

MARK BUGNASKI/STAFF PHOTOS

Patient Dean Gawlas enters the chamber at Baltimore's Life Force clinic. Hyperbaric oxygen therapy is used to treat people with AIDS.

Hyperbaric oxygen therapy: hope or hype?

Doctors divided on effect on AIDS

By Holly Selby
Staff Writer

When E. J. Roberts seeks respite from the disabling fatigue caused by AIDS, he dons a green paper coverall, green paper shoes and a plastic hood that looks like a space helmet. He enters a steel chamber resembling a small submarine.

As oxygen is piped into his hood, the 24-year-old Essex resident says he sits back and passes the time by singing show tunes.

The chamber belongs to Life Force, a clinic set up three months ago in a former Mount Vernon art gallery. Mr. Roberts and others infected with the human immunodeficiency virus come here from as far away as North Carolina for treatment at \$125 per session.

"I've tried AZT; it made me sick. I've tried ddI; it made me sick, too," Mr. Roberts says of two anti-viral

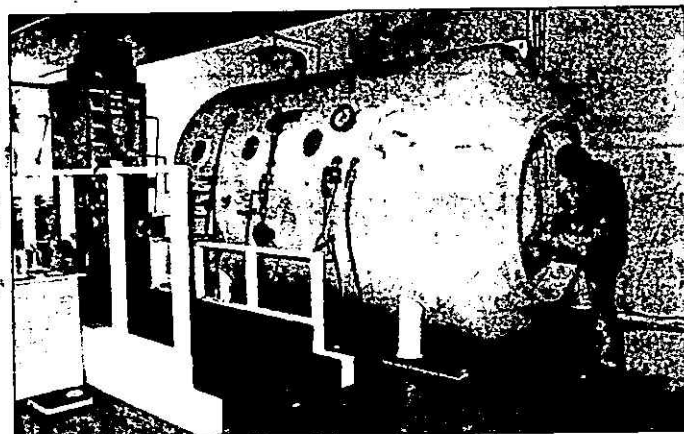
drugs used to combat AIDS. "Why not try this?"

This is hyperbaric oxygen therapy. Best known as a way of treating the "bends" — a deadly condition in which divers have nitrogen bubbles in the blood — the therapy is also used at institutions such as the Maryland Shock Trauma Center to treat some types of wounds, burns and infections.

While in a chamber of highly compressed air, patients breathe pure oxygen. Some doctors say that saturating the blood with oxygen promotes healing by stimulating capillary growth in unhealthy tissues.

The owners of Life Force tout the therapy as a way to alleviate the fatigue often associated with the virus that causes AIDS.

Michelle R. Rello, a nurse who is president of the clinic, contends that the therapy also halts progression of the virus, saying oxygen sat-



Mr. Gawlas talks to a technician while undergoing a 45-minute hyperbaric oxygen treatment at Life Force.

uration "slows viral replication by interrupting biochemical reactions." She has made similar statements in letters to doctors.

But researchers have not established whether hyperbaric oxygen

therapy helps people who are HIV-positive, let alone that it might impair the virus that leads to full-blown AIDS and eventual

See CHAMBER, 3B

CHAMBER

From 1B

Still, people with AIDS who have received the treatment say it makes them feel better afterward. While acknowledging their testimony, some doctors say that the patients may be experiencing a placebo effect — a phenomenon in which a treatment works because patients believe in it.

'We have to be very cautious'
"I think we have to be very cautious about application of a potentially very expensive technology that is unproven. We don't do it with melioidosis and I don't think we should do it with technology," says Dr. Joseph O'Neill, director of research at Chase Breton, a Baltimore AIDS clinic that manages the cases of about 1,500 patients.

Chase Breton doctors do not prescribe hyperbaric oxygen therapy. Nor do doctors at the Moore Clinic, a part of the Johns Hopkins Hospital that oversees care of nearly 3,000 patients who are HIV-positive.

"We don't refer patients because we feel there isn't very much data to support using [the therapy] with HIV," says Moore's director, Dr. Joel Galant.

One Baltimore doctor says she cautions her patients that the therapy is unproven but does not prevent their using it.

'The way I approach patients with a terminal illness is that you don't want to deprive them of hope.'
says Dr. Janet Horn, an internist. If a patient is in the end stages of AIDS, or even before, and has exhausted all the things that we know are of proven benefit, and if he wants to seek treatment elsewhere, that's up to him."

Fighting fatigue

Many who have tried the therapy say it helps them. Since September, when he began receiving hyperbaric oxygen therapy, Mr. Roberts says he sleeps eight hours a day instead of 18. Previously, he says he was unable to overcome his intense fatigue, which led him to quit his job as a convenience store manager.

