THE INTERNATIONAL HYPERBARICS ASSOCIATION, INC.

The Pressure Point

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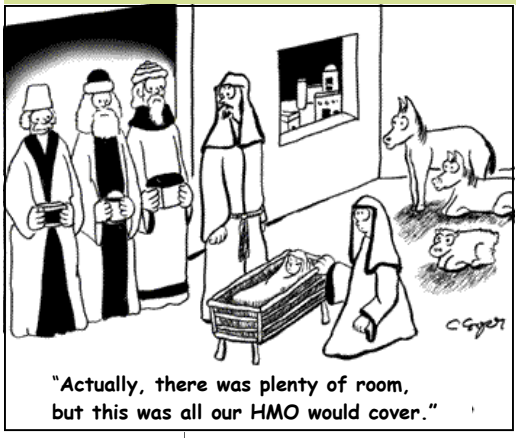
Inside this issue:

♫ ♪ Laughing All the Way...



"Actually, there was plenty of room, but this was all our HMO would cover."

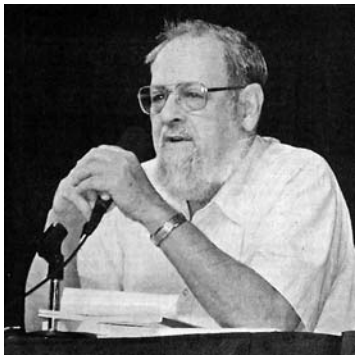
Autism's Great Advocate:

The Legacy of Dr. Bernard Rimland

ARI, DAN! and his work with Hyperbaric Therapy

By Shannon Kenitz

(November 15, 1928-November 21, 2006)



Dr. Rimland first began his search for answers to autism when his son was diagnosed with autism in the late 1950s.

In life, we don't often have the opportunity to meet and become friends with a "true great"—that is, a person, who through his work and dedication has literally changed the lives of thousands of children and families world wide.

I had the pleasure of meeting Dr. Rimland, or "Bernie", as he liked to be called, in 2005 when he asked me to visit him in San Diego to talk about Hyperbaric Oxygen Therapy (HBOT) and Autism.

Dr. Rimland had been interested in HBOT for several years and was sure that HBOT could benefit the Autism community, but wasn't sure just how. As he always did with new therapies, Dr. Rimland researched HBOT and all the possibilities that could occur by the use of this therapy to help Autistic Kids.

With these facts laying the groundwork for progress, I headed back to ARI for a meeting of the minds. I brought with me some of the world's leading HBOT authorities, and we sat with Dr. Rimland, in his own right an expert in Autism, and with Matt (his right hand man) at the doctor's favorite Restaurant, "The Green Tomato."

We talked at length about all the possible benefits that HBOT could bring for Autism. Until then, HBOT had not been a topic discussed at any DAN! meeting. However, due to his earnest quest to help heal autism, Dr. Rimland paved the way for HBOT to be present at the DAN! conference in Long Beach, California on October 28-30, 2005.

From this moment, The International Hyperbarics Association was invited into the ARI/ DAN! "Think Tank" as Dr. Rimland's special guest, and the first discussion of HBOT was given at DAN!

Dr. Jerry Kartzinel and Dr. Julie Buckley presented their data from a pilot study which they had just finished. The results were very encouraging. Dr. Dan Rossignol also delivered a poster board presentation on a pilot study that he and his wife, Lanier Rossignol R.N., had just finished. Those results were also very positive.

Needless to say, HBOT was a hot topic at the Long Beach conference, and Dr. Rimland wanted to make sure that it was introduced to the attendee's in a responsible

Autism's Great Advocate:

The Legacy of Dr. Bernard Rimland (continued)

In the 1998 hit movie, 'Rain Man', Dr. Rimland served as technical advisor.

The film brought autism awareness to many homes.

Mark Rimland, Dr. Rimland's son is said to have been the inspiration of the Dustin Hoffman character, Raymond.

way. Thus, another meeting was called, bringing together HBOT experts and DAN! physicians alike. This meeting was the beginning of many more to come, and out of this came funding for several HBOT/ Autism studies.

