

# The Pressure Point

July/Aug  
2008



## Health Awareness

### National Indoor Toxic Mold Awareness Month | Sept. 5 - Oct. 5, 2008

**W**hat is the purpose of *National Indoor Toxic Mold Awareness Month*?

The purpose of *National Indoor Toxic Mold Awareness Month* is to inform, educate, and raise awareness about the adverse health effects due to exposure of indoor molds and mycotoxins.

#### What are molds?

Molds are a common name for fungi. Molds are microscopic organisms that produce enzymes to

digest organic matter and mold spores to reproduce. These organisms are part of the fungi kingdom, a realm shared with mushrooms, yeast, and mildews. In nature, molds play a key role in the decomposition of leaves, wood, and other plant debris. Molds need moisture to grow.

#### What are mycotoxins?

Mycotoxins are toxic vapors produced by mold spores when they sporulate, or grow, and have seri-

ous health effects on humans and animals. Mycotoxins are so poisonous that they have been used as a biological war weapon. *Stachybotrys chartarum* is the most studied and well-known toxic mold. It is known to

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## Military News

PRNewswire-USNewswire

### Rep. Boozman, AOA Officials Tour Military Eye Care Facilities at Walter Reed Army Medical Center

**W**ASHINGTON, May 20—Eye wounds and combat-related vision loss have been among the most common types of injury for America's soldiers, sailors, airmen and Marines serving in Iraq and Afghanistan. On May 19, 2008 at Walter Reed Army Medical Center in Washington, D.C., U.S. Rep. John Boozman, O.D. (R-AR), incoming American Optometric Association (AOA) President Peter H. Kehoe, O.D., and other nationally prominent doctors of optometry met with Department of Defense (DoD) health officials to discuss the current state of military eye and vision care for America's



wounded warriors facing combat-related eye trauma and vision damage associated with Traumatic Brain Injury (TBI).

Since 2002, nearly 1,350 courageous American military personnel have suffered combat eye trauma and were evacuated

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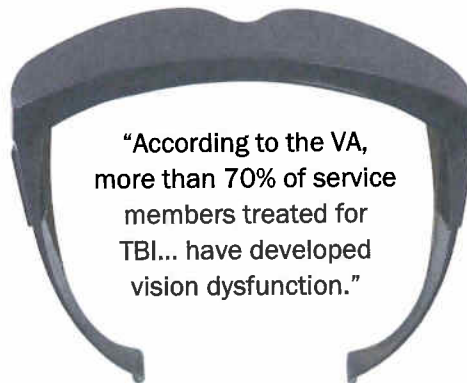
from overseas military operations. An increase in road-side bomb and improvised explosive device (IED) attacks on American troops has resulted in TBI quickly becoming known as the "signature injury" among soldiers returning from the front-lines of Operation Iraqi Freedom and Operation Enduring Freedom. Standing shoulder-to-shoulder with Rep. Boozman, the AOA is committed to a long-term leadership role in helping to ensure that American military service personnel wounded in U.S. conflicts receive the highest quality and most advanced eye and vision care.

Highly attuned to this growing problem, Rep. Boozman, a senior member of the House Committee on Veterans Affairs, sponsored the **Military Eye Trauma Treatment Act, a part of legislation approved by Congress and signed into law on January 28, 2008 (Public Law 110-181).**

The law establishes a national Center of Excellence dedicated to providing military and Department of Veterans Affairs (VA) eye doctors and eye health teams with the best information on the diagnosis, treatment and follow-up for each serious eye injury received by any member of the armed forces while serving on active duty. The new law also calls for a patient-centered joint initiative to respond to visual dysfunction related to TBI between DoD and VA health officials and facilities.

"Traumatic Brain Injury has become the hallmark injury among America's wounded warriors returning home from the front-lines of our current conflicts," said Rep. Boozman. "The treatment of TBI,

and the vision issues deriving from it, is important work that the DoD and the VA should work together and provide leadership on. Genuine coordination between the two is vital to ensuring effective treatment for our men and women who wear, and who have worn, the uniform, including those that have suffered serious eye injuries," Rep. Boozman added.



some estimates, more than half of all service personnel wounded as a result of blast exposure in Iraq have sustained a TBI, although the overall incidence of TBI in all wounded soldiers remains to be determined. In previous wars when blast exposure was thought to be a less common cause of survivable injury, including

Korea and Vietnam, overall TBI rates in injured soldiers have been estimated at about 20 percent or less.