Similarly, Domingo Vega, 37, also says hyperbaric oxygen therapy relieves his fatigue. "I used to come home and get into bed. Now I work, and then I come home, and I still do my normal activities."

In many ways, the discussion surrounding the Life Force clinic epitomizes a larger debate that began with the onset of the AIDS epidemic: whether people with HIV should — or can — wait for treatments to be proven effective or seek out what seems promising.

'The way I approach patients with a terminal illness is that you don't want to deprive them of hope.'
DR. JANET HORN
Baltimore internist

ment when clearly it seems to help."

Before establishing Life Force, the nurse worked at Shock Trauma and collaborated on a study of the effect of hyperbaric oxygen therapy on people with AIDS. After becoming convinced the therapy works, she left Shock Trauma to open the clinic.

On the other side of the debate is the medical establishment, embodied by Dr. Roy A. M. Myers, a Shock Trauma surgeon who oversees the study. "We have not proven anything," he says.

Beginning in December 1990, 25 people with AIDS who were expected to die received the therapy three times a week, some for as long as two years. All reported feeling better and suffering less fatigue, he says. Eight of the 25 have since died.

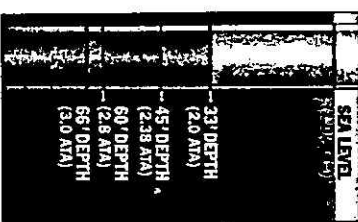
Blood tests abandoned

Dr. Myers calls the results inconclusive because assessment of "quality of life" was subjective, there was no control group and results were not replicated. In addition, he says, blood tests were abandoned because of expense and because biological markers in the blood, fatigue and therapy could not be correlated.

The study was paid for by the University of Maryland, by a manufacturer of hyperbaric chambers, and by proceeds of Dr. Myers' lectures, he says.

Although the study has ended, some former participants continue to receive hyperbaric oxygen therapy at Shock Trauma. Some are treated for

HYPERBARIC OXYGEN THERAPY



One atmosphere, or 14.7 pounds per square inch, of atmospheric pressure.

Hyperbaric oxygen chambers were developed to treat deep sea divers with the "bends," a condition in which nitrogen builds up in the blood. People are placed in chambers that simulate pressures found at varying depths below sea level — usually 33, 45 or 60 feet.

Breathing pure oxygen while under pressure forces a person's red blood cells, which normally are 97 percent oxygen, to become saturated. Oxygen is also forced into the plasma.

The therapy is used to treat infections for which oxygen is toxic. It also is believed to promote healing of some wounds and burns. A new use — the treatment of AIDS patients — is considered experimental.

BY DAWN / STAFF PHOTO

free and a few submit claims to their insurance companies for payment. "I think something is happening here. The fatigue seems to improve," Dr. Myers says. "Emotionally, I want to say, 'Yes, it works.'"

But to claim definitive results, Dr. Myers says, he would have to conduct another study that has a control group. The same number of people who are HIV-positive and do not receive the therapy would be monitored for the sake of comparison.

Dr. Steve Schulman, chief of the medical branch of the division of AIDS at the National Institute of Allergies and Infectious Diseases, raised the issue of a control group when asked to comment on the University of Maryland study. He also brought up the need for review.

No direct funding

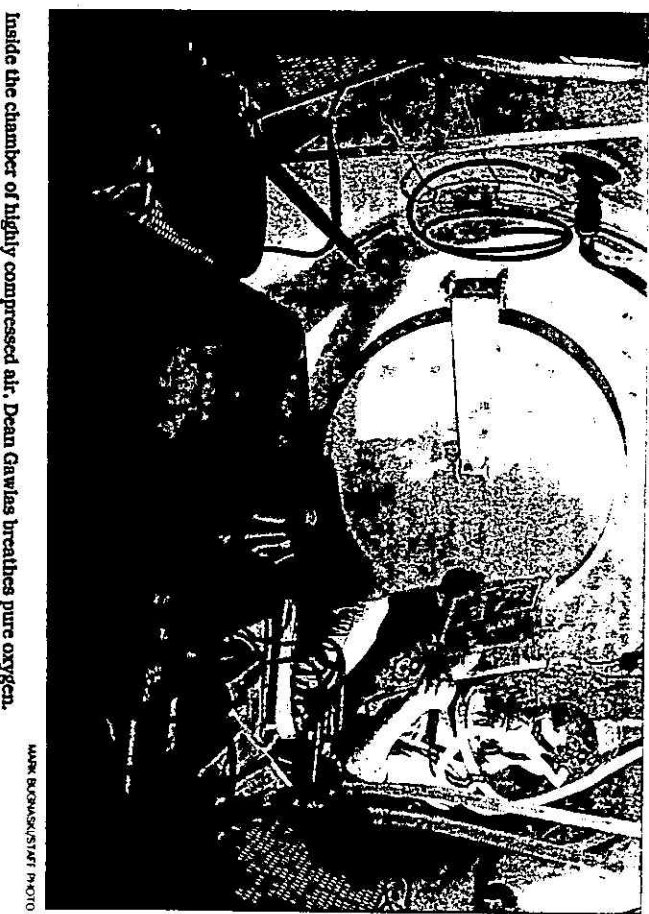
The institute, which pays for AIDS research throughout the nation, is not directly funding any research on hyperbaric oxygen therapy and AIDS, he says.

