piece of equipment.

Sincerely,

J P. Rescue Specialist, Canadian Coast Guard."

"Robert Douwens  
RES-Q Products Inc.  
P.O. Box 661 Quathiaski Cove B.C. Canada  
V0P 1N0

Dear Robert:

Your "RES-Q-AIR" rewarming system has now been field tested by myself on a patient suffering from severe hypothermia.

On July 26, 1993 Mr.(name withheld) was recovered from the Strait of Georgia after EIGHT hours of immersion. Rewarming of Mr.(X) was aggressive and very successful. Mr.(X) was brought from critical to stable within 40 minutes. For ambulance transport to hospital internal rewarming was continued using the RES-Q-AIR portable unit (no internal rewarming unit was available on the ambulance).

In the final analysis, the RES-Q-AIR system proves to be the best all around internal rewarming system I have used to date.

I.K. Rescue Specialist, Canadian Coast Guard."

"July 1999

## The Effectiveness of the Res-Q-Air Treatment Unit.

According to Bruce Paterson a Rescue Specialist with the Canadian Coast Guard, the following observations were made while using the Res Q Air System (model HT 1000) in a case of severe hypothermia.

The case involves a Chinese migrant who was rescued off the coast of British Columbia in 1999. After having jumped ship, he and others had hiked through dense bush for an unknown period of time, seeking some form of civilization.

The man was discovered exhausted and thoroughly disorientated. He was given a floater jacket and transported to the Coast Guard vessel, Tanu. On board were two doctors contracted by immigration Canada and Canadian Coast Guard Rescue Specialists Harold Slornan and Bruce Paterson. Due to fear of disease, the physicians chose to isolate the migrants from the rest of the ship and treat them on deck where a tarp had been rigged up to offer some protection.

The migrant had lost consciousness enroute to the Tanu and was now in critical condition. The physicians concluded the man was suffering from life threatening severe hypothermia and possible dehydration. They recommended IV fluids but had none available. Another Coast Guard vessel in the area was radioed for help in getting IV fluids.

One of the doctors attempted to get a heart beat reading by trying to find a radial pulse, not being successful, he suggested CPR. However, one of the Rescue Specialists, who from experience knew to take a carotid pulse reading when dealing with a hypothermic patient, detected a heart beat.

Now with a correct cardiac reading, they decided to immediately hook the patient up to the Res Q Air hypothermia treatment Unit. As is frequently the case, the physicians were neither familiar with the unit nor its use. They had to be instructed in the use of this equipment and use of the tympanic thermometer for core temperature readings.

The patient's core temperature was 93.2 degrees F, pulse carotid 40 strong and regular, pupils were constricted but equal and reactive to light. Respiration's were 8 and shallow. After diagnosing the patient, the heat packs were applied to the body and the life saving warm moist air of the Res Q Air was administered. As the temperature of the Res Q Air Unit increased to operating temperature, so did the patient's core temperature and pulse.

A core temperature reading was taken every 5 minutes. During the first 10 minutes of treatment, the patient suffered back arching convulsions every 30 or 40 seconds. As his core temperature and pulse increased, he relaxed.

After about 35 minutes the IV fluid arrived. However, the physicians had great difficulty in getting the needle into the cold collapsed veins. The fluid was at ambient temperature (on a warm but misty day). After approximately one hour on the Res Q Air unit, the patient recovered consciousness.

The interpreter asked him if he was thirsty or hungry and he was given a few sips of water and vegetable broth. His temperature was around 95.5 degrees F. About 5 minutes later, the patient lapsed into unconsciousness and it was thought that it was a result of "after-drop". However, the battery output to the Res Q Air unit was dropping and there was insufficient warm moist air to keep the patient stabilized.

His temperature had dropped to 94.2 degrees F and his pulse slowed to 52. The battery was quickly hooked up to the charger, after a few minutes the Res Q Air reached it's normal operating temperature, and the patients core temperature reacted accordingly and he regained consciousness.

(Editorial Note:

When the patient did not receive effective inhalation rewarming treatment, his condition deteriorated correspondingly and rapidly improved once full treatment was restored. This case proves again, the effectiveness of the inhalation rewarming method to stabilize the core temperature in the field situation and the Res-Q-Air equipment.)



After about two and a half hours of treatment, with a core temperature of 96.6 degrees F and pulse at 60, it was agreed to Medivac him. His pupils were equal and reactive and respiration's were at 12. We were told the next day, that the man was up and around and in good shape.

According to Canadian Rescue Specialist Bruce Paterson: "the Res Q Air unit was very effective in saving this man's life!"

The Res-Q-Air is used extensively by Canadian Coast Guard and other rescue professionals and has saved many life's.

<http://www.hypothermia-ca.com/res-q-air.htm>