

NASA Portable Hyperbaric Chamber Technology Finds Home on Earth

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(PhysOrg.com) -- NASA has signed a patent license agreement with a California company to improve the medical community's access to hyperbaric chambers used to treat many medical conditions and emergencies.

OxyHeal Medical Systems Inc. of National City, Calif., will develop new products based on technologies NASA originally developed for space.

Hyperbaric chambers create an environment in which the atmospheric pressure of oxygen is increased above normal levels. The high concentrations of oxygen can reduce the size of gas bubbles in the blood and improve blood flow to oxygen-starved tissues.

"These technologies will allow OxyHeal to develop new products capable of providing life-saving treatments and care to patients in remote areas that may not have access to large, fixed-site hyperbaric chamber facilities," said Ted Gurnee, president of OxyHeal. Additionally, the company is working on solutions that involve large portable hyperbaric chambers for possible use in treatment of disaster victims.

The partially exclusive patent license agreement allows the company to use three technologies developed at NASA's Johnson Space Center in Houston that are associated with inflatable spacecraft modules and portable hyperbaric chambers.

NASA developed the technologies as part of a program to plan for how

astronauts in space might be treated for decompression sickness. Decompression sickness, commonly called "the bends," can occur in astronauts as they undergo pressure changes returning from spacewalks and in divers as they return to the water's surface.

In addition to treating decompression sickness, hyperbaric chamber therapy on Earth also commonly provides treatment for carbon monoxide poisoning, crush injuries, healing problem wounds, soft tissue infections, significant blood loss and other ailments.

The NASA inventors of the portable hyperbaric chamber, Dr. James Locke, William Schneider and Horacio de la Fuente, recently were recognized by the Federal Laboratory Consortium with a Notable Technology Development Award.

"NASA has a long history of making space-aged technologies available for commercialization, creating new markets that power the economy," said Michele Brekke, director of the Innovation Partnership Program Office at Johnson. "These commercial products and services, known as 'spinoffs,' allow the taxpayers to benefit from space exploration."

Provided by JPL/[NASA](#) ([news](#) : [web](#))

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