But basic research that could shed light on how high levels of oxygen affect HIV molecules has been funded by a grant from the division.

Dr. Michael Summers, associate chemistry professor at the University of Maryland Baltimore County, is studying the effects of oxidation on key components of HIV molecules, called nucleocapsid zinc fingers.

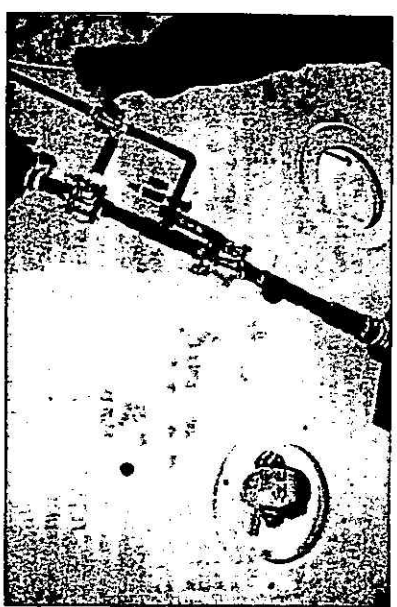
In test tubes, certain organic chemicals halt production of the virus during an oxidation process, Dr. Summers says. Now he is investigating whether high concentrations of oxygen molecules have the same effect as the oxidizing chemicals.

Ms. Rello is collaborating on this portion of his work and has raised money to supplement his grant, he says. Even if experiments show that oxygen molecules can interfere with the replication of the virus, more studies would be required to prove that hyperbaric oxygen therapy slows or stops the progression of the human immunodeficiency virus, he says.



Inside the chamber of highly compressed air, Dean Gawlas breathes pure oxygen.

MARK BUCHSUS/STAFF PHOTO



MARK BUCHSUS/STAFF PHOTO

Mr. Gawlas watches as a technician pressurizes the chamber.

Ms. Rello says her belief that hyperbaric oxygen therapy "doesn't kill the virus but keeps it in a resting state because it disrupts chemical reactions will be borne out.

Enhancing 'well-being'

An account of the Shock Trauma study was published by Ms. Rello in a recent issue of the *Journal for the Association of Nurses in AIDS Care*. She described the study as having been conducted at a "Mid-Atlantic medical facility and the technology as one that will 'enhance well-being' of people with AIDS.

After visiting Shock Trauma last year, Dr. Corliss Steinhart of Miami's Mercy Hospital began offering the therapy to some AIDS patients and billing their insurance compa-

therapy should be documented before being prescribed for people with AIDS.

"I want this woman to have a technique that makes people [with AIDS] feel better... I would love it," he says. But he contends hyperbaric oxygen therapy "ought to undergo that same rigorous scrutiny that we insist drugs undergo. And if it is going to be studied, [patients] should not pay for it."

Bills for the therapy can add up. Ms. Rello says Life Force patients begin with three weekly treatments. That would cost \$375. In a few weeks, they get twice-weekly treatments that can continue indefinitely.

Although hyperbaric oxygen therapy is not a medically approved treatment for AIDS, some insurers reimburse HIV-positive patients for the procedure. That's because the therapy is an approved treatment for certain symptoms, Ms. Rello says.

Those who need a doctor's referral for treatment at Life Force can get one from the clinic's physician, says Dr. Ray Albert, an internist who has a private practice in Dundalk.

Meanwhile, many people suffering from HIV say they have neither time nor reason to seek any treatment that might help them.

Doug Garriott, 51, says the therapy has allowed him to remain productive as an architect. He switched from hyperbaric treatment at Shock Trauma to using the chamber at Life Force for convenience.

Some of its effects may have been psychological, I have no idea," he says. But the way I look at it, if it's psychological, that's fine, too.