

# *Creating Futures*

University of Colorado *Denver*



*Moving Toward a  
Healthier Future*  
*The Center for Adult Diabetes*



Diabetes taxes not only its sufferers, but all of us.

## Heralding a New Frontier for Diabetes, With Your Help

### Just imagine:

- **Better diagnosis and treatment** that dramatically improves prognosis and quality of life for diabetes patients
- **Better prevention** to slow down our current epidemic, especially among highly susceptible populations and minorities
- **Better understanding** of diabetes's impact on overall health
- **More research and clinical expertise** in the Rocky Mountain West's largest metropolitan area, serving millions throughout the region
- **Seamless links with the Anschutz Medical Campus's** vast medical resources including the Barbara Davis Center for Childhood Diabetes, increasing clinical care for Colorado's 220,000 patients with diabetes
- **A future in which diabetes robs no one of their full human potential**

The University of Colorado Denver is the ideal place to pursue this new frontier—and the time is now. Your support for the Center for Adult Diabetes at the University of

Colorado Denver Anschutz Medical Campus will herald a brighter future for all who are impacted by this pervasive, pernicious disease.

“In the next few years, there will be major developments in prevention of cardiovascular disease. There will be major steps in surgical treatment of diabetes. There will be new technology for connecting glucose measurements with the insulin infusions, and far more. We want to be at the forefront of development of solutions for diabetes.”



**Dr. Boris Draznin**

Director, Center for Adult Diabetes, UC Denver

# Diabetes: A Pervasive and Patient Adversary

Diabetes mellitus does not instantly strike down its sufferers. Rather, its symptoms gradually but relentlessly weaken the human body, sometimes at a level barely above perception, and curtail patients' capacity to enjoy life. Blindness, lower-extremity amputations, heart disease and stroke, and kidney failure are among complications exacerbated by diabetes—whose sufferers on average live 12 years less than the broader population.

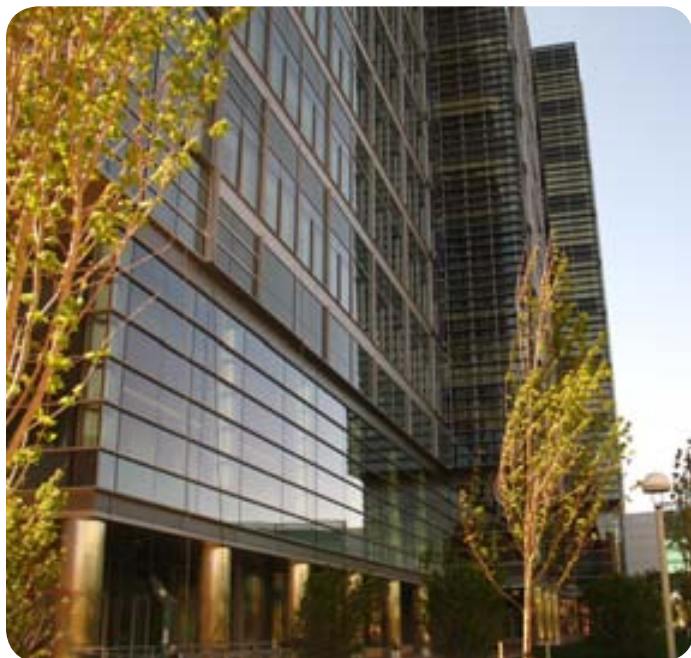
And diabetes is on the rise. It's already one of America's top three killers, afflicting 8 percent of the population, and incidence of the more common type 2 ("adult-onset") diabetes has doubled in the last 30 years. Yet increasing obesity and an aging population make it likely this disease's prevalence will increase. Of Americans born in 2000, more than 30 percent are anticipated to develop diabetes. By 2050, more than 100 million Americans—to the current population of Colorado, New York, California, Texas, and Ohio combined—may have diabetes.

Despite Colorado's status as one of America's fittest states, it's not immune to this epidemic. The state's childhood-obesity rate, triple the U.S. Department of Health and

Human Services' target, is the fastest-growing in the nation. Colorado's population contains a high proportion of Latinos who are 50 percent more susceptible to type 2 diabetes than the broader population.

Diabetes taxes not only its sufferers, but all of us. Average medical costs for diabetes patients are 2.3 times higher than for the general population and the costs continue to rise. Total U.S. health care expenditures for diabetes exceed \$100 billion annually, with lost work time, productivity, and services increasing total direct and indirect costs far beyond that figure. Beyond dollars alone, diabetes takes a toll on the families and friends of those who bear the burden of this disease.