According to the VA, more than 70 percent of service members treated for TBI at their Polytrauma Rehabilitation Center in Palo Alto, CA have developed vision dysfunction, while it has been reported in the past that over half of those treated for TBI at the Walter Reed Army Medical Center have developed vision-related complications. TBI is a type of severe blast injury in which the eyes do not necessarily suffer cuts or contusions but often severe brain concussion affects nerve pathways related to sight.

The AOA, the Blinded Veterans Association (BVA) and the National Alliance for Eye and Vision Research (NAEVR) strongly supported the enactment of Rep. Boozman's bill, and urged congressional leaders to make it a top priority last year. Since its enactment, these organizations, working with Rep. Boozman, have been continually monitoring its implementation.

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Focus On TBI



**What is Traumatic Brain Injury?**

A traumatic brain injury (TBI) is caused by a blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain. Not all blows or jolts to the head result in a TBI. The severity of a TBI may range from "mild," i.e., a brief change in mental status or consciousness to "severe," i.e., an extended period of unconsciousness or amnesia after the injury.



**What Are the Causes?**

(in the civilian population)

- 29% Firearms/Assaults
- 29% Motor Vehicle Accidents
- 13% Falls
- 13% Motorcycle Accidents
- 9% Pedestrian Accidents
- 2% Bicycle Accidents
- 5% Unclassified

**National Indoor Toxic Mold** *continued*

produce *trichothecene mycotoxins*. *Aspergillus* produces *aflatoxin mycotoxins*. Aflatoxins are among the most carcinogenic substances known.

**How do you get sick from mycotoxins?**

Mycotoxins enter the body through inhalation, ingestion, or contact with the skin, and can result in a multitude of symptoms including but not limited to: dermatitis, cough, rhinitis, nose bleeds, cold and flu-like symptoms, headache, general malaise and fever.

**How can exposure to indoor mold and mycotoxins affect my health?**

Mycotoxin exposure can lead to toxic injury that may include multiple illnesses, affecting the skin and the nervous, vascular, respiratory, digestive, reproductive, urinary, and immune systems; including the formation of cancers and can be life-threatening.

**Can mold grow inside the human body?**

Yes. Certain species of molds referred to as "body temperature molds" can live and grow inside the human body, causing recurring infections and numerous other health problems as well as death.

**Can Hyperbaric Oxygen Therapy help relieve health problems resulting from mold exposure?**

Yes. Hyperbaric Oxygen, in particular is medically proven to kill mold, mildew, germs, bacteria, viruses, chemical gases and more. It enhances the body's ability to mobilize and metabolize the *mycotoxin* from the body's cells and tissues. In fact, high pressure and oxygen will also purify any number of items that have been exposed to mold.

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**Archives: Air Force Print News Today**

Mar 25, 2008

**Wilford Hall opens new Air Force hyperbaric therapy facility**

by Senior Airman Erin M. Peterson  
59th Medical Wing Public Affairs

SAN ANTONIO (AFPJ)—The primary hyperbaric capability in the Air Force was relocated March 21 from Brooks City-Base, Texas, to the Wilford Hall Medical Center at Lackland Air Force Base, Texas.

**Hyperbaric chambers are used to perform hyperbaric oxygen therapy**, which supplies a surplus of oxygen to the tissues, helping wounds heal and white blood cells fight infection.

Breathing high concentrations of pure oxygen under increased atmospheric pressure can remove excess nitrogen and carbon monoxide from the body.

Air Force officials have used hyperbaric oxygen therapy for more than 30 years. Originally, the therapy was used to treat aviators and aircrew trainees who suffered decompression sickness.

Presently, hyperbaric oxygen therapy is used to treat not only decompression sickness, but also carbon monoxide poisoning, problem wounds such as nonhealing ulcers and compromised skin grafts, radiation soft tissue damage, chronic infections and burns.