In the next months, an Autism Consensus Committee was created and the IHA and ARI pooled their resources to make sure that HBOT was given the attention it needed. At the next DAN! meeting in Washington D.C., the IHA held its Second Parent Forum on HBOT. It was standing room only, with over 175 people in attendance.

These meetings were the start of HBOT becoming a part of so many DAN! practices throughout the country. HBOT had made its mark on the Autism Community.

I remember a call I received after that meeting, when Dr. Rimland heard how many people had attended. He said, "Shannon, I really think HBOT will help so many of our kids," and he then thanked me for working with him to do the studies and to introduce this therapy in "a responsible way."

That day was a special day for me in many ways because one of the IHA's most beloved doctors had passed away—Dr. Ignacio Fojgel. He would have been so proud to see so many families interested in HBOT for their Autistic Children. Dr. Iggy, like Dr. Rimland, was dedicated to helping children. They both believed that HBOT was a treatment that could really benefit Autistic children worldwide.

Dr. Rimland was very supportive and proud of what the IHA and ARI had accomplished. He was and always will be a role model for me—both professionally and personally.

Indeed during our association, Dr. Rimland even took the time to increasingly learn more about my daughter Grace, who suffers from a mitochondrial disorder and autism. One day, when Dr. Rimland and I were talking, he suggested that I start Grace on the DAN! protocols. It was at the DAN! conference that I realized that I needed to focus on Grace's autism and not so much on her mitochondrial disease.

One of the things that I most admire about Dr. Rimland is that he always put us parents first—he was always cautious about new therapies and always wanting to proceed slowly to make sure that something of importance wasn't missed along the way. Being a parent of a child with autism, I will always be grateful for his willingness to do just that—being cautious and thorough. As parents, we are always being pulled in so many directions and we only have limited resources to help our kids.

Not long before Dr. Rimland's passing, we exchanged letters. Even then, he was still thinking about how HBOT was changing children's lives. He was so pleased that the studies were being done and that the outcomes were as he had thought they would be—positive. I made a personal promise to him in my letter that I would continue to raise funding for more studies, and that the IHA would act in a professional and responsible manner so that parents would have 'true science' when making their decisions about starting Hyperbaric Oxygenation.

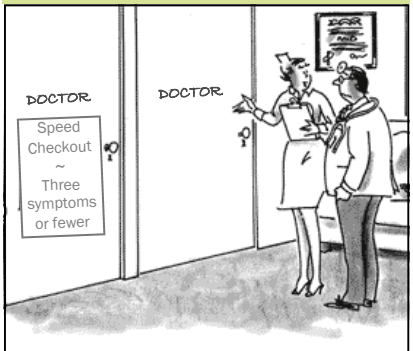
Although our time working together was short, I am amazed at just how much we accomplished in such a small amount of time.

In the last two years, over a half million treatments have been given to autistic children—and those are only the treatments reported by IHA member clinics! The findings thus far have been very positive with physicians and parents reporting back improvements in most all areas of speech, cognition and gut issues.

ARI and IHA will continue to work together to carry out what Dr. Rimland would have wanted for the betterment of autistic children everywhere. ARI has now added HBOT to the ATEC, and has developed a site where parents can record the progress made by the use of HBOT.

The IHA has funded several studies and will continue to fund more studies as needed.

♫ ♪ Hee hee...



"It's the only way to beat the HMOs"

Dr. Rimland paved the way for HBOT to be part of the DAN! movement. HBOT has made the rounds at several DAN! Conferences and even now at the next DAN! conference, Dr. Rossignol will be given a slot to speak on HBOT alone.

This is a huge milestone for HBOT and for families interested in this therapy. It gives the science and credibility that Dr. Rimland would have wanted it to have.

As a parent, I will always be indebted to Dr. Rimland and his family for giving so much of their life to help others. Also, much gratefulness goes to the ARI family for all the work they do to make sure that parents get the most up to date information on all the therapies that can help our kids.

