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NORTH DAKOTA MEDICINE

UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE & HEALTH SCIENCES

How Healthy Are We?

More Answers, Better Treatment

Healthy Living Is CATCH-y

Field Research

**No Butts About It: North Dakota
Tobacco Quitline Works**

WICHE Doctors

Hot for Haiti

SUMMER 2006
VOLUME 31, NUMBER 3



WE'D LIKE TO EXTEND A SPECIAL thanks to so many of you who've sent acknowledgments and compliments on our new publication, NORTH DAKOTA MEDICINE. We greatly appreciate your readership and will continue to improve upon the publication.



Congratulations, Dr. Rohrich

As part of this year's commencement exercises, Rod Rohrich, M.D. (B.S. Med. '77) received an honorary doctoral degree from the University of North Dakota. One of the *Best Doctors in America* since 1996, he is professor and chair of plastic surgery at the University of Texas Southwestern Medical Center, Dallas. Currently the editor-in-chief of Plastic Surgery, he is world-renowned for his work with facial deformities. What an honor to have him as a member of our alumni family! For more about Rod, see Alumni Notes on page 28.

The Buck Starts Here!

One of my goals when I became the dean here was to strengthen the ties between the medical school and the health of the children of our state. As a pediatrician, I know the value of early education on proper diet and exercise. Recent studies have shown that nearly two-thirds of Americans are overweight - and the likelihood of obesity is greater if weight is a factor as a child. Nancy Vogeltanz-Holm, Ph.D., has established a successful and recognized program aimed at reducing obesity and cardiovascular risks in the children in rural North Dakota. Read more about this on page 10.

The Tradition Continues!

April and May have been busy months. Associate Dean for Student Affairs Judy DeMers led a team through the interview process to finalize and select members for the Class of 2010. The process is

highly competitive, with four applicants interviewed for every student accepted.

Second-year students will begin third- and fourth-year rotations this summer. We were notified recently that 15 percent of this group scored in the top 1 percent in the nation on Step One of the National Board examination (included more than 17,000 medical students).

Fourth-year students returned to campus for their senior colloquium, followed by graduation ceremonies on May 6. About half of this class has chosen a primary care field as their specialty.

And Not Just Physicians!

The health sciences continue to grow and expand their offerings which further advance the school. A doctorate in physical therapy is now offered, and a master's of both the occupational therapy and physician assistants studies programs are now available.

Strength in Research

When I visit with alumni around the country they are often surprised to learn that the majority of the medical research conducted in North Dakota is housed at the School of Medicine and Health Sciences. A strong research program complements a strong medical education program. At UND we focus on the diseases that affect the citizens of this region, and have some of the finest basic scientists and researchers in the nation, including Ed Carlson, Ph.D., a specialist in diabetes research who was recently awarded the Chester Fritz Distinguished Professorship.

If you're in the neighborhood this summer, please stop by. We'd be happy to see you!

Handwritten signature of H. David Wilson.

H. David Wilson, M.D.
Vice President for Health Affairs and Dean



NORTH DAKOTA MEDICINE

UNIVERSITY OF NORTH DAKOTA
SCHOOL OF MEDICINE AND HEALTH SCIENCES

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NORTH DAKOTA MEDICINE

UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE & HEALTH SCIENCES

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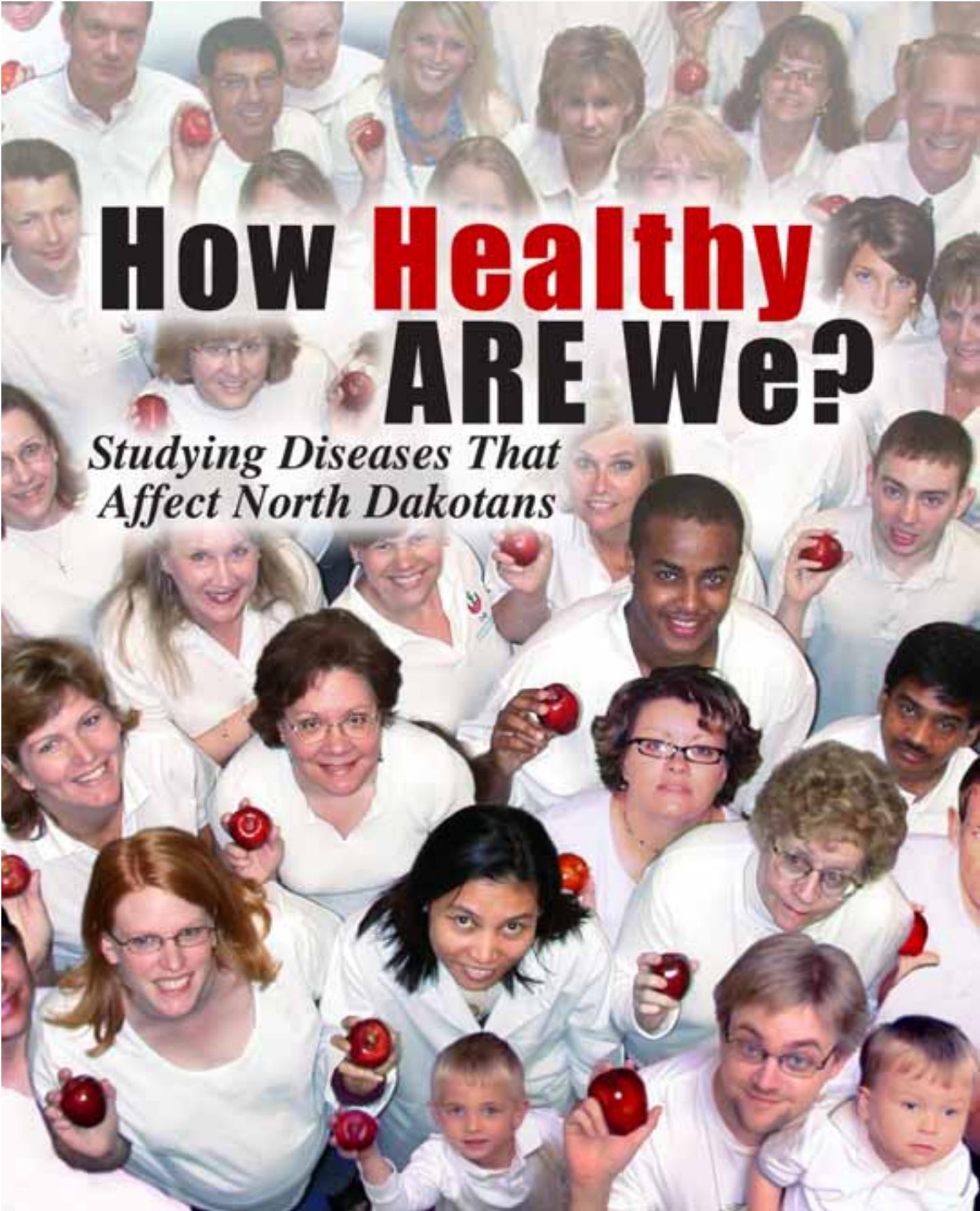
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How **Healthy** ARE WE?

*Studying Diseases That
Affect North Dakotans*

IMPROVING THE QUALITY OF LIFE FOR PEOPLE of North Dakota and the Northern Plains is a tenet that undergirds the mission of the University of North Dakota (UND) School of Medicine and Health Sciences. It is a guiding force that motivates our efforts on a daily basis.

Those who live in this region face diseases common to all Americans. Some of those diseases occur here at higher rates than in other parts of the United States. Many are lifestyle-related and could be prevented by not smoking and by adopting healthier habits of nutrition and physical activity.

What is the UND School of Medicine and Health Sciences doing to find answers to increase our understanding of disease that will lead to better treatments and to improve the lives of people, especially children, through health promotion? In this issue, we highlight a few of the studies that are aimed at the most critical challenges to our health and well-being. They offer hope for enhancing the quality of life for people in this state and region.

New Treatment Ahead: A Cancer Vaccine

The trouble with cancer is that the body doesn't recognize cancerous cells for what they are—disease entities that should be attacked and killed—as it does with so many other threats to our health. Cancer cells become quite adept at escaping the surveillance system that triggers our natural defense mechanisms.



Robert Sticca, M.D., injects a laboratory mouse with an experimental vaccine that has shown potential as an effective treatment for colorectal cancer, while David Goossens (right), research assistant, observes. Sticca is chairman of the surgery subcommittee of the North Central Cancer Treatment Group, a national cancer research organization based at the Mayo Clinic in Rochester, MN.

What if there was a vaccine that could be injected into the body, that would travel through the bloodstream to the site of the cancerous cells and destroy them?

And what if there was a vaccine that could be injected as a preventive measure, to protect the body from developing a particular type of cancer?

These questions are at the heart of preliminary studies at the UND School of Medicine and Health Sciences, in its Department of Surgery, where researchers are using mice to find more effective treatments for cancer in humans. Their work is focused on colorectal cancer, the second most common cause of cancer-related death in the United States.

The incidence of colorectal cancer is expected to increase as the age of the U.S. population increases, said **Robert Sticca, M.D.**, chair and professor of surgery, Grand Forks. About 150,000 new cases are reported each year, and the disease accounts for 50,000 to 60,000 deaths annually in this country.

The only surgical oncologist in North Dakota, Sticca has a special interest in gastrointestinal cancers and melanoma.

In North Dakota colorectal cancer is the third leading cause of cancer and the second leading cause of cancer-related death, he said, with 34 percent of patients diagnosed eventually succumbing to their disease.

Although significant strides have been made with traditional therapies such as surgery, chemotherapy and radiation therapy, in many cases the disease recurs and

progresses causing the eventual demise of the patient.

New therapies are needed, he said.

Immunotherapy has emerged as an attractive alternative therapy in many types of cancer, allowing the patient to avoid the serious, often debilitating side effects (sickness, nausea, hair loss) of traditional methods of treatment. Studies have demonstrated that this type of therapy can be undertaken with little or no toxicity.

