



DAKOTA DIABETES
COALITION

The Dakota Diabetes Coalition is proud to offer a regular column on diabetes and related concerns every other Friday.



Dr. Johnson is a family practice doctor in Grand Forks with a special interest in diabetes -- and a special knack for writing. As a member of the Dakota Diabetes Coalition, he has generously made himself available to answer questions through our listserv. If you have comments, or questions for Dr. Johnson to address in future columns, please contact gailhand@qwest.net

Visit the Coalition's website!

<http://www.ndhealth.gov/diabetescoalition/>

Who knew?

The Link: Diabetes and Smoking

Q. I'd heard that smoking may actually lead to type 2 diabetes. Is that true?

A. While it is fairly common knowledge that obesity and genetics are risk factors for Type 2 diabetes, the evidence that smoking may actually be a factor in the development of Type 2 diabetes is not widely known, even in the medical community. It needs to be! Make it a New Year's resolution to be more helpful to patients who smoke.

Everyone's heard the mantra: Persons with Type 2 diabetes are at very high risk for the development of cardiovascular complications such as stroke, heart attack or other coronary heart disease and peripheral arterial disease. Likewise, those who smoke are at high risk for these complications.

What's the connection?

The latest studies show a more definitive link and it's important because approximately 20% of North Dakota adults are smokers, and the number of state residents with diabetes who smoke is higher, closer to 23%.

The risks of smoking and the complications of diabetes are all well known. Strategies to stop smoking are more effective than ever. It is imperative for health care providers and all other support staff to regularly monitor patients' use of tobacco and recommend ways for them to quit.

There is a growing body of evidence regarding smoking as a risk factor for Type 2 diabetes, and until recently, this has received surprisingly little attention. Early studies were criticized for poor adjustment for common risk factors such as cholesterol disease or hypertension, but more recent prospective data seem to show a firmer link.

An early study, published in 1993 in the Journal of Public Health as part of the Nurses Health Study, showed that women who smoked more than 25 cigarettes a day had a relative risk of 1.42 of going on to develop Type 2 diabetes--this would be a 142% increase compared to controls.

More than 100,000 female nurses were in this analysis, which adds to the strength of the data. Similarly, a 1995 study involving over 41,000 male health professionals showed that men who smoked more than 25 cigarettes daily had a relative risk of developing Type 2 diabetes of 1.94 (a 194% increase compared to controls).

A prospective study published in Diabetes Care in 2001 by Wannmethee, et al, has made the link more definitive, as over 7,000 patients were tracked forward through time to assess the role of smoking in developing Type 2 diabetes. Again, the results paralleled the retrospective studies. In this study, men who stopped smoking realized some benefit in diabetes risk reduction. However, this improvement was partially offset by weight gain, actually leading to diabetes in some subjects. But bottom line, the risk of former smokers took nearly 20 years to reach the lower risk people who had never smoked.

Effective smoking cessation strategies exist and need to be offered to all smokers. They are appropriate for persons with diabetes who smoke, especially given their already very high risk of cardiovascular complications. Smoking cessation classes, often offered by local health departments and the North Dakota Tobacco Quitline (1-866-388-7848) are very effective counseling tools. Nicotine replacement, when dosed correctly and used properly, is clearly an effective intervention for smoking cessation and safe for most patients.

Bupropion also has good data to support its use, and the newer medication Chantix has had very impressive results since its release in October of 2006. Chantix has the additional benefit of being fairly weight neutral.

Diabetes patients will need particular attention to managing potential weight gain, and this may direct therapy not only for cessation, but for the treatment of their diabetes as well. Metformin, Januvia, and Byetta are all considered to be at least

weight neutral diabetes treatments, and may be useful for appropriate patients in their Type 2 diabetes management within the context of smoking cessation to limit weight gain.

Eric L. Johnson, M.D., is a member of the Dakota Diabetes Coalition. He serves as Assistant Medical Director at Altru Diabetes Center and is an Assistant Clinical Professor in the Department of Family and Community Medicine at the University of North Dakota School of Medicine and Health Sciences.

[Smoking and Diabetes, Dr. Johnson's Column #12, Dec. 28, 2007](#)

Make sure you are up to date and following guidelines. The ADA Standards of Care for diabetes are updated each January and can be found at this site:

http://care.diabetesjournals.org/cgi/reprint/30/suppl_1/S4