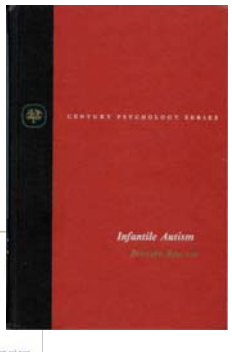
Dr. Rimland will be truly missed, but his hard work and devotion will be with us for a lifetime.

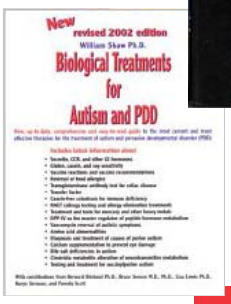
Sincerely,

Shannon M. Kenitz
Mom to Grace and
IHA Spokesperson

Infantile Autism

The book that started it all.

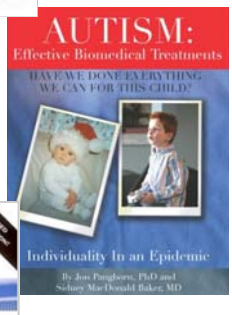




Biological Treatments for Autism and PDD.

Autism: Effective Biomedical Treatments

Introduction



Recovering Autistic Children

Books by Dr. Rimland

1964 *Infantile Autism: The Syndrome and Its Implication for a Neural Theory of Behavior* - written after his son, Mark, was diagnosed with autism.

1976 *Modern Therapies* (with Virginia Binder, A. Binder)

1998 *Biological Treatments for Autism and PDD* (with William Shaw, Lisa Lewis, Bruce Semon)

2001 *Tired - so Tired!: And the "Yeast Connection"* (with William Crook, Cynthia Crook)

2003 *Vaccines, Autism and Childhood Disorders: Crucial Data That Could Save Your Child's Life* (with Neil Z. Miller)

2003 *Treating Autism: Parent Stories of Hope and Success* (with Stephen M. Edelson, Ph.D.)

2006 *Recovering Autistic Children* (originally published as *Treating Autism*) *Second Edition* (with Stephen M. Edelson, Ph.D.)

[For an excerpt from *Infantile Autism*, please see page 5.]

Drawing attention to a possible autism epidemic

Dr. Rimland was among the first medical professionals to draw attention to what has since become a staggering increase in the number of diagnoses of autism. His early observations about the rise in diagnoses during the mid-1990s, regarding what is now known as an 'autism epidemic', have proven prophetic. The number of controversies surrounding vaccination campaigns, many of which Dr. Rimland has found himself in the midst of, have also escalated in tandem with the scope of the possible epidemic.

Autism Statistics

- 1 in 166 births
- 1 to 1.5 million Americans
- Fastest-growing developmental disability
- 10 - 17 % annual growth

Quote

"Soon after my textbook on autism was published in 1964, I began to hear from other parents. Many parents told me that their children were normal until getting a triple vaccine—the DPT shot. In 1965, I began systematically collecting data on the symptoms and possible causes of autism: In 1967—33 years ago—I began querying the parents, specifically about the child's response to the DPT shot. Many had reported marked deterioration. During the past few years the Autism Research Institute has been flooded with an upsurge in pleas for help from parents throughout the world—from wherever the World Health Organization vaccine guidelines are followed. The majority of these parents say their children were normal until getting the MMR—another triple vaccine."

—Dr. Bernard Rimland (testimony before US congressional committee on April 6, 2000)

PubMed News

Studies Eye Autistic Kids' Kin

By LIDIA WASOWICZ

SAN FRANCISCO, Dec. 8—A number of studies have shown parents and siblings of autistic children sometimes share some of the anatomical and behavioral anomalies characteristic of autism, even though they themselves do not have the disorder.

The studies were carried out to circumvent the difficulties inherent in investigations of brain and cognitive development in autistic children, many of whom have limited communication skills, among other challenges, researchers said.

In one investigation, scientists at the University of Colorado, Colorado State University and the University of Denver pored over three-dimensional brain images of the children's kindred for signs of heritable abnormalities.