Immunotherapeutic research involving patients has shown some promising results, said Sticca, who led clinical studies in South Carolina prior to joining the UND medical school in 2003.

In my former lab (at Greenville, SC), we were

Cancer is the second-leading cause of death and is responsible for one of every four deaths in the United States. In 2004, more than 560,000 Americans – or more than 1,500 people a day – died of cancer. Of those annual cancer deaths, about 1,300 occurred in North Dakota. About 1.4 million new cases of cancer were diagnosed nationally in 2004. This figure includes 3,250 new cases in North Dakota.

looking at kidney cancer and melanoma, he said. We had moderate successes with this type of treatment (for patients). My feeling, when I came here, was that this work could be extrapolated to other cancers.

At UND, his research is aimed at creating a vaccine that reprograms the body's immune system to recognize and eradicate malignant cells, without harming healthy ones.

We've had some very good successes, in experiments with mice, that have been very encouraging, he said.

We're working now to determine the correct amount and timing of dosages and the optimal conditions for the vaccination in generating the immune response. We're fine-tuning the whole vaccination process to either prevent the mice from getting tumors or injecting them after they have the cancer.

We are optimistic that, within a year or so, we will be able to begin a clinical trial in humans, he said.

This could be something that's very important for these cancers and others affecting the breast, lung and prostate.

Breaking the Grip of Eating Disorders

What fascinates **Stephen Wonderlich, Ph.D.**, professor and associate chair of clinical neuroscience, about the study of eating disorders is that intellectually, it's really a fairly unique interaction of a person's psychology, their biology and their culture which leads people to develop eating disorders, he said.

Eating disorders include a range of problems most commonly expressed as anorexia nervosa (self-starvation), bulimia (binge eating and purging), and other self-destructive patterns of behavior related to eating.

Nationally, the prevalence of eating disorders (ED) is 2-4 percent, he said. Although there's very little data on prevalence of ED statewide, some studies focused on eastern North Dakota show that up to 15 percent of children in grades 7-12 have engaged in eating disorder behavior – extreme dieting, binge eating, vomiting and the misuse of laxatives, diet pills and diuretics.

A portion of these kids probably try it and quit, but, in some, it solidifies into a medically threatening problem, said Wonderlich, co-director of the Eating Disorders Institute, co-sponsored by MeritCare Health System, the UND School of Medicine and Health Sciences, and the Neuropsychiatric Research Institute (NRI) in Fargo. Co-director is **James Mitchell, M.D.**, Chester Fritz Distinguished Professor of Clinical Neuroscience and the NRI/Lee Christoferson, M.D., Chair of Clinical Neuroscience at the UND medical school.

Their research has revealed, generally, that over time, people with eating disorders experience unusually high rates of psychiatric problems – depression, anxiety disorders, chemical dependencies, Wonderlich said. Also, early childhood trauma, most often child abuse and neglect, seems to predict the development of complicated and serious forms of the disorder.

We're working on some new treatments for these conditions, particularly bulimia nervosa, which may be promising, he said.

The Eating Disorders Institute is the largest hospital and clinic program devoted to eating disorders between Minneapolis and the West Coast, Wonderlich said. The eating disorders professional community marvels at what we have been able to develop here.

The presence of the Institute in Fargo means that kids who have serious psychiatric problems can be treated here, and their families can be part of the treatment, he said.

Family involvement is crucial to (the patient's) recovery. One of the most promising treatments for anorexia nervosa involves families.

Families are just critical, he emphasized. They can have an extremely positive impact, *if they get involved.*

Eating Ourselves to Death

We have massive obesity problems in this country, said James Mitchell, M.D., Chester Fritz Professor

and the NRI/Lee Christoferson, M.D., Chair of Clinical Neuroscience, Fargo.

This is a public health concern that is growing every day.

Obesity, to which Mitchell has devoted more of his research efforts in recent years, is shown to have markedly increased in the last 20 to 30 years, particularly extreme obesity, he said. It is if not the first one of the top two or three public health concerns in this country. It is increasing dramatically and there doesn't appear to be a foreseeable way to stem this trend.

In the treatment of obesity, of which there is a high incidence in North Dakota, current approaches don't work particularly well, said Mitchell, adding that health care professionals' attitudes are negative towards overweight and obese patients.

Patients are seen as lazy or uninterested in their own health. Some professionals provide less than respectful care, he said. They need to see this as a major public health concern; they need to be more empathetic, patient and helpful with these patients.

One treatment for obesity, bariatric surgery is rising dramatically from a time, in the past, when about 10,000 surgeries were performed annually, to this year during which about 170,000 will be done.

As part of a nationwide study, Mitchell and his colleagues at MeritCare are looking at how bariatric surgery changes the medical complications of obesity; often these patients have diabetes as well as hypertension and dyslipidemias, he said. We want to determine how

What is anorexia nervosa?

Anorexia nervosa is a deadly disorder: between five percent and 20 percent of anorexia patients will die from the effects of this disorder, according to the National Eating Disorders Association.

The eating disorder, characterized by excessive weight loss and fear of becoming overweight, has the highest death rate of any psychiatric illness. First described in 1689, anorexia nervosa remains poorly understood.

Most people with anorexia are currently treated with a combination of therapy and nutritional counseling.

Advice to parents

Be vigilant and watch for signs of anorexia in children, such as:

- slower growth patterns
- talk about dieting while at a normal weight
- excessive exercising

Parents may also need to buffer children who are prone to anorexia and be more sensitive to what goes on around them.

Parents can also encourage eating all foods in moderation, despite their good and bad labels, and discourage perfectionism in everyday activities.



WEB EXCLUSIVE:
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Stephen Wonderlich, Ph.D., (left) and James Mitchell, M.D., are internationally recognized authorities on eating disorders. They are highly respected for their work aimed at finding better treatments for anorexia nervosa and bulimia and, for Mitchell, his work in the area of obesity. His most recent book is titled, "A Physician's Guide to Bariatric Surgery".

Manuchair Ebadi, Ph.D., associate dean for research and program development, is a leading researcher of Parkinson's and Alzheimer's diseases, both of which occur at a high rate in North Dakota.



effective this type of surgery is and what predictors of problems are. By analyzing high-risk patients, we hope to learn who will have problems later, after surgery.

Mitchell's work also extends to comparing banding with bariatric surgery, looking at outcomes comparatively, he said. Banding is a procedure which involves placing a band around the stomach, creating a pouch in the upper stomach. It can be done much more easily laparoscopically, but does not render as much weight loss as gastric bypass surgery.

Brain Studies

Parkinson's and Alzheimer's diseases affect people living in North Dakota and the Northern Plains at a higher rate than other parts of the country.

As an agricultural state, North Dakota sees a particularly high incidence of Parkinson's and Alzheimer's diseases, says **Manuchair Ebadi, Ph.D.**, associate dean for research and program development, Grand Forks.

These diseases are prevalent in North Dakota and other agriculture states because of the insecticides that are widely used here, he says. These chemicals are thought to play a part in damaging the mitochondria in the brain. We know that when the mitochondria is damaged, it leads to Parkinson's disease.

It is also due, he says, to the fact that North Dakota has one of the highest proportions of elderly of any state in the country, and if you live long enough, you will get Parkinson's.

The second most-common neurodegenerative disease, Parkinson's results from the degeneration of neurons in a region of the brain that controls movement. It is characterized by limb tremors, especially when the body is at rest, and affects

millions of people around the world.

The incidence of Alzheimer's, a disease of the elderly, is also higher in North Dakota, Ebadi says.

Ebadi and his research associates say the answers to better treatment for Parkinson's and other neurodegenerative diseases may be twofold: protection and restoration.

When damage occurs to the neurons in the brain, it leads to Parkinson's disease, he said. We want to find out how to *protect* the neurons and therefore prevent or delay the onset of this disease.

We know that people have different amounts of dopamine, a neurotransmitter in the brain that helps the central nervous system function normally, and that some people have a propensity to get Parkinson's, he says.

We are working toward finding ways that we may be able to predict which patients have a predisposition to get Parkinson's. Once we are able to identify those patients, we would be able to treat them with neuroprotective agents.

Ebadi places a high value on prevention. Once you get cancer or have a stroke, it is very difficult to treat. Physicians of the past *treated* disease, he says. Physicians of the future will *prevent* disease.

They are also looking at how treatments could be developed that would *repair* the neuronal damage that leads to Parkinson's disease.

Why Women Drink

The longest study of problem drinking in women reveals that they get into trouble with alcohol for different reasons than men.

For the past 25 years, the study of alcoholism and problem drinking in women at the UND medical school has led the way to a deeper understanding of what causes these behaviors and their destructive effects.

In recent years, this research has moved on to the global stage. The work of **Sharon Wilsnack, Ph.D.**, and **Richard Wilsnack, Ph.D.**, professors of clinical neuroscience, Grand Forks, is well-respected internationally and has

earned them a place at the forefront of leading authorities who are seeking to understand the kind of influences and life experiences that cause this type of behavior in women.

Sharon's interest in this subject is rooted in her experience as a graduate student at Harvard University in the late '60s. The common thinking of that era was that women don't drink or don't get drunk, or if they do, they do so for the same reasons as men, Richard said. Very little research on women was being done at that time.

As faculty members at UND, in 1981, they began their studies, taking a sample of women's lives by a survey.

We were interested in drinking behavior and drinking-related problems, Sharon said. They interviewed the same women every five years and added new cohorts of younger women every ten years.

The Wilsnacks analyze approximately 200 variables that may predict whether a woman will become a problem drinker, including family background, work experiences and victimization, and physical and emotional health. Their surveys, which have been conducted in five waves, once every five years, have yielded data from more than 1500 women.

Problem drinking in women is different from that in men, they have found, based on examination of factors that may influence drinking behavior. In general, women's drinking behavior seems to be more influenced than men's by their marriages and other close personal relationships—how satisfying the relationships are, whether there are sexual problems or violence in the relationship and whether their partner is a heavy or problem drinker.