Wilford Hall Medical Center officials purchased two new hyperbaric chambers and began hyperbaric oxygen therapy in the hospital March 24. The new department is staffed with physicians who are board-certified in hyperbaric medi-



Hyperbaric chamber Col. Tim Hursch, chief of the Hyperbaric Medicine Division (left), 59th Medical Wing commander Maj. Gen. Tom Travis (center), and Col. J. R. Little, Air Force Surgeon General Chief medical consultant, officially open Wilford Hall Medical Center's new hyperbaric chamber March 21

cine, fellows, nurses, technologists and maintenance technicians. Each is trained in the administration of hyperbaric oxygen therapy.

Other 59th Medical Wing providers who specialize in areas such as plastic surgery, radiation therapy and oncology, also work with hyperbaric medicine providing patient therapy.

The new department has a multiplace and a monoplace chamber. The multiplace chamber holds up to six patients, is filled with ambient air and is pressurized to 2.5 to six times sea level. The patients breathe 100 percent oxygen under a clear plastic hood.

**The monoplace chamber holds a single patient, is filled with 100 percent oxygen and pressurized to 2.5 to three times sea level.**

"The multiplace chamber allows for the effective treatment of many patients simultaneously, while optimizing the efficiency of our staff," said Senior Master Sgt. Darryl Swartz, superintendent of the hospital's new Hyperbaric Medicine Division.

"This larger chamber allows for the treatment of more acute and critical patients requiring

*(Continued on page 6)*

Fox News Miami/Ft. Lauderdale: Medical Reports

By Richard Lemus, wsvn.com

## Hyperbaric Healing

**F**or most breast cancer patients reconstructive surgery is a critical part to feeling like themselves again. Now a controversial treatment is helping these patients have successful surgeries. Richard Lemus has more on this Hyperbaric Healing:

WSVN -- When Belina Rabang felt pain in her left breast two years ago, she never expected it would be cancer.

**She underwent a mastectomy, having her breast removed, followed by months of chemotherapy and radiation.**

Her plan was to have reconstructive surgery when the doctor gave her some more bad news.

Belina Rabang, Breast Cancer Patient: "It would be hard for me to go through reconstruction because of

the damage that the radiation had done to my skin and left breast."

That's when plastic surgeon Blane Shatkin at Memorial Hospital Pembroke recommended Belina undergo Hyperbaric Oxygen Therapy.

Dr. Blane Shatkin, Memorial Hospital Pembroke: "You go into a chamber, your whole body goes in and you breathe the oxygen, and the pressure kind of moves the oxygen through your body."

The treatment has been used to help wound and burn victims as well as scuba divers with the bends.

Dr. Blane Shatkin: "It kind of compresses the oxygen in the plasma, so it can get out to areas where you might not normally get oxygen to."

**Hyperbaric Oxygen Therapy can help radiation patients heal faster from surgery by stimulating blood flow to the area. It also decreases infection rates by boosting the immune system.**

Belina went into the chamber five days a week for 90 minutes at a time. After 30 sessions, her body was ready for reconstructive surgery.

Belina Rabang: "The breast really healed so well I had no side effects, my skin looked great."

And finally she feels like herself again.

Belina Rabang: "At least I can face the mirror, and I can see there is symmetry in my body."

The good news is most insurance companies cover Hyperbaric Oxygen Therapy for radiation patients.

Medical News TODAY

June 17, 2008

## Hyperbaric Medicine Team Joins War on Cancer

**T**he University of California, San Diego Medical Center's Hyperbaric Medicine Center is part of a nationwide effort to compile and evaluate data in order to validate whether cancer patients being treated for radiation-related wounds heal more quickly and more thoroughly with hyperbaric oxygen therapy.

Each year in the United States, approximately 1.2 million Americans are diagnosed with cancer, half of whom receive radiation therapy. About five percent of those individuals develop problems or "late effect" wounds related to the radiation.

Specialists say hyperbaric oxygen therapy is beneficial in managing radiation related injuries, and that a large-scale collection and analysis

of data across treatment sites will help substantiate this working knowledge.