In comparing the scans of 40 parents with autistic offspring and 40 without, they found size differences between the two groups in a multitude of regions, each of which regulates behaviors that are affected in autism, the authors said.

In the autistic children's kin, they reported observing:

- A shrunken cerebellum, the coordinator of motion and regulator of speech, learning, emotions, attention and other cognitive thinking;
- A shriveled prefrontal cortex, also referred to as the "theory of mind area" because of its pivotal role in interpreting intentions, motivations and feelings of other people;
- An oversized motor cortex, the controller of voluntary movement;
- A bloated basal ganglia, a center for planning and imitating motion that also is associated with compulsive and ritualistic behaviors,
- An undersized somatosensory cortex, a site critical to comprehending facial expressions and other social cues.

The team is planning to confirm the findings in studies of twins.

At the University of Wisconsin-Madison, investigators used advanced imaging and eye-tracking technologies to peek at ocular activity and measure brain structures in nine boys with autism, their nine non-autistic brothers and nine unrelated healthy youngsters.

They said they found the sibling pairs shared the autistic proclivity to avoid eye contact with strangers, friends and even family members.

In addition, the researchers said, the boys had an abnormally small amygdala, an almond-shaped, multi-task area that holds the key to reading facial expressions and experiencing fear at social situations.

None of these features appeared in the "control" group of non-autistic boys with non-autistic relatives, the study authors said.

Because the deficits observed in the typically developing brothers of autistic children did not result in any noticeable symptoms, the researchers reasoned other brain areas must be compensating for the shortfalls. That suggests autism touches multiple brain systems to make itself known, the investigators said.

"Because the deficits observed in the typically developing brothers of autistic children did not result in any noticeable symptoms, the researchers reasoned other brain areas must be compensating for the shortfalls"

Parental genes may affect a baby's growth in other unforeseen ways, scientists said.

In one surprising finding, investigators from Wake Forest University Baptist Medical Center in Winston-Salem, N.C., noted the nutritional composition of a woman's breast milk—which has a bearing on the nursing infant's development -- may depend not only on what she eats but also on what she's inherited.

In the first study to show a genetic effect on human lactation, the researchers discovered having a certain variant of a gene—which some one-third of the U.S. population does—can boost by 40 percent the amount of a needed nutrient that enters a mother's breast milk, the team reported.

A shortage of the substance—a type of omega-3 fat called decosahexaenoic acid, or DHA, found mainly in cold-water fish such as tuna, salmon and mackerel—has been implicated in autism, attention-deficit/hyperactivity disorder, learning disabilities and other developmental disorders.

BRAIN'S FEAR CENTER, AUTISM MAY BE LINKED

MADISON, Wis., Dec. 8—A smaller amygdala, or fear center, in the brain may be linked to autism in male teens and social impairment in young men, two U.S. studies say.

In the first study, University of Wisconsin researchers examined participants' brains, specifically the amygdala, located deep in the brain. They found autistic teens had smaller amygdalas, HealthDay News said. They also found smaller amygdalas in young men who had difficulty differentiating between emotional and neutral facial expressions and were unable to make eye contact with another person, which indicate social impairment.

In the related study, another University of Wisconsin research team found autism-free siblings of autistic children exhibited some of the same differences in amygdala size and in the way they look at faces and process that facial information.

"Together, these results provide the first evidence linking objective measures of social impairment and amygdala structure and related brain function in autism," Richard Davidson, who led both studies, said in a statement.

The first study was reported in the December issue of the Archives of General Psychiatry. The second study was published in a recent online issue of Biological Psychiatry.