They study personality traits, occupational and social roles, marital and family relationships, sexual and reproductive experiences, and life events as they affect drinking behaviors and alcohol-related problems.

Of all the factors we've studied, the strongest predictor of women's problem drinking is a history of sexual abuse, Sharon said. I think it's a

huge contributing factor in women's drinking. If there's something we could do as a society (to eliminate or reduce sexual abuse of children), we could go a long way toward preventing problem drinking, depression and suicide.

Since 1993 the Wilsnacks have been increasingly called on to lend their expertise to studies of women's drinking around the world.

They direct the GENACIS project (Gender, Alcohol, and Culture: An International Study), a worldwide study involving more than 40 countries, funded by the U.S. National Institute on Alcohol Abuse and Alcoholism, the World Health Organization, and other sources. Unlike most other international studies, the GENACIS project includes a number of developing countries in Africa, Asia and Latin America.

The topic of problem drinking in women is becoming increasingly important, they maintain, as women's roles change and expand, and internationally, the research is so valuable for learning how culture affects both women's and men's drinking behavior. There is, more and more, such an explosion of knowledge. If you don't collaborate with researchers in other countries, you're clearly missing out.

- Pamela D. Knudson 



Sharon Wilsnack, Ph.D., and Richard Wilsnack, Ph.D., professors of clinical neuroscience, have recently received federal funding, \$1.8 million for four years, for their study, "National Study of Health and Life Experiences of Women". With a span of 25 years and \$10.5 million in federal research funding, this is the world's longest continuous and most comprehensive study of problem drinking in women.

Healthy Living is CATCHy

LIVING HEALTHY IS CATCHING ON among North Dakota schoolchildren thanks to a program by the Center for Health Promotion and Prevention Research at the UND School of Medicine and Health Sciences.

By combining and coordinating health education in the classroom, new physical activity and education programs, and healthier food choices in the cafeteria, the Coordinated Approach to Child Health (CATCH) program is showing elementary school children in eight schools across the state how to be healthy for the rest of their lives.

Burlington-Des Lacs, Ellendale, Grafton, Hettinger, Kenmare, Killdeer, Lisbon and Turtle Mountain community schools are participating in the program.

CATCH is unique because all school personnel work together to improve children's health, said **Nancy Vogeltanz-Holm, Ph.D.**, associate professor of clinical neuroscience and director of the center in Grand Forks.

The kids have healthier food choices, fun physical activities and classroom education that emphasize life-long health.

And it seems to be working. After the first year of the program, the center is reporting marked improvements in both physical activity and healthy eating among the children.

Fitness Can Be Fun

Just over 30 percent of the children are reporting watching less television and playing fewer video games. More than a quarter of the students have increased their moderate physical activity while almost 20 percent have increased their vigorous physical activity. The children's ability to do push-ups, sit-ups and trunk lifts all saw improvements after just one year of the program.

The variety available with CATCH physical education keeps it fun for the kids, according to Michelle Schilling, physical education teacher at Ellendale Elementary.

We can use three to four different activities in one class period, and they don't get bored, she said. There's lots of energy in the games.

The kids really love the activities, agrees Jean Klein, principal of Burlington-Des Lacs Elementary. You can even find them doing some of the activities on their own during recess.

Learning about The Good, The Bad and The Ugly

Go, Slow and Whoa. With these simple labels on the foods they serve, CATCH schools are teaching even the youngest children about the foods they eat. Go foods are lowest in fat and should be eaten more often than the higher-fat Slow and Whoa foods.



Kids at Burlington-Des Lacs Elementary play with a parachute during physical education class, one of the many ways the CATCH program makes fitness fun.



Sonia Marrone, research associate at the UND medical school's Center for Health Promotion and Prevention Research, measures the trunk extension of a student at Burlington-Des Lacs Elementary.

Nearly half of the more than 300 children participating are more knowledgeable of healthy foods and almost 30 percent are eating healthier as well. Many of the students have increased the amount of dairy, grains, vegetables and fruits they eat every day while nearly a quarter of the students have cut down on fats and sweets.

In one CATCH lesson, third graders get to taste-test health snacks that may be new to them, like peanut butter on a celery stick. Fourth graders learn to make their own healthy snacks through a tasting-bee activity where they are encouraged to match different health foods such as cottage cheese on a graham cracker.

These activities introduce them to healthier snack options than going home and opening a bag of chips, said Klein. It gives them an Ah-ha moment in their heads.

Healthy Homework

Each of the eight participating schools has a CATCH Team of administration members, classroom teachers, food service personnel, physical education teachers and community members who participated in training and put CATCH into practice in their schools.

The ideas are not hard to implement, easy to incorporate into the curriculum

and the kids really like them, said Klein.

When reporting to the center's online evaluation system, Deb DeWald, a third-grade teacher in Ellendale wrote, The kids were very excited about this new program and all the neat activities they get to do as part of this curriculum.

Regular classroom CATCH assignments also include take-home activities for parents. Students take home activities to complete with their parents, and receive healthy snack

prizes for their family's efforts.

The educators in Ellendale involved parents from the start by introducing the CATCH program to the community at Parents Night. During the evening parents and children enjoyed healthy CATCH snacks and tried out the new CATCH physical education activities.

Schools also find other ways to get parents involved. Monthly newsletters include information about healthy living and parents help with a healthy potluck. Parents also enjoy joining their children at school for physical education class. To further help this process, the center's staff provides schools with a yearly progress report that includes information prepared specifically for parents and their children.

Our main message is that we are part of a healthy schools program, and family fitness is part of that, said Ellendale Elementary Principal Diane Olson.

The CATCH program has worked well in other U.S. schools, but it is working even better in our North Dakota schools, said Vogeltanz-Holm.

Our North Dakota educators and parents are dedicated and enthusiastic in implementing the program.

“The kids really love the activities. You can even find them doing some of the activities on their own during recess.”

Jean Klein
Principal,

Burlington-Des Lacs Elementary

- Amanda Scurry 

Field Research

North Dakota
researchers are
exploring whether
exposure to
pesticides affects
children's
learning and
development ...

JAN GUNDERSON HAD GOOD reason to suspect that the chemicals farmers sprayed on their fields might make children more prone to learning disabilities. Having worked as a librarian and teacher in Northwood in rural, eastern North Dakota, she noticed an increasing number of children diagnosed with conditions such as dyslexia, central auditory processing disorder, attention deficit disorder and hyperactivity during her nine years with the school district.

When we would go to conferences, they would say that the average in the nation [of children diagnosed with such disorders] was less than 10 percent. In our district, we were up to 15 percent, and you wondered why, she says.

That wasn't the only reason Gunderson suspected a possible connection between pesticide exposure and brain development. Her own son, now 16, was diagnosed when he was 9 with central auditory processing disorder, an inability to discriminate, recognize, or comprehend what is heard even though hearing and intelligence are normal.

At the time he was an infant, we were living on farmland, says Gunderson, who is now circulation manager for the library at the UND School of Medicine and Health Sciences in Grand Forks.

Stories such as Gunderson's inspired a team of researchers from across the university to discuss the need to study the possible connections between health and pesticide exposure. Among that group are **Patricia Moulton, Ph.D., (B.S. '97, M.A. '99, Ph.D. '02)**, an assistant professor in the School of Medicine and Health Sciences Center for Rural Health, and Tom Petros, Ph.D., a professor of psychology.

After searching the literature, they were surprised at how little research had been done on pesticide exposure and development. A number of

correlations were drawn, Petros says.

They speculate that an increase in developmental disorders over the last couple of decades is in some degree due to pesticides. But there was little that offered concrete evidence.

The two researchers decided to design their own study to determine if there is a connection.

A Ready-Made Sample

Families such as the Gundersons, who live in the Red River Valley area of eastern North Dakota and western Minnesota, are in a unique position to help scientists tease out possible connections between the chemicals in pesticides and health and development. Farming is the No. 1 occupation in the area, and in order to increase their yields, farmers use a variety of insecticides, herbicides, and fungicides.

With that in mind, Moulton and Petros applied for and received a two-year, \$100,000 grant from the National Institute of Environmental Health Sciences. Their plan was to obtain measures of (or biomarkers for) pesticide exposure in blood and urine of area children and compare those results with cognitive test results.

During the summers of 2003 and 2004, the researchers tested 128 Red River Valley children between the ages of 7 and 12 years—ages when exposure to chemicals poses a great risk to brain development.

Any alterations in these processes can lead to deficits in cognitive and motor capabilities, Moulton says.

Half of the children tested lived at least a mile from a farm or active agricultural field; the other half, which included Gunderson's daughter, Abby, now 13, who has no academic difficulties, lived on or next to a farm. (Gunderson says their current home in Thompson, ND, about 10 miles south of Grand Forks, is surrounded on three sides by farmland that is sprayed with

pesticides.) The researchers tested blood and urine samples from each of the children for 18 pesticides, and for elevated cholinesterase levels, another marker for pesticide exposure.

The children were then given tests of intelligence, reading, and listening comprehension, and memory and attention, as well as tests that measured simple reaction time, choice reaction time, and tracking of a target on a computer screen. In addition, the parents were given intelligence quotient (IQ) tests and evaluated for socioeconomic status.

A Small-but-Significant Difference

Although Moulton and Petros are still comparing the data about the type and amount of chemicals present in the children's blood and urine from the Centers for Disease Control and Prevention, they have made one discovery: that the kids living on or near a farm scored an average of five points lower on IQ tests than the children who did not.

The IQ scores were still in the normal range, but there was a significant difference, Petros says. He adds that even when correcting for the IQ and socioeconomic status of the parents, the differences remained.

The researchers expect to have their final results this summer.

Gunderson, who is careful about not running the air conditioning and keeping pets inside when the neighbors are crop-dusting, hopes the study will start to explain why so many children in the area, including her son, have been diagnosed with learning disabilities. I can't go back in time and take away that disability, she says. But if I can, I'd like to prevent another parent from having to fight the battles we've had to fight. 🌱



North Dakota researchers Patricia Moulton, Ph.D., and Tom Petros, Ph.D., want to know if living in farm country has an effect on developing brains.