"As individual entities, it is difficult to know just how beneficial a therapy is until you can measure it across thousands of patients," said Ian Grover, M.D., Medical Director, Hyperbaric Medicine Center at UC San Diego Medical Center. "So as health care professionals, it is very important to collaborate on our varying experiences through studies such as this registry."

**Radiation therapy can leave behind wounds on the skin, or cause blood in the urine or stool.**

The increased exposure to concentrated levels of oxygen through hyperbaric oxygen ther-

apy helps re-generate blood vessels, thus delivering more oxygen to the wounded area and facilitating healing.

The information gathered at UC San Diego Medical Center will be merged with other leading centers across the U.S. The institutions have already shared findings from 2004 and 2005 and will be contributing data from 2006 and 2007 as well. The combined results will form a data base that will be used to demonstrate the merits of this therapy to other physicians and health care insurers.

"To ensure that this therapy becomes widely available, we must further define and demonstrate its benefits," explained Robert Bartlett, M.D., President of the American College of Hyper-

*(Continued on page 5)*

### Hyperbaric Medicine Team Joins War on Cancer *conclusion*

baric Medicine.

In 2006, Bartlett, along with Jeffrey Niezgodka M.D., Medical Director, Centers for Comprehensive Wound Care & Hyperbaric Oxygen Therapy, Aurora Health Care Hyperbaric & Wound Care Associates, in Milwaukee, Wisconsin designed a web-based registry to capture the success of U.S. doc-

tors and nurses who employ this form of therapy.

"This will help us design the best course of treatment for these patients. And we can pass this information along to insurance companies, demonstrating that it is a valid, front-line therapy," said Grover.

*Media:* Dr. Grover, his team and

patients are available for interviews.

For more information on UC San Diego's Hyperbaric Medicine Center, please visit:

<http://health.ucsd.edu/specialties/hyperbaric>.

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### Reuters Health

By Amy Norton, Reuters

## Oxygen therapies may ease headache pain, cluster headaches

**N**EW YORK (Reuters Health) - Two forms of oxygen therapy may help manage two types of debilitating headache pain, a new research review suggests.

In a review of nine small clinical trials, the researchers found that hyperbaric oxygen therapy showed promise for halting pain during migraine attacks. A similar treatment—normobaric, or normal-pressure, oxygen therapy—eased pain in people suffering from cluster headaches.

The findings are published in the *Cochrane Library*, a publication of the Cochrane Collaboration, an international organization that evaluates medical research.

Both migraines and cluster headaches can be debilitating. Migraines typically cause throbbing pain in one area of the head, often accompanied by nausea, vomiting or sensitivity to light and sound.

Cluster headaches cause sharp pain on one side of the head, including the eye; that lasts anywhere from 15 minutes to a few hours and come in waves—repeated attacks over a few weeks to months, followed by a period of no symptoms.

Hyperbaric oxygen therapy involves breathing pure oxygen in a sealed, pressurized chamber. With normobaric oxygen therapy, patients breathe pure oxygen from a

portable unit under normal conditions.

Normal-pressure oxygen has long been used for severe headache pain, and there is some evidence that hyperbaric oxygen could be helpful, but few controlled clinical trials have evaluated the therapies.

For the current study, researchers were able to find nine clinical trials performed between 1981 and 2004 involving a total of 201 patients. When they combined data from three, they found that hyperbaric oxygen therapy was six times more likely to relieve migraine pain than a "sham" (placebo) therapy used for comparison.

Similarly, one study showed that normal-pressure oxygen outperformed sham therapy in easing cluster headache pain. Another trial found the therapy to be effective, but not better than the medication ergotamine.

None of the two forms of oxygen therapy prevented future headache attacks, however, lead researcher Dr. Michael H. Bennett, of Prince of Wales Hospital in Randwick, Australia, told Reuters Health.

He said that based on the evidence, people with cluster headaches who are not finding quick or complete relief from their medication could ask their doctor

about normobaric oxygen therapy.

Hyperbaric oxygen could be an option for stubborn migraine pain, according to Bennett, but it may not be all that practical.