Excerpts from *Infantile Autism: The Syndrome and its Implications for a Neural Theory of Behavior*

By Bernard Rimland

(Chapter 1, pg. 7)

The first two years. The child is usually exceptionally healthy and attractive, quite often precocious and alert in appearance. Very little that is noticed in the first months, except perhaps that feeding may be a problem. Some autistic infants are reported to have been apathetic and unresponsive in the first few months, while others have been given to implacable crying. Typically, it is not until the fourth month that even a person experienced with babies may first notice anything unusual. The first awareness of any problem is often the observation that the child fails to make the usual anticipatory movements prior to being picked up. He also fails to make the usual adjustments of his body to adapt to the person carrying or holding him. Head-banging is common, both in the crib and while being held; the latter behavior causing considerable discomfort and chagrin to the adult holding him. Case histories of very young autistic infants have been supplied by Plenter (1955), Lazure (1959), Eveloff (1960) and Lewis and Van Ferney (1960).

Between the fourth and eighteenth months several disturbing symptoms will have begun to appear. These include prolonged rocking and head-banging in the crib. Apathy and disinterest in the surroundings, unusual fear of strangers, obsessive interest in certain toys or mechanical appliances, highly repetitive and ritualistic play, insistence on being left alone and that the physical environment remain unchanged, and very unusual language behavior. Speech, of a a very unusual sort, may have started early. Because speech is of special importance in early infantile autism, it will be discussed separately below, in conjunction with separate discussion of other behaviors of special interest.

By the time the child is eighteen months to two years old, the parents will have become quite concerned, especially if another child has been born which acquaints them with the much different normal pattern of development. One the most disturbing of the symptoms is what has been called "autistic aloneness." The child may sit for hours staring into space, motionless, as if deep in thought. The autistic child looks highly intelligent and always appears to be mentally occupied during these periods of self-imposed isolation. Sometimes a fleeting, pensive smile will cross his face. The child's attention cannot be attracted by calling his name or speaking. No sign of attention is given.

Even more disturbing is the child's utter lack of interest in people. Most autistic children act as if other people did not exist (e.g., Chapman, 1957; G. Arnold, 1960; Loomis, 1960), but a few appear to have an active aversion to others (e.g. Plenter, 1955). Coupled with the disinterest in persons is frequently an active interest in inanimate objects.

(Chapter 7, pg. 131)

On Oxidative Stress in Autistic Children:

"That certain infants may be susceptible to damage by something apparently as innocuous as atmospheric oxygen is not really unlikely. The literature of allergy is replete with cases of persons severely afflicted by environmental factors to which the rest of us are immune."

(Chapter 8, pg. 138)

On the need for Research:

"Inasmuch as infantile autism is clearly a source of unhappiness to children afflicted, to their families, and to the community at large, there can be no doubt that research on infantile autism is necessary and important in itself. If our hypothesis that children stricken with autism have also often been predisposed to unusual giftedness is correct, research leading to the prevention and perhaps cure of autism becomes all the more imperative."

♫ ♪ Making Spirits Bright...

"We're calling him 'Quits'!"

JAMA News

Older Fathers More Likely to Have Autistic Children

Science Daily — Sep 5, 2006

Children of men age 40 and older have a significantly increased risk of having autism spectrum disorders compared with those whose fathers are younger than 30 years, according to an article in the September issue of Archives of General Psychiatry, one of the JAMA/Archives journals.

Autism is characterized by social and language abnormalities and repetitive patterns of behavior, according to background information in the article. Autism and related conditions, known collectively as autism spectrum disorders, have become increasingly common, affecting 50 in every 10,000 children as compared with five in 10,000 two decades ago. This increase is partially due to higher levels of awareness and changes in diagnosis processes, but could also reflect an increase in incidence of autism, according to the authors. Older parental age has previously been linked to abnormalities in the brain development of children; however, few studies have effectively examined the effect of mothers' and especially fathers' ages on autism.

"...possible genetic mechanisms for the parental age effect, including spontaneous mutations in sperm-producing cells or alterations in genetic "imprinting," which affects "genetic expression."

Abraham Reichenberg, Ph.D., of the Mount Sinai School of Medicine, New York, and Institute of Psychiatry, King's College London, and colleagues evaluated this association in children born during the 1980s in Israel. All men and three-fourths of the women born in these years were assessed by the draft board at age 17, during which time any psychiatric disorders were recorded. Dr. Reichenberg and colleagues obtained draft board information and the age of the father for 318,506 individuals; age of the mother was available for 132,271 of those.