*This article by Kim Kiser originally appeared in the March 2006 issue of **Minnesota Medicine**. © 2006 Minnesota Medical Association. It is reprinted in **North Dakota Medicine** with permission.*



WEB EXCLUSIVE: To see more of the data the researchers have collected, visit: www.ndmedicine.org

No Butts About It

North Dakota Tobacco Quitline Works

IF I WOULD HAVE KNOWN IT would be this easy to quit, I would have done it years ago, said July Anderson of Jamestown. The North Dakota Tobacco Quitline has been just great.

Anderson smoked for nearly 30 years, but was scared to try to quit. It took her husband three times going cold turkey to quit and she thought it would just be too hard. Then she saw an ad in the local paper for the North Dakota Tobacco Quitline.

They counseled me through the whole time, said Anderson, who has been smoke-free for a year now. I had a slip-up my first week and I was so angry, but the counselor assured me and said not to let it set me back.

Every Year Smoking Kills More Than 800 North Dakotans.

Now the 20 percent of North Dakotans who currently use tobacco products have help so they don't meet the same fate. The North Dakota Tobacco Quitline, located at the UND School of Medicine and Health Sciences Department of Community Medicine, provides help to North Dakotans who are ready to quit using tobacco products.

The joint project with the North Dakota Department of Health and the Mayo Clinic Nicotine Dependence Center began in September of 2004 and has shown tremendous results in its first year.

Just Pick Up the Phone

I think this is one of the best things that we have done in the state, said Nancy Thoen, tobacco prevention coordinator at the Central Valley Health Unit in Jamestown. It is so nice to be able to hand someone a tool they can use immediately.

With one simple call, North Dakota smokers and spit-tobacco users receive free counseling and resources to quit and remain tobacco-free.

Quitline callers receive up to five telephone counseling sessions with professional counselors trained at the Mayo Clinic Nicotine Dependence Center in Rochester, MN. The counselors help callers set a quit date, discuss ways to deal with withdrawal symptoms that include proper medication use, teach them about triggers and strategies for staying tobacco-free and provide ongoing support and encouragement.

No one can tell you that it is time to quit, said Ron Hanson of Fargo who decided to quit after smoking for 50 years and has been smoke-free for eight months. You have to reach a point when YOU want to quit.

Hanson saw a commercial on TV for the Quitline and called for more information. Although he had tried a work-based program thirty years ago, he was impressed by all the information about nicotine addiction the North Dakota Tobacco Quitline provided and he still looks at it occasionally.

Scott Leishman, a UND student who has been smoke-free for seven months, agrees. After trying to quit cold turkey a time or two, he says it was the information provided by the Quitline on the terrible effects of smoking that woke him up.

They laid it on hard, he said. I was pretty certain I would get one disease or another if I kept smoking.

We are so fortunate to have the Quitline in North Dakota, said Pat McGeary, tobacco prevention coordinator of the Bismarck-Burleigh Public Health Department. To have that easy access to help is essential for North Dakota residents. They don't need to travel, make appointments or find childcare. It is really good for rural North Dakota.

John Baird, M.D. (B.S. Med. 76, Family Practice Residency 81), clinical associate professor of family medicine

Erin Dionne is one of four North Dakota Quitline tobacco cessation counselors in the state who helps callers set a quit date, discuss ways to deal with withdrawal symptoms that include proper medication use, teach them about triggers and strategies for staying tobacco-free and provide ongoing support and encouragement.



at the UND medical school, Fargo, agrees. The Tobacco Quitline is great for areas that don't have cessation clinics," he said.

It is also nice that we are able to do it right here within the state," said Baird who works with Fargo-Cass Public Health and the North Dakota Department of Health. Some quitline programs contract their telephone counseling to out-of-state firms. The North Dakota Tobacco Quitline counselors are right there at the medical school. They know our communities and are part of our communities.

Cessation Success

During its first year, the North Dakota Tobacco Quitline answered nearly 3,000 calls to its toll-free number and more than 800 North Dakotans enrolled for the free telephone counseling.

Nearly 40 percent of those people are still smoke-free six months after their quit date, and a third have remained smoke-free after a year.

That success rate is truly amazing," said **Eric Johnson, M.D. (Family Practice Residency 92)**, clinical assistant professor of community medicine and one of the medical directors for the project at the UND medical school. Smokers who try to quit without help typically have only a three to five percent success rate.

Even among tobacco cessation programs, North Dakota's has shown tremendous results. Programs nationally have quit rates of 20 to 30 percent on average, according to Lowell Dale, M.D., associate medical director of the Mayo Clinic Nicotine Dependence Center and the Mayo Clinic Tobacco Quitline.

The North Dakota Quitline has had an exceptional quit rate among its callers in the first year," said Dale, who works with the telephone quitline tobacco cessation programs in New Jersey, Wyoming, and Minnesota as well as the North Dakota program. "I think the factors making a difference in the North Dakota program are that the counselors spend the time necessary to get to know the caller, develop a comprehensive treatment plan and then provide follow-up calls as needed; and that Dr. Johnson and colleagues are very good at disseminating information about the Quitline throughout the state.

To enroll in the program or to get more information call toll-free number at 1-866-388-QUIT (7848).

"I think the factors making a difference in the North Dakota program are that the counselors spend the time necessary to get to know the caller, develop a comprehensive treatment plan and then provide follow-up calls as needed..."

Lowell Dale, M.D.

Associate Medical Director of the Mayo Clinic Nicotine Dependence Center and the Mayo Clinic Tobacco Quitline

- Amanda Scurry 



WEB EXCLUSIVE: To learn more about Quitline and see their promotional video, visit: www.ndmedicine.org



WALKING THROUGH THE UND medical school's parking lot, you might notice some Montana and Wyoming license plates in the student section.

While most of the medical students at the UND School of Medicine and Health Sciences are from North Dakota, a few in each class hail from our neighbors to the west. They participate in the Western Interstate Commission for Higher Education (WICHE)'s Professional Student Exchange Program. These WICHE students, as they are called, attend medical school here because their states do not have medical schools.

The WICHE program is an amazing opportunity for folks from states that don't have a medical school, said **Ashley Beller**, a fourth-year medical student at UND originally from Missoula, MT.

Without this program, I couldn't have gone to medical school.

How it Works

In the late '80s when times were tight, the North Dakota State Board of Higher Education asked the medical school to start accepting WICHE students, and in turn, their out-of-state tuition dollars.

Having WICHE students has its financial advantages, said **Judy DeMers**, (BSN '66), associate dean for student affairs and admissions at the UND medical school.

Home states pay about \$100,000 per student over the four years they are here.

Because state budgets are tight, some WICHE students may not receive this help for tuition payments, and pay out-of-state tuition from their own pockets until they are able to establish North Dakota residency.

Students from Montana and Wyoming who want to go to medical school first apply to participate in the WICHE's Professional Student Exchange Program.

Once they are in, they go through the competitive application process in the very same way as their future classmates from North Dakota.

The addition of WICHE students has been really great, said DeMers.

As an applicant base, they make getting into the school more competitive, giving us better students. As medical students, their backgrounds are just different enough that they bring varied life experiences. They give us a more diversified student body.

Once they are in, they are just one of the gang.

Being a WICHE student isn't really any different than any one else, except for the application process, Beller said. In addition to the UND medical school, WICHE students are also welcome at state medical schools in Arizona, California, Colorado, Hawaii, Nevada, New Mexico, Oregon and Utah. Often students enroll in the WICHE program, hoping to go elsewhere for the medical education, until they interview at UND.

I was very impressed with UND's patient-centered learning curriculum, said Beller. Plus, everyone here is so nice. They are friendly and very pro-student. They really want you to succeed.

Robin Hape, M.D. '02, a fifth-year resident-physician in the UND medical school's surgery residency program, agrees.

When I applied to UND, my wife and I thought it would be a good back-up plan, remembers Hape, who grew up in Yellowstone National Park on the Wyoming/Montana border.

But after my interview, we decided that UND was our number-one choice.

I wouldn't go anywhere else, said **Jerry Eckardt**, a third year medical student from Cody, WY, who was also set on UND after his interview.

I loved the curriculum, the professors and all the opportunities available here.

Two-Way Street

In addition to medicine, UND also accepts WICHE students in the programs of occupational therapy, physical therapy and graduate nursing through the Professional Student Exchange Program.

Through the program, UND received three medical students and nine physical therapy students who were funded by other WICHE states in the 2005-06 academic year as well as some \$176,000 in support fees. In addition, each student pays for resident tuition, room and board, and incidental student expenses. The school accepts even more WICHE students, who pay their own way, without the help of their home states.

Hape, who plans to stay in the Grand Forks area after completing residency training, couldn't be happier with his education at the UND School of Medicine and Health Sciences.

WICHE was my ticket to UND, said Hape, but it's the ride that's really worth the while.

- Amanda Scurry 

“WICHE was my ticket to UND, but it's the ride that's really worth the while.”

Robin Hape, M.D.

UND fifth-year resident-physician, surgery, Grand Forks

What IS WICHE?

What: Western Interstate Commission for Higher Education (WICHE)'s Professional Student Exchange Program

States: Montana and Wyoming

Programs: Medicine, physical therapy, occupational therapy, graduate nursing

2005-06 academic year: Three medical students and nine physical therapy students

Payments to UND: \$176,000 in support fees this year

HOPE for Haiti

Annette Larson holds a baby diagnosed with kwashiorkor, a form of malnutrition caused by inadequate protein intake, who was admitted to the Haitian Health Foundation's nutrition rehab program.



IT LIES IN THE MIDDLE OF THE hurricane belt, has a humidity of 80-90 percent, not a single Starbucks and they can't wait to go back.

Faculty members of the Physician Assistant Program at the UND School of Medicine and Health Sciences have been bringing students to medical missions in Haiti for several years now.