Diabetes is everyone's disease. But the University of Colorado Denver is aggressively pursuing research and clinical care to fight it. A path to better future for patients with diabetes lies just ahead. With your help, it will lead through the Center for Adult Diabetes at the Anschutz Medical Campus.



*The Adult Diabetes Center will inspire more and better research to combat this crippling disease.*

The research of **Dr. Jane Reusch**—professor of medicine and biochemistry in UC Denver's department of endocrinology, metabolism, and diabetes—focuses on prevention of cardiovascular



disease in people with diabetes. In particular, she has discovered that an inappropriate regulation of the protein CREB contributes to diabetic complications. She is now exploring how augmenting CREB function can reduce diabetes and its complications.



Dr. Richard Johnson

## Sugar's Ramifications Not So Sweet

What makes type 2 diabetes such an urgent problem? One cause can be found in our sugar-laden supermarket aisles. New science about the links between high-fructose diets and systemic disease (particularly among African Americans and Native Americans) are outlined in *The Sugar Fix*, a new book by **Dr. Richard Johnson**, chief of UC Denver's Division of Renal Diseases and Hypertension. Dr. Johnson's research has taken him to rarified locales such as Peru, where he researched the effects of high altitude on kidney disease.

## A Multipronged Approach

An effective diabetes response requires sustained energy on numerous fronts. Fortunately, the Anschutz Medical Campus—a “miracle mile” of health research, clinical care, and education—possesses the breadth and depth of expertise to complement the life-changing work to be undertaken at the Center for Adult Diabetes. Our capacity to collaborate with other medical disciplines, and for a bench-to-bedside-to-bench research loop, makes Anschutz a welcome home for this Center—to be one of just a handful in the United States.

**The Center for Adult Diabetes will pursue solutions on fronts such as:**

### **Prevention, Outreach, and Early Diagnosis:**

Better nutrition, exercise, and regular health assessments can help keep type 2 diabetes at bay. Potential partnerships with Anschutz's Center for Human Nutrition and the Cardiac & Vascular Center will promote healthy lifestyles and reduce onset of diabetes. We will intensify screening for high-risk individuals—targeting those with undiagnosed diabetes to accelerate their treatment and care, and those with “pre-diabetes” to keep them from developing the disease.

Preventive measures also require community outreach and education. The Center for Adult Diabetes will mobilize regional health care providers with a replicable prevention model, deploy culturally sensitive outreach teams in high-risk communities, and reach out to rural Coloradans using online and telemedicine technology.

**Advanced Clinical Care:** Most patients with diabetes develop eventual and substantial complications, so ongoing treatment and management can be the difference between prolonged pain and a life well lived.

Center for Adult Diabetes experts will refine a personalized, practical self-management approach that offers patients knowledge, behavioral change, and access to care. Enhanced technology and medication management will help patients to better monitor and maintain healthy levels of glucose, blood pressure, and lipids. The Center will enhance coordination with specialists across the medical spectrum, to better connect diabetes's complications with its root causes. With the Barbara Davis Center for Childhood Diabetes in close proximity, research endeavors and clinical services for all diabetes patients will rise to a new, higher level.

**Cross-Disciplinary Collaboration:** Diabetes can be a launching pad for an array of ailments and complications, many requiring specialized intervention in other medical disciplines. Diabetes patients are more than twice as likely to develop depression, heart disease, or a fatal stroke. Diabetes is the leading cause of kidney failure, blindness, and non-traumatic lower-limb amputations. Even gum disease and pneumonia present added risks for diabetes patients.

The Center will enhance communication and coordination among doctors in fields as diverse as endocrinology, cardiology, transplantation, and nutrition. It will benefit from synergies with new Anschutz affiliates such as the Rocky Mountain Lions Eye Institute, the Cardiovascular Institute, the Center for Women's Health Research, and the Health and Wellness Center—each boasting top doctors and researchers.

**Front-Line Research:** Within the past generation, we've made great strides toward understanding the causes and complications of diabetes. Yet to keep this epidemic at bay, the next generation must go even further to initiate research breakthroughs.