Age may matter

Two hundred and eight individuals in the larger group (a rate of 6.5 per 10,000) and 110 in the group with both maternal and paternal ages (8.3 per 10,000) had a diagnosis of autism spectrum disorder, according to the information in the draft board registry. Among the paternal age groups of 15 to 29 years, 30 to 39 years, 40 to 49 years and older than 50 years, there were: one case, 13 cases, 34 cases, and 62 cases, respectively, of autism spectrum disorders. Advancing age among fathers was associated with increased risk of autism. This association persisted after the researchers controlled for year of birth, socioeconomic status and the mother's age, such that the odds of autism spectrum disorder were nearly six times greater among children of men age 40 and older than those of men 29 years and younger. Older age among mothers was not associated with autism after researchers factored in the effect of the father's age.

The authors discuss several possible genetic mechanisms for the paternal age effect, including spontaneous mutations in sperm-producing cells or alterations in genetic "imprinting," which affects gene expression." It is important to keep in mind, however, that age at paternity is influenced by the socio-cultural environment and varies across societies and over time," they continue. "In a given population, a change in the socio-cultural environment could produce a change in paternal age at birth. In theory, it could thereby lead to a change in the incidence of genetic causes of autism."

"Although further work is necessary to confirm this interpretation, we believe that our study provides the first convincing evidence that advanced paternal age is a risk factor for autism spectrum disorder," they conclude.

Genetic News

July 31, 2006 Different Genes May Cause Autism In Boys and Girls

Science Daily—Like detectives trying to solve a murder case, researchers searching for the biological cause of autism have come up with some surprising suspects.

They've found that different genes may be responsible for causing autism in boys than in girls.

In addition, the researchers also have discovered that other genes may play a role in the early onset form of the developmental disorder and in the recently verified regression, or late onset, type of autism, according to a new study published today in the online edition of the journal Molecular Genetics.

The study also provides new evidence for the idea that multiple genes contribute to autism, said lead author Gerard Schellenberg, a researcher at the Puget Sound Veterans Affairs Medical Center and a research professor of medicine at the University of Washington. The research team was headed by Schellenberg, Ellen Wijsman, a UW research professor of medical genetics and Geraldine Dawson, director of the UW's Autism Center.

"It is highly unlikely that there is

only one gene responsible for autism," said Schellenberg. "There may be four to six major genes and 20 to 30 others that might contribute to autism to a lesser degree.

"If an individual only gets three high-risk variants of these genes, it could mean a less-severe form of autism. And because autism is rarer in females, it may take more risk genes for a female to have autism. There also is the possibility that there might be a biological difference in autism for females versus males," he said.

"What is meaningful is that we have found evidence for two genetic subtypes of autism, male versus female and early versus late onset," added Geraldine Dawson, a professor of psychology. "This is a critical piece of information. With Alzheimer's disease research, one big breakthrough was segregating the late and early onset forms of the disease, and this led to important genetic discoveries."

"The study also provides for the idea that multiple genes contribute to autism… and because autism is rarer in females, it may take more risk genes for a female to have autism."

Schellenberg said the study came up with "strong support" for an autism gene on chromosome 7 and "less, but still compelling evidence" for genes on chromosomes 3, 4 and 11. These results confirm some data from previous studies, particularly involving chromosome 7.

The search for autism genes is part of a long-term Autism Center effort to uncover the genetic and neurobiological causes of autism. To find regions of the human genome that contain autism genes, the researchers scanned the DNA of 169 families that had at least two siblings who met the strict criteria for autism. They also scanned the DNA of another 54 families that, in addition to having individuals with strictly defined autism, also included members who had less severe forms of the disorder, such as Asperger syndrome.

"We have been working almost 10 years to get to this point," said Schellenberg. "If we can find and confirm that a particular gene is involved in autism the field will explode. We have to find a gene so that molecular biology can be defined and we can understand what's inside autism. Until that happens, we are dancing on the outside."