The UND contingents work with the Haitian Health Foundation (HHF), a not-for-profit health and human services organization founded in the mid 1980s to serve poor people in the isolated, mountainous western portion of Haiti. Located in the city of Jeremie, Haiti (pop. 37,000) about 150 miles west of the capital, Port au Prince, the foundation is a volunteer, grass roots humanitarian

organization that provides outpatient medical care, eye and dental care, pre and postnatal and pediatric care for the poor of the community and the surrounding villages.

Mary Ann Laxen (FNP/PA 91), associate professor and director of the UND Physician Assistant (PA) Program, has worked with the organization since 1991 and started planning clinical experiences for UND PA students when she came to UND in 1999.

I wanted students to experience that not all the world has access to high-tech diagnostic equipment or treatments, Laxen said. Working with the HHF makes them rely on their own senses and what the patient is telling them to find out what is wrong and how to treat it.

During the two-week experience, students and faculty members provide care to patients at the HHF clinic in Jeremie and work closely with the Haitian workers sharing information and techniques. Through this experience, they are exposed to things they might never see in their practices at home including malaria, tuberculosis, HIV and AIDS, malnutrition, typhoid fever, parasites, ringworm and much more.

We saw more malaria in one hour than the U.S. has in a year, said **Wanda Frank (PA 06)** from Alexandria, MN, who was one of three PA students to go on the latest trip in March.

In addition to working at the HHF facilities in Jeremie, the students take trips up into the mountains to provide clinics to the people there. At these day-long clinics, people line up to be seen, and exams are often done in the open with the other patients watching, because there is no other place to do them. Frank remembers the start of her first mountain clinic.

Wrapped in Pennies

Near the cash register at the medical school's food cart there is a small container. This container keeps spare change out of people's pockets and rescues those who are a few cents short. But after a while those pennies add up and, with the help of the food cart's manager, they become blankets for newborn babies in Haiti.

When a new mom has four clinic visits during her pregnancy and returns to the Haitian Health Foundation (HHF) clinic after the baby is born for a new baby check, she receives a new baby kit that includes soap and a washcloth, a shirt and hat for the baby, cloth diapers and one of Judy Johnson's blankets.

When Annette Larson, assistant professor in the physician assistant program, was on her six-month trip in 2004, Johnson would share in her experiences through her Web site journal.

Johnson was so impressed that she wanted to help, too. Growing up her church had always made blankets for those in need so it was a logical choice. She started saving the extra pennies from the penny jar, collecting about \$2.00 a week to buy material for the blankets.

Johnson, her daughter and her mom make the flannel blankets. Each one takes about an hour to make, but even more time is put into making them just right.

When I am looking for the flannel, I try to find the cute stuff, the fun stuff," said Johnson, "and I try to get it on sale so I can get as many as I can out of the money I have.

Everyone who wanted to be checked out was in the church, which we were using as the clinic that day. The place was full of people. A member of the village brought all of us to the front of the room and introduced each one of us by name, she pauses, choking up at the memory.

Then the whole group began signing and praying for us, thanking us for being there. We hadn't even done anything yet! All we had done was show up.



Some of medical students caught wind of Johnson's project and in April 2005, organized a Penny War fundraiser to purchase the materials for the blankets. In the end, more than \$800 had been raised, enough to purchase materials for nearly 90 blankets.

Johnson continues to make blankets for Haitian newborns and to date, has made nearly 125 blankets and 35 cloth diapers for the HHF.

It's fun to do, and it's for a good cause," she says, beaming.

WEB EXCLUSIVE: To read more about support the PA students and faculty received from the UND medical school, visit: www.ndmedicine.org



Mary Ann Laxen; Sister Sophia, an Indian midwife who works with the Haitian Health Foundation and Tery Hursh give one of Judy Johnson's blankets to a new Haitian mom and baby. When a new mom has four clinic visits during her pregnancy and returns to the Haitian Health Foundation clinic after the baby is born for a new baby check, she receives one of Judy Johnson's blankets and other supplies.

Tery Hursh (PA '06) from Dillon, MT, another student from the last trip, also remembers how grateful the people are.

They were all so appreciative," said Hursh. "I can still see all their smiles.

Two Weeks is Not Enough

Annette Larson (FNP/PA '79), assistant professor in the physician assistant program at the UND medical school, was so impressed with the work of the HHF,



A young Haitian girl watches as **Wanda Frank** examines her grandmother's ear during a day-long clinic trip into the Haitian mountains. At these clinics, people line up to be seen, and exams are often done in the open with the other patients watching, because there is no other place to do them.

that she applied for developmental leave from the university and spent six months in Haiti just over a year ago.

Having a background in rural and family medicine really prepared me for this experience, said Larson, who worked in Harvey, ND, in the late '70s. I knew the skills I had were of value to the organization.

During that trip, Larson spent a lot of time with HHF's prenatal care and malnutrition program at their Center of Hope.

My work with these malnourished children was very gratifying, said Larson. I was devastated and disheartened with the deaths of children caused mostly by their late arrival to the center. They were too ill in a health system that had minimal resources available to help

them in time of crisis. I was ecstatic when I saw weights improve on children and watched them change from listless, apathetic infants to smiling, healthy looking little people.

A Life-Long Connection

There is a very humanitarian part to medicine, said Laxen.

This experience helps students develop that. It has been a life altering experience for every student we have taken there. It awakens their desire to give.

Each of us left Haiti having not given as much as we had received, agrees Hursh. We walk lighter now and carry a heavier load.

Larson is already planning her return to Haiti by organizing a week-long continuing medical education trip for doctors, physician assistants and nurse practitioners.

The people are very loving, accepting, thankful and faithful, Larson continues. We shared with the poor and broken and, in the process, achieved a renewed appreciation for all the blessings that we possess.

I will have a lifetime relationship with HHF, she added.

- Amanda Scurry 

WEB EXCLUSIVE: To read and see more of the PA medical mission to Haiti, including Larson's online journal, visit: www.ndmedicine.org



The Forever Young Diet & Lifestyle

Editorial Note: *University of North Dakota alumnus and Grand Forks native, James H. O'Keefe, Jr., M.D., and his wife, Joan, developed a program they say allows families to live active lives, eat nutritious and delicious foods and get back to the natural way of living. O'Keefe, a nationally recognized cardiologist, discussed his program at the UND School of Medicine and Health Sciences in February.*

The below is an excerpt from their book, "The Forever Young Diet and Lifestyle."

Rethinking Your Priorities

Bringing balance back to your life is a real key to health and happiness. Living in the twenty-first-century American culture seems to promote an unbalanced life: too much work and not enough play, excessive calories and not enough natural fresh foods, too much stress and not enough fun, and too much TV and too little exercise, too much rushing around insufficient restful sleep, too much materialism and too little spirituality. As Dr. Phil would ask, "Is it workin' for ya?" We can tell you that it doesn't work for us. One of the best ways to avoid getting swept away in the tide of the often self-defeating modern lifestyle is to live by the mantra: Good Things First.

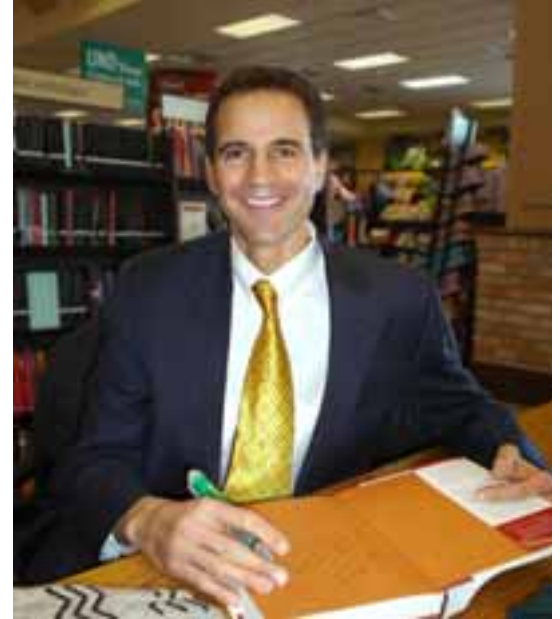
Get in the habit of prioritizing the things that will make your life better in the long run: exercise, eating breakfast each morning, good food and healthy beverages, time to play, plenty of rest and relaxation, and a chance to make meaningful connections. When you make it a priority to eat and drink all the good first things first, you will find that you aren't constantly hungry. This makes it easier to resist the junk food temptations that surround you each day.

When you sit down in front of the TV you need to ask yourself, "Have I gotten my exercise today?" If the answer is no,

get up and go. At first this may seem uncomfortable, but soon you will feel your energy level improve dramatically, and after a few weeks of daily exercise you will find yourself raring to go. A routine of thirty to sixty minutes of exercise daily will turbo-charge your energy level like nothing else can.

Changing a long-standing habit can be a difficult task. Sometimes a health problem such as a diagnosis of diabetes or high blood pressure, or even a heart attack can be a wake-up call. A reminder of your vulnerability can spur you to make changes in your life that can dramatically improve your future health and longevity. Instead of wasting your precious time and energy worrying about the future or ruminating about the past, focus on what you can do to make your life better today. You can be truly alive in only one instant—the present moment. The future has not yet arrived, the past is already history. The surest way to take care of the future is to take care of the present and make each moment count.

Dr. O'Keefe, staff cardiologist and director of the Preventive Cardiology Program at the Mid America Heart Institute in Kansas City, MO, was born in Grand Forks, ND. He received a Bachelor of Science degree from UND in 1978 and attended medical school at UND for two years before going on to Baylor College of Medicine in Houston to receive his Doctor of Medicine degree in 1982. He is a practicing cardiologist and also does research and teaches cardiovascular medicine and preventive cardiology.