"Unfortunately, this treatment will be relatively expensive and may not be covered by medical insurance or provided by local medical services," he said. "It is likely that hyperbaric oxygen will only be used in the very worst cases where relief is not obtained by any alternative method."

Exactly why oxygen therapy works is not entirely clear. Bennett noted that migraines involve blood vessel dilation in the head, and hyperbaric oxygen causes vessels to constrict, which may help explain the pain reduction. There is also evidence that hyperbaric oxygen blocks the "chemical pathways" that lead people to feel migraine pain, he explained.

As for cluster headaches, they are associated with altered activity in certain brain areas. "In general," Bennett explained, "oxygen seems to return the activity of these areas to normal, and may be directly responsible for the effect of oxygen on the headache."

*SOURCE: Cochrane Library, online July 16, 2008.*

ABC Action News.com

&gt;&gt;&gt;[with IHA Statement in brackets]

July 1, 2008

## Hyperbaric chambers at home

Divers use it to get over the bends. Diabetics depend on it to cure wounds. Even athletes believe it will enhance their performance.

Now families here in Tampa Bay are hoping a controversial treatment will heal their children who suffer from autism and other neurological injuries.

"I remember one day I was in there and I said 'Kaleb I love you.'"

Kristy Schwade shares her scrapbook of heart-wrenching pictures detailing the hours, days and weeks after her baby boy suffered a severe head injury.

"We took him to a licensed home care provider and when we picked him up, he was unresponsive," she remembers.

Doctors told them Kaleb had life threatening injuries, the result of shaken baby syndrome.

"They told us many times he would not make it and if he did he would have no quality of life," Kristy says.

Tyler Suor remained locked in his own world - struggling with autism and a seizure disorder.

"He'll be on medications all his life and it might get worse. I wasn't going to take that for an answer,"



says Tyler's mother, Anna Suor.

These two families have little in common except a quiet desperation and a shared hope that a controversial treatment will heal their precious children.

The Schwades and the Suors are using a home hyperbaric chambers to deliver oxygen therapy to their loved ones.

The chamber takes air from the room, runs it through a concentrator and then pumps it into the portable pressurized air bag, delivering, according to the Suors, 87% pressurized oxygen, 4 times what we normally breathe.

The theory is that oxygen will reduce inflammation and improve circulation in the brain.

The Suors put Tyler in the chamber one hour every day.

"It's been two years and he hasn't had a seizure," Anna says.

Anna says the oxygen therapy also helped Tyler's vision.

Dr. Christopher Morrison isn't surprised these families are seeing improvements, but warns the

home chambers may not be as effective as hospital grade chambers. **[IHA Statement: "Home chambers" are considered every bit as effective. The only variables patients need to heed—as with any prescriptions—are that 1) they are following a prescribed protocol using these apparatus, and that 2) they are being followed by a licensed medical practitioner, well-versed in the patient's disease and hyperbaric medicine.]**

There are risks, but he says the research is promising.

"We have found, at least through pet scanning and spec scanning we are actually changing the metabolism and improving the circulation of the brain in some of these patients," Dr. Morrison says.

Treatments are expensive, costing from \$100 to \$500 a session in a clinic - even more in a hospital. The Selama Grotto, a local non profit organization, purchased a number of home chambers and allows families, like these two, to use the chambers for free.

Now they're trying to get the word out "that you don't have to worry and go into bankruptcy to help your child," says Kristy.

"We have been so blessed by all the opportunities Kaleb has gotten to heal. I hope other families will be able to benefit from something as great as this," Anna says.

### Wilford Hall opens new Air Force hyperbaric conclusion

constant hands-on care. The monoplace chamber is often used for treating otherwise healthy and stable patients requiring treatment for only decompression sickness."

"When Brooks City-Base was placed on the Base Realignment and Closure list, the Air Force needed to decide where to relocate the Air Force's primary hyper-

baric capability," said Col. Timothy Hursh, chief of the Hyperbaric Medicine Division.

"While the Air Force has other large chambers at Travis AFB, Calif., and Wright-Patterson AFB, Ohio, the birthplace of hyperbaric medicine in the Air Force was in San Antonio. Since there is such a large active duty and re-

tire population here, it only made sense to relocate to Wilford Hall."



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