Dawson said the researchers are looking for autism susceptibility genes, ones that heighten the risk of an individual getting autism, just as there are genes that raise the chances of getting breast cancer.

"Once we discover these susceptibility genes, we can immediately screen infants to identify those at risk early in life. Early identification can lead to early intervention, which could have a much more dramatic effect.

"Also, when a gene is discovered, you discover the underlying biology of autism at the molecular level. Once you understand the biology you can develop a prevention strategy including medical approaches. Genetic research is a good strategy for eventually designing effective medical treatments for autism," she said.

The research is part of the National Institute of Child Health and Human Development Collaborative Program of Excellence in Autism. The research is ongoing and families who have more than one child of any age with an autism spectrum disorder who are interested in participating in the UW genetics study can call toll free 1-800-994-9701.

Co-authors of the paper are Yun Ju Sung, Annette Estes, Jeff Munson, Elisabeth Rosenthal and Joseph Rothstein of the University of Washington; Leslie Leong and Chang-En Yu of the Puget Sound Veterans Affairs Medical Center; Patricia Rodier of the University of Rochester Medical Center; M. Ann Spencer of the University of California, Irvine; Nancy Minshew of the University of Pittsburgh; and William McMahon of the University of Utah.

Note: This story has been adapted from a news release issued by University of Washington.

National Legislation

Bush Signs Autism Measure

WASHINGTON, Dec. 19, 2006—U.S. President George Bush on Tuesday signed legislation expanding autism research for the condition's prevention and treatment.

The measure provides funding through 2011 to help the 1.5 million Americans who suffer from autism.

Since Bush took office in 2001, *funding for autism research has increased from $56 million to $101 million*, with $5.9 million going to study the factors that may put children at risk.

The measure calls for early screening for the condition and to increase the number of people able to diagnose the condition.

"For the millions of Americans whose lives are affected by autism, today is a day of hope," Bush said in signing the measure, the ***Combating Autism Act of 2006***.

"By creating a national education program for doctors and the public about autism, this legislation will help more people recognize the symptoms of autism. This will lead to early identification and intervention, which is critical for children with autism."

♫ ♪ What fun it is to ride and sing...

"Mundo vitam dare"

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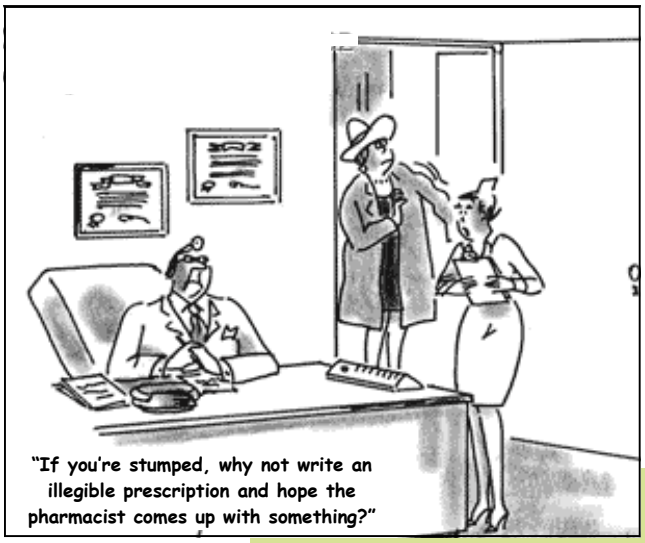
The International Hyperbarics Association, Inc., is a coalition of doctors, parents, patients, corporate chamber-industry professionals, hyperbaric center owners, and above all members who are committed to the cause of medical hyperbarics.

Our members come to us from all geographical areas with one common goal— to share their knowledge and information regarding the latest hyperbaric news. Our driving force is our members, who are committed to do all we can "to give life to the world."

— "Mundo vitam dare"

Happy Holidays!
Merry Christmas
Happy Hanukkah
Happy New Year

"It was getting moldy, so I threw it out."



"If you're stumped, why not write an illegible prescription and hope the pharmacist comes up with something?"