"Your life is the product of your choices, actions, thoughts and words. When you integrate meaningful positive habits into your day-to-day routine, you will flourish and thrive. Believe in yourself, make a plan, and begin."

from
The Forever Young Diet & Lifestyle
by James O'Keefe, MD, and
Joan O'Keefe, RD

Becoming a Leader

*On and Off
the Ice*



JESSICA KOVACEVICH
OCCUPATIONAL THERAPY
CLASS OF 2007
HOMETOWN:
Anchorage, Alaska
HIGH SCHOOL:
Shattuck-St. Mary's School,
Faribault, MN
PARENTS:
Terry and Vickey Kovacevich

AT AN AGE WHEN MOST GIRLS ARE begging their dads to let them get their ears pierced, **Jessica Kovacevich** was begging her dad to let her hit the ice. No, she didn't want to be the next Dorothy Hamill; she wanted to be the next Wayne Gretzky.

After warming the bench for most of her life as her three brothers ate, slept and breathed hockey, Jessica's father finally relented and let her lace up her skates at about age 10.

I had so much drive, Jessica remembers. I got good really fast because I would practice constantly.

When it was time to choose a college, Jessica was not only looking for a good hockey program, but good academic programs as well.

I knew I wanted to do something in the medical field, she explained.

I knew that UND had a really great medical school.

UND's men's hockey tradition was strong, but the women's hockey program was brand new. Regardless, Jessica chose UND and became the first player to sign a letter of intent in Fighting Sioux women's hockey history.

When she arrived at UND, she knew she wanted to major in something in the medical field and was wavering between occupational therapy (OT) and physical therapy. Her freshman year, she chose OT. However, OT is not one of the easy majors some college athletes choose. Once she started the program Jessica found herself doing nothing more than skating and studying.

I am in school from 8-3, then off to practice from 5-8, then home to study and do homework, she explained. Almost every weekend we were on the road and I had to bring five bags along with my computer, books and everything I needed to keep up with school work.

Even her lunch hour consisted of 10 minutes eating time and 50 minutes studying time.

My social life is pretty much non-existent, she laughed.

Jessica just finished her last year on the hockey team, during which she served as captain.

I loved being a leader for the team, she said. I think that leadership experience will come in useful in my career. I would love to be the manager of a clinic someday and this experience will help me do that. The OT program stresses leadership for a successful career.

Leadership is an important aspect of our program, explains **Janet Jedlicka, Ph.D. (BSOT '82)**, associate professor and chair of the OT program at the UND medical school. We emphasize leadership in many of the courses, beginning the first semester the students are enrolled in the program with a personal and professional development course, where they learn effective strategies for structuring group interventions for clients, building and facilitating interdisciplinary teams and developing the skills needed for administrative positions.

Jessica has been extremely successful in our program, Jedlicka continues, based on her drive and initiative she has been a leader both in the classroom and the hockey arena.

So, what does dad think now?

He doesn't regret his decision to let me play at all, Jessica said. Even though he works overseas, he comes to every one of my games that he can. Both my mom and dad are huge supporters.

"I loved being a leader for the team... I would love to be the manager of a clinic someday and this experience will help me do that. The OT program stresses leadership for a successful career."

Jessica Kovacevich
Senior OT Student

- Amanda Scurry

UND Graduates 54 New M.D.s

Fifty-four senior medical students received the Doctor of Medicine (M.D.) degree during the May 6 commencement ceremony for the University of North Dakota (UND) School of Medicine and Health Sciences.

The ceremony was officiated by **UND President Charles Kupchella, Ph.D.**, and **Vice President for Health Affairs and Dean H. David Wilson, M.D.** State Board of Higher Education member Richie Smith of Wahpeton delivered greetings from the board.

The keynote address, titled *Eagles, Robins and Pigeons*, was presented by **Jon Allen, M.D. '84**, assistant dean for the medical school's Northeast Campus and associate professor of internal medicine. The invocation and benediction was delivered by The Reverend Patrick O'Brien, pastor of St. John's Lutheran Church in Oakes, ND, and father of a graduate, **Katie O'Brien**.

Special recognition was given to **Justin Horner**, a member of the M.D. Class of '06 and the first graduate also to earn the Master of Public Health degree through a joint program with the University of Minnesota (U of M). John Finnegan, Jr., Ph.D., professor and dean of the School of Public Health at the U of M, delivered remarks regarding this program. Horner is the son of Randy and Cheri Horner of Mandan.

Ten physician-faculty members were invited to participate in the ceremony and receive the Dean's Special Recognition Award for Outstanding Volunteer Faculty. They are:

Bismarck - **Edward Fogarty, III, M.D.**, clinical assistant professor of radiology; **Brian Hebert, M.D. '99**, clinical associate professor of internal medicine; **Parag Kumar, M.D.**, clinical associate professor of pediatrics; **Shari Orser, M.D. '77**, clinical assistant professor of obstetrics and gynecology, and **Chatree Wongjirad, M.D.**, clinical assistant professor of clinical neuroscience

Fargo - **Kenneth Christianson, Ph.D.**, clinical assistant professor of clinical neuroscience; **Luis Garcia, M.D. (Surgery Residency Program '02)**, clinical assistant professor of surgery

Grand Forks - **Ramon Anel, M.D.**, clinical assistant professor of internal medicine

Jamestown - **David Muhs, M.D. '85**, clinical associate professor of family medicine

Minot - **Thomas Carver, M.D.**, clinical associate professor of pediatrics



WEB EXCLUSIVE: To watch this year's commencement ceremony online or to order your own copy, visit: www.ndmedicine.org.

Graduates Choose Primary Care Fields

Primary care specialties remain the most popular fields for senior medical students who received the Doctor of Medicine (M.D.) degree this spring from the University of North Dakota (UND) School of Medicine and Health Sciences.

Nearly half (45.3 percent) of the 54-member M.D. Class of 2006 chose to pursue residency training in primary care fields, which are family medicine, internal medicine, pediatrics or combined medicine-pediatrics, beginning this summer, according to **Judy DeMers (BSN '66)**, associate dean for student affairs and admissions.

Pediatrics is the most popular specialty among this year's graduating medical students—nine will pursue that specialty, followed by surgery (eight), family medicine (seven), internal medicine (seven) and obstetrics-gynecology (five), DeMers said.

UND's 2006 M.D. graduates will pursue 14 different specialties and will spend the first year of residency in 16 states, she said.

Most of our students seem to prefer the Upper Midwest, DeMers noted, with 13 selecting Minnesota programs, followed by 11 in North Dakota, five in Iowa and four in Michigan.

Poster Campaign



Joe Luger, M.D.

'85, Bismarck, is among a group of American Indian alumni of UND who agreed to have their photos used as part of a media campaign for American Indian Student Services at UND. These nine alumni were honored at an event, *A Celebration of Achievements:*

American Indian Graduates of UND, during the annual Time Out Wacipi in April on the UND campus.

A board-certified dermatologist, he practices with Mid Dakota Clinic at Gateway Dermatology in Bismarck. He is a member of the Standing Rock Sioux Tribe.



UND President Charles Kupchella presents the UND Foundation/McDermott Award for Departmental Excellence in Teaching to physician assistant program faculty and staff members: (left to right) Terrie Wold, Rhonda McDaniel, Annette Larson, Mary Ann Laxen, Pamela Boltz, Jeanie McHugo, Avis Reynolds and Vikki McCleary.

Physician Assistant Program Receives Teaching Excellence Award

The Physician Assistant Program received the University of North Dakota Foundation/McDermott Award for Departmental Excellence in Teaching during the school's Founders Day Activities in February.

Their goal, that of a quality PA Program, unifies them and allows them to get through the challenges of the new curriculum, **Elizabeth Burns, M.D., M.A.**, professor of family medicine at the UND medical school, wrote in her nomination of the department. They have had to learn new technology skills and put them into practice. They have obtained federal grant funding to support their program. They don't back away from hard work and the vision of what their program should be. They are the best team I've had the privilege of working with.

NIH Funds Anorexia Study

Stephen Wonderlich, Ph.D., professor and associate chair of clinical neuroscience at the University of North Dakota (UND) School of Medicine and Health Sciences Fargo campus, has received a major grant from the National Institutes of Health (NIH) to continue his studies of the eating disorder, anorexia nervosa.

The nearly \$2 million project, titled Ecological Momentary Assessment of Anorexia Nervosa, is a multi-site project involving UND, the Neuropsychiatric Research Institute (NRI) in Fargo, the University of Chicago School of Medicine, and the University of Minnesota School of Medicine. Funding for the four-year project is provided by the National Institute of Mental Health (NIMH), a division of NIH.

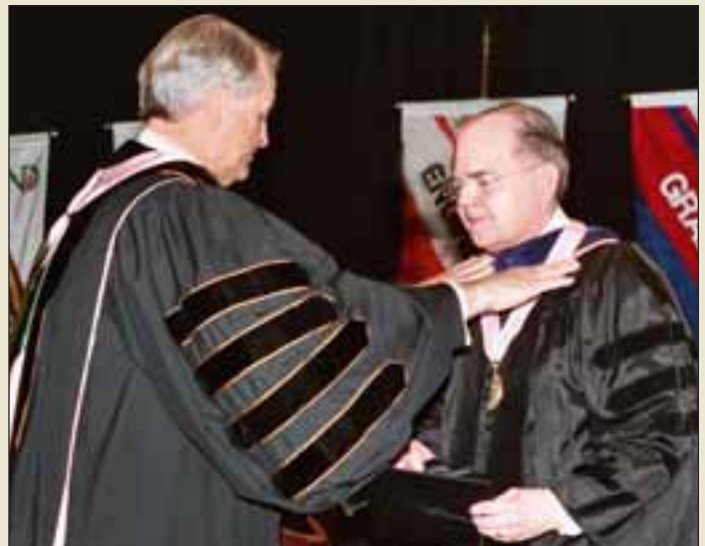
The study will utilize portable computer technology to assess anorexic people several times a day to gain a clearer understanding of the relationship between the environment and behaviors in anorexia nervosa. A group of 120 patients will capture their moods, stressful events and feelings about struggles they are having, when they occur rather than trying to recall them many days later with a health care provider.