The University of Colorado Denver offers an extraordinary capacity for interdisciplinary research, and is already garnering over \$300 million annually in federal research grants. Anschutz doctors and researchers are pursuing:

- **Genomic screening** that will help us predict, and thereby reduce, the likelihood of diabetes onset
- **Molecular research** that helps us understand the mechanisms that trigger diabetes, aided by world-class researchers at the Colorado Initiative in Molecular Biotechnology
- **Cardiological ramifications** of diabetes, helping to protect patients from eventual cardiac disease and stroke
- **New surgical approaches** that reduce obesity's complications for patients
- **Accelerated application of lab discoveries to clinical treatment**—an outgrowth of UC Denver's new Colorado Clinical and Translational Sciences Institute—and a nimble research response to trends in patient populations



Our capacity to collaborate with other medical disciplines, and for a bench-to-bedside-to-bench research loop, makes Anschutz a welcome home for this Center.

The synergies available for cutting-edge research at Anschutz are unparalleled. And Denver's sizable patient base enables large-scale clinical trials that provide additional allure for talented faculty and researchers. But we need a Center to bring diverse researchers together, allow strands of relevant work to intersect, enable time-pressed faculty to bring research insights to fruition, and provide a critical mass so our work can take shape and make an impact. We must take advantage of our capabilities to fight diabetes now—for the sake of all our friends and neighbors who are affected by this disease.

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Current research by **Dr. Marc-Andre Cornier**, associate professor of endocrinology, metabolism, and diabetes at UC Denver, focuses on why individuals develop insulin resistance. "We need a better understanding of the pathophysiology of type 2 diabetes, and we need to study potential new treatments," he says.





# Your Help Will Get Us There

## Center for Adult Diabetes

UC Denver has made a commitment to the Center for Adult Diabetes with a promise of seed funding, and by designating as director Dr. Boris Draznin, a professor of endocrinology, metabolism, and diabetes at UC Denver, and author of *The Thinking Person's Guide to Diabetes*. But private funds must be raised to launch the Center's programs and allow doctors to intensify their efforts toward research and enhanced clinical care.

Our goal is to establish a \$34 million endowment, which will:

- Establish an unprecedented continuity of care, education, and research
- Help recruit and retain leaders in the field
- Leverage our potential to attract funding from federal grants and granters
- Ensure the long-term sustainability of the program
- Improve clinical care, research, and outreach for the benefit of diabetes sufferers in Colorado and beyond

## Unraveling “adult-onset” diabetes in children

Kids can get type 2 diabetes, too—yet most research on the disease focuses on adult populations. As a result, type 2 youth (particularly minority or low-income youth) are underserved, a problem Dr. Kristen Nadeau, assistant professor of pediatrics at UC Denver, confronts with her research. Dr. Nadeau is co-investigator on a large multi-center study of type 2 diabetes treatments in adolescents, and has published findings linking type 2 diabetes to elevated alanine aminotransferase levels, and linking adolescent cardiovascular function with insulin resistance. “The collaboration at CU is what keeps me here,” Nadeau says. “I’m working with cardiologists, the exercise lab, adult endocrinologists, and radiologists. It’s an unbeatable combination of resources.”



# Naming Opportunities

Numerous opportunities exist to establish a personal legacy at the Adult Diabetes Center, honor a loved one or colleague, or support a particular area of specialization. You can help build the future of the Center by providing support for:

- Faculty Chairs
- Fellowships
- Special Programs
- Laboratory Equipment
- Research
- Research Facilities



“Here at Anschutz, we’ve got all the people in place: it’s just a matter of getting everyone together. And with a large population of diabetes patients here, the possibilities for doing trials that we design is very, very high. Getting organized and funded is key.”

Dr. Michael McDermott  
Director, Endocrinology and Diabetes Practice  
University of Colorado Hospital, UC Denver

Join us in this worthy endeavor to establish the Center for Adult Diabetes.



*Dr. Boris Draznin with colleagues.*

To learn about the many ways you can make a gift:

#### **Contact**

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## You Can Make a Difference

We're entering a key period for diabetes, as the disease gains momentum throughout our population. At the University of Colorado Denver, we can reverse the trend of escalating incidence, and make life better for the 250 million people worldwide with diabetes. With your help, we will. Join us on this worthy endeavor to establish the Center for Adult Diabetes.

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"Diabetes is more than a disease: it's a life. Yet I'm thankful to be alive during a time in which advances in science, medicine, and technology have enabled me to accept my nearly lifelong diabetes (55-plus years) and manage it with very few limitations. But there's still much more to learn about diabetes, including the genetics, prevention, complications, and management. Perhaps ultimately, a cure will even be possible."

**Dr. Robert Eckel**

Professor of Medicine, Physiology, and Biophysics

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## **University of Colorado Denver**

**If you or someone you know wishes to be a patient at our Center, please call 720-848-2650 to make an appointment.**

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