The benefit of this diary technology approach is that it may help to identify aspects of anorexic individuals' lives that may lead to more effective treatments for this condition, said Wonderlich.

Carlson Named Distinguished Professor

Edward Carlson, Ph.D., 70, professor and chair of the Department of Anatomy and Cell Biology, was presented the University of North Dakota's highest award for faculty, the Chester Fritz Distinguished Professorship, during the school's general commencement in May.

Colleagues of Carlson describe him as a creative investigator, a superb award-winning educator, and a highly effective administrator. A widely-published researcher with more than 180 papers and abstracts, Carlson is known for his work in the morphometric analysis of cellular and extracellular ultra-structure, especially as applied to models of diabetic retinal and kidney ailments.



UND President Charles Kupchella presents Edward Carlson, Ph.D., with the Chester Fritz Distinguished Professorship.

Med School Library Receives Award for Native American Programs

The Harley E. French Library of the Health Sciences has received the 2006 National Health Information Award for North Dakota for its program Linking Native Americans to Health Information, under the leadership of **Judy Rieke**, assistant director of the library. This program is designed to improve health information literacy among the Native American communities in the state through collaboration with the tribal college librarians.

The National Health Information Award for Libraries is given annually to a library in each state that encourages lifestyle improvement among a targeted population by reaching out to people with low information literacy skills.



WEB EXCLUSIVE: To learn more about the library's resources visit: www.ndmedicine.org

First Kupchella Preventive Medicine and Wellness Award

The Ina Mae Rude Aquatic Center in Stanley and **Nancy Vogeltanz-Holm, Ph.D.**, of the University of North Dakota (UND) medical school in Grand Forks have been selected to receive the **Charles E. Kupchella Preventive Medicine and Wellness Award**, named for the president of UND and presented this spring for the first time.



The Ina Mae Rude Aquatic Center, built with a \$2 million gift from Raymond Rude (husband of Ina Mae), opened in June 2002 to provide people an opportunity to improve their health, vitality and quality of life with water therapy and exercise. This therapeutic and exercise pool, the only one of its kind between Minneapolis and Seattle, is used by participants ranging in age from infancy to 95 years. Since it opened, more than 50,000 people, many of whom are dealing with obesity, pain management, diabetes, fibromyalgia, cardiac issues, arthritis and other health problems, have taken part in a wide variety of programs including aquatic aerobics, arthritis therapy and physical education.



Vogeltanz-Holm, associate professor of clinical neuroscience and director of the Center for Health Promotion and Prevention Research at the UND medical school, was selected to receive the award for her work in

advancing healthier lifestyles for children through the CATCH (Coordinated Approach to Child Health) program as well as several other statewide health promotion efforts such as worksite and clinical-based wellness programs. (See full story about CATCH on page 10.)

The Charles E. Kupchella Preventive Medicine and Wellness Award was established by a gift to the UND Foundation from **Manuchair Ebadi, Ph.D.**, associate vice president for health affairs and medical research at UND, to recognize the achievements of individuals and organizations in North Dakota and surrounding states who have contributed significantly to disease prevention and healthful living.

Med Students Say Thanks

Medical students presented awards to two teachers during the annual sophomore awards lunch at the medical school this spring.

Second-year medical students presented the Golden Apple Award for outstanding teaching to **Richard Clarens, Pharm.D.**, associate professor of family medicine.

First-year medical students selected **Patrick Carr, Ph.D.**, associate professor of anatomy and cell biology, to receive a Golden Apple.

During the presentation, Carr also received the Portrait Award, given in recognition of outstanding support provided to the students during their first two years of medical education. This is the first time that a faculty member has received a Golden Apple and the Portrait Award in the same year. His portrait will be hung in the medical school.

Murphy Named Editor of *Lipids* Journal

Eric Murphy, Ph.D., assistant professor in the Department of Pharmacology, Physiology and Therapeutics at the University of North Dakota (UND) School of Medicine and Health Sciences, has been named editor-in-chief of the professional scientific journal, *Lipids*. He will serve a five-year term.

Lipids is an international journal which features peer-reviewed scholarly work in the field of lipid research, including chemistry, biochemistry, metabolism and clinical nutrition. Published monthly by the American Oil Chemists Society, based in Champaign, IL, the journal has an extensive readership in academia, industry and government research laboratories.



Job Opportunities



WEB EXCLUSIVE: North Dakota job opportunities for physicians and other health care professionals are available at www.ndmedicine.org

A Sense of Commitment

Don Meredith, M.D. (B.S. Med. '52), and his wife, Marge, are committed people. After a lifetime of committing to marriage, family, education, work and play, the Merediths have turned their commitment to medical education, specifically with a \$500,000 endowment for medical student scholarships. They want the best of the best students to afford an opportunity to attend the University of North Dakota School of Medicine and Health Sciences.

Don Meredith's lifelong commitment to medicine started at a young age. His father, C.J. Meredith, M.D., a physician and surgeon, and his mother, Grace, a registered nurse, practiced in Valley City, ND. Growing up in a medical family, Don always knew he wanted to become a doctor, but the government had different plans for him. Six days after his high school graduation, he was drafted and served as an infantryman in the U.S. Army's Second Division, stationed in Fort Louis, Washington, from 1945 to 1947.

After his discharge, he returned to Valley City and enrolled at Valley City State University for several quarters before transferring to the pre-med program at the University of North Dakota in Grand Forks, home to the state's only medical school.

At 6-feet-6, Meredith had been the tallest high school basketball player in North Dakota in the 1940s and he continued with a successful basketball career while at UND. He was elected to the All Decade team of the '40s.

We played basketball in the old armory—we were a good team! Meredith reflects. His fourth year would have been in the new Hyslop Center but he completed his B.A. degree in only three years and was admitted to medical school instead.

School was challenging. Class started at 8 a.m. and finished at 5 p.m. We spent Saturdays studying in the lab. There were never enough hours in the day. Everything was new and interesting, and the excellent faculty were very helpful.

After receiving his Bachelor of Science in Medicine degree in 1952 from the UND medical school, Meredith transferred to Washington University School of Medicine in St. Louis, MO, where he completed his Doctor of Medicine degree in 1954.

He completed his surgical residency in the University of Minnesota orthopaedic surgery program in 1959. At that same time, he and his fraternity brother and residency partner, Paul Gislason, M.D., discussed developing an orthopedic practice in Mankato, MN. The Merediths were planning to return to North Dakota, but the lure of developing an independent practice, and doing it with a friend, prevailed.

We have never regretted our decision, said Meredith. Founded by Gislason in 1957, the Orthopaedic and Fracture Clinic, P.A., was only two years old when the Merediths arrived. The specialty of orthopedics was relatively new in

“I was privileged to receive an excellent education at UND. That made it possible for Marge and me to give something back to our universities and to the communities in which we have lived and practiced. It is the obligation, of those who can, to support their university by giving something back in appreciation of their education.”

Don Meredith, M.D.
(B.S. Med. '52)



Dean Wilson (left) visited Don and Marge Meredith at their winter home in Sun Lakes, Arizona

southern Minnesota and they specialized in unique procedures not offered by family practitioners; in fact, no one in the area did them. When Meredith retired in the early 1990s, the clinic had grown from 2 to 10 board-certified orthopedic surgeons.

Much of Meredith's considerable philanthropy has been committed to helping people get a better education. He has also established endowments at Valley City State University and Minnesota State University-Mankato, for students majoring in science or mathematics.

His wife, Marge (Rabe), was raised in Dickinson, ND, and graduated with a degree in dietetics from UND. The couple met at a Delta Gamma/Beta Theta Pi dance at the Beta house in 1949. They have been married for 55 years and have five children: Janet, Nancy, Don II, Bruce and Barbara, and 13 grandchildren. They reside in Sun Lakes, AZ, in the winter and Mankato in the summer.

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Roberta Wimmer, B.S., O.T.R. (BSOT 76) is currently working as the academic fieldwork coordinator in the School of Occupational Therapy at Pacific University in Forest Grove, Or. Prior to joining the faculty at Pacific, Wimmer practiced in a variety of mental health facilities in North Dakota, Maryland, Pennsylvania, California and Oregon.

From 1998 to 2002, Wimmer co-chaired the American Occupational Therapy Association (AOTA) Commission on Education's Task Force for the revision of the occupational therapy and occupational therapy assistant student fieldwork evaluation forms for which she received the AOTA Recognition of Achievement Award in 2003. She was also recognized for excellence in the profession by the Occupational Therapy Association of Oregon that same year when she received the Grace Black Award, the association's highest honor.

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Dale Klein, M.D. 82, Mandan, has been selected as the North Dakota Family Physician of the Year by the North Dakota Academy of Family Physicians.

The board-certified family physician, who serves as chair of the Family Practice Department at Medcenter One, has practiced in Mandan for more than 20 years.

His name will be placed in nomination for the American Academy of Family Physicians Family Doctor of the Year, to be awarded in September.

01



Soon Bahrami, M.D. 01, Louisville, KY, has been awarded the College of American Pathologists Foundation 2006 Young Leader Award, for recognition and further development of her leadership skills in the field of pathology.

The award included support to participate in two legislative meetings for the College of American

Pathologists Residents Forum.

Bahrami, who completed residency training in June at the University of Louisville, began a dermatopathology fellowship in July at Indiana University.

Rohrich Receives UND Honorary Degree

Rod J. Rohrich, M.D., (B.S. Med. 77), Dallas, TX, received UND's honorary Doctor of Letters degree at the general commencement ceremony on May 13, 2006.

An internationally recognized educator and physician, Rohrich is professor and chair of plastic surgery, University of Texas Southwestern Medical Center, Dallas. He holds the Crystal Charity Ball Distinguished Chair in Plastic Surgery and the Betty and Warren Woodward Chair in Plastic and Reconstructive Surgery.

A native of Zeeland, ND, Rohrich graduated from NDSU and then enrolled at the UND School of Medicine, where he graduated with a Bachelor of Science in Medicine degree. He earned his M.D. from Baylor University College of Medicine. After general surgery and plastic surgery residencies at the University of Michigan Medical Center, he did further training in pediatric plastic surgery at Oxford University in England. He completed a hand and microvascular fellowship at Massachusetts General Hospital/Harvard Medical School and, in 1986, joined the Division of Plastic Surgery at UT Southwestern.

Rohrich has been the recipient of numerous prestigious national research, teaching, and service awards. An innovative educator and scientist, he holds a patent on a new breast implant and has developed educational models for bringing emerging technology to plastic surgeons. He is editor in chief of Plastic and Reconstructive Surgery, the leading journal in the field. He has also served as president of the American Society of Plastic Surgeons, the largest organization of Board certified plastic surgeons in the world.

Rohrich has been a visiting professor internationally and has delivered more than 1,000 scientific presentations on all aspects of plastic surgery. He has published four textbooks, more than 300 peer review articles, and 30 chapters on plastic surgery. His research interests span the entire field.

Rohrich has been included as one of *The Best Doctors in America* since 1996. He has been honored by both the UND and NDSU alumni associations, and as a Notable North Dakotan in 1998. In addition to his many professional activities, he is involved in civic affairs, including the American Cancer Society, the Save the Children Foundation, and arts and music organizations in Dallas.

Through his foundation, for which he serves as president, Rohrich established an endowment that provides a scholarship to a UND medical student with a rural North Dakota background and an interest in primary care.

We welcome letters and news notes:

UND School of Medicine and Health Sciences, Office of Public Affairs Room 1916, 501 North Columbia Road Stop 9037, Grand Forks, ND 58202-9037.
E-mail: spohlman@medicine.nodak.edu (Please include your daytime phone number)

ALUMNI NOTES

Krohn Named Director of UND Center for Family Medicine-Minot

Kim Krohn, M.D. '96, has been named director of the family medicine residency program at the University of North Dakota (UND) Center for Family Medicine-Minot.

A board-certified family physician, Krohn has been on staff at the Center since 1999. As director, she replaces **C. Milton Smith, M.D. (B.S. Med. '69)**, who served from 1992 to 2005 and has retired from UND.

She serves as vice president of the North Dakota Academy of Family Physicians Foundation and as the speaker of the house of the North Dakota Medical Association. She has received awards for excellence as a student, resident, faculty member and practicing physician.



The **Physician Assistant Program** hosted an alumni reunion this spring in San Francisco, CA. Some of those in attendance included (left to right) Bill Willett ('01), Cindy Glassick ('01), Bonita Gawel ('01), Jane Case ('01), Sherry Hernisey ('00), Lori Krause ('00) and Gretchen Fawcett ('01).

IN MEMORIAM

Gordon Lucky Salness, M.D. ('41 and B.S. Med. '43), Laguna Woods, CA, died April 18, 2006 at the age of 86 after a long battle with prostate cancer.

Born in Rolette, ND, he graduated from UND with B.S. degrees in chemistry and medicine. He went on to receive his medical degree from Temple University in Philadelphia, PA. He served in the Navy, achieving the honored position of chief medical officer.

In 1950, Dr. Salness joined the Johnston-Gendel Medical Clinic in Anaheim, CA, and had an active private practice in internal medicine until his 1987 retirement. He was also an active medical volunteer at various youth camps including the Anaheim YMCA and Camp Ocoola.

Lucky was married to Betty Elliott of Rolla, ND, from 1936 until her passing in 1983. He is survived by his companion, Eloise Boortz; three sons; two daughters; 16 grandchildren and eight great-grandchildren.



Brad N. Meyer, M.D. '84, 48, Bismarck, died June 4, 2006, of natural causes.

A native of Williston, he grew up and attended school there. He attended UND here he earned his medical degree, graduating summa cum laude in 1984. He did his residency at the Mayo Clinic in Rochester, MN.

Dr. Meyer was on the radiology staff of the Q and R Clinic and Mid Dakota Clinic, and most recently at Medcenter One.

He is survived by his wife of 27 years, Cathy (Sinness); one son, Tim (Sarah); two daughters, Kayla Meyer and Sara Meyer and her fiancé, Tyler Bentz; four grandsons, his parents, one brother, two sisters, mother-in-law and several nieces and nephews.

Memorials can be sent to: Brad Meyer, M.D., Radiology Scholarship/Award Fund, University of North Dakota School of Medicine, Southwest Campus c/o Dr. Ted Fogarty, P.O. Box 1975, Bismarck, ND 58502.

Darrell Swank, M.D. '86 and Ph.D. in Biochemistry '81, Franklin, TN, died March 7, 2006 at the age of 50.

Dr. Swank earned the Doctor of Medicine degree and Ph.D. in Biochemistry, both from UND, and went on for residency training at Mayo Clinic in Rochester, MN. He was a board-certified pathologist specializing in anatomic and clinical pathology. He also was an accomplished pianist.

He is survived by his wife, Denise Swank; four daughters and two stepsons; his mother, Muriel Swank; a brother, and two sisters.

John Redman, (PA '01), Ludington, MI, died Feb. 26, 2006. He was 55.

A graduate of the Physician Assistant Studies Program at the UND medical school, he worked at Wellston Medical Center, and was also very active in philanthropic endeavors, including missionary trips with his wife and children.

He is survived by his wife of 32 years, Karen, and four children; two sisters, and a brother.

Everyone Counts...

ANNUAL GIVING IS A CRITICAL PART of a university. Typically, annual funds represent the alumni of the school - and the level of participation is as important in measuring success as the dollars raised.

This is true at the UND School of Medicine and Health Sciences as well, and we look to our alumni and special friends to provide these necessary funds each year. They are what support and enhance the student scholarship funds, faculty development, research and the ongoing needs of the school.

The generosity of every alumnus makes a difference!

Meet Don and Joann McIntyre! The McIntyres are the epitome of alumni loyalty. For the past 35 years they have remembered the medical school with an annual gift.

Don dedicated his entire career to providing quality health care to his patients in the Rugby area of rural North Dakota. The couple has been active members of both their community and UND. Don was recently honored with the UND Alumni Association Sioux Award. It is the highest honor bestowed upon UND graduates.

I have always been grateful for the opportunities my education at UND provided me, Don said, and I started giving a gift to the school even while I had a young practice and was raising children. I m honored to show my gratitude



Joann (left) and Don McIntyre with Blanche Abdallah

in this way - it s my way of helping the school move forward into the future.

The fiscal year-end is June 30. To make an annual gift to the UND School of Medicine and Health Sciences, complete and return the form below, or contact: Blanche E. Abdallah, Director of Development, (701) 777-2004 or babdallah@medicine.nodak.edu. A complete list of UNDSMHS donors will be published in a future issue of North Dakota Medicine.

Here is my gift of support for the UND School of Medicine and Health Sciences.

\$250 \$500 \$1,000 or \$_____ payable to the UND Foundation

Method of payment Check MasterCard Discover Visa

Charge # _____

Exp. Date _____ V-code (last 3 digits on signature strip) _____

Authorization Signature _____

- I would like my contribution to support:
- SMHS Priority Needs
 - Program/Department _____
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PARTING SHOTS



Jan Weathers (DPT '06), Maxbass, ND, receives the Clarence O. Blecha Memorial Scholarship award from faculty member Meridee Danks, MPT, NCS.



MD Class of 2006 member Julie Kenien and her father and mentor Alan Kenien, M.D., clinical professor of pediatrics, Fargo ND



Patrick Litster (PA '06), Aberdeen, WA, receives the Outstanding Scholarship Program Award from Susan Kuntz, Ph.D., assistant professor in the physician assistant program.



MD Class of 2006 members Roxanne Larson, Ray, ND; Samuel Harms, Hibbing, MN; and Krista Pekarski, Dickey, ND.



Amanda Gulka, Valley City, ND; Nicole Nord, Devils Lake, ND; Kari Pedersen, Williston, ND; and Tiffany Anderson, Gillette, WY, received their Doctor of Physical Therapy (DPT) degrees on May 13, 2006.



Melanie Stover (PA '06), Rockford, MI, is hooded by her mother, Yvonne Misaledes.



Congratulations MD Class of 2006!

- Front row: (seated left to right):** Assistant Dean Nicholas Neumann, Assistant Dean Jon Allen, Associate Dean Mary Wakefield, Associate Dean Manuchair Ebadi, Associate Dean Judy DeMers, Dean H. David Wilson, Executive Associate Dean Joshua Wynne, Assistant Dean Martin Rothberg, Associate Dean Randy Eken, Associate Dean Bruce Pitts, Assistant Dean William Newman
- Second row:** Alicia Norby, Diane Kraft, Karin Lokensgard Pierce, Jon Solberg, Jared Bratvold, Tracie Tuggle Newman, Barbara Swenson, Ann Sackman, Julie Kenien, Jason Erpelding, Jennifer Beckwith, Lori Haagenson, Bonnie Kvistad, Jolene Dunn, Joni Buechler-Price, Emily Dietrich, Nichole Veitenheimer, Jody Huber
- Third row:** Crystal Cunningham, Alicia Glynn, Rebecca Tompkins, Leslie Poling, Melissa Horner, Nell Suby, Kara Johnson, Alex Campbell, Sarah Steidler Wilkins, Joshua Deere, Jared Schmidt, Jacob Harris, Carrie Johnson, Katie O'Brien, Corey Kroetsch
- Fourth row:** Roxanne Larson, Rachel Aufforth, Justin Horner, Aaron Berg, Michael Wiisanen, Samuel Harms, James Elder
- Back row:** Lisa Jamsa Tollefson, Krista Pekarski, Daniel Starr, Heather Bedell, Timothy Bedell, John Miller, Samuel Milanovich, Ryan Reynolds, Jeremy Beireis, Andrew Bakke, Thomas Fox, Patrick Klempel, Kimberly Bigelow, Renae Dorrity



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