

Celiac Disease News



Celiac Disease Awareness Campaign • www.celiac.nih.gov

A service of the National Institute of Diabetes and Digestive and Kidney Diseases, NIH

Winter 2009

Research Finds Shared Genetic Susceptibility for Celiac Disease and Type 1 Diabetes

Celiac disease and type 1 diabetes are disorders in which the body's immune system mistakenly attacks itself, targeting the lining of the small intestine in celiac disease and the beta-cells of the pancreatic islets in type 1 diabetes. Celiac disease is far more common in people with type 1 diabetes than in the general population—as many as 10 percent of children with type 1 diabetes, compared with only one in 100 children in the general population, test positive for the antibodies that indicate celiac disease. Moreover, a growing body of research suggests type 1 diabetes is triggered by exposure to gluten, the protein linked to celiac disease, adding even more weight to the theory that the two disorders share common genetic causes.

Investigators have taken a significant step toward confirming this hypothesis. A research team headed by John A. Todd, Ph.D., at the University of Cambridge in Great Britain identified three genetic markers known to be associated with celiac disease that also are associated with increased likelihood of type 1 diabetes and two factors previously associated with type 1 diabetes that contribute to the risk of celiac disease. The research was reported in the December 25, 2008, issue of *The New England Journal of Medicine*.

In an editorial accompanying the report, Robert Plenge, M.D., Ph.D., director of genetics and genomics at Brigham and Women's Hospital



in Boston, writes, "There are going to be many combinations of these risk factors, and future research that is aimed at understanding these combinations and the underlying biological pathways should lead to new insights into [these diseases]."

GENETIC SUSCEPTIBILITY,
continued on page 2

Inside This Issue

13th International Coeliac Disease Symposium _____	2
Update on Provider Points Fact Sheets _____	3
Featured in the NIDDK Reference Collection _____	3
Celiac Disease and Osteoporosis _____	4
Additional Resources _____	4
Upcoming Meetings, Workshops, and Conferences _____	5



NIDDK
NATIONAL INSTITUTE OF
DIABETES AND DIGESTIVE
AND KIDNEY DISEASES

GENETIC SUSCEPTIBILITY, from page 1

The researchers examined genetic markers in blood samples obtained from 2,536 people with celiac disease; 8,064 people with type 1 diabetes; and 9,339 controls with neither diabetes nor celiac disease. In blood samples from people with type 1 diabetes, the researchers looked for variations in the DNA sequence at genetic sites, or loci, known to be associated with celiac disease. In samples from people with celiac disease, they looked for DNA variants previously associated with type 1 diabetes. Because prior research has established a clear association with both diseases and variants at gene loci associated with human leukocyte antigen (HLA)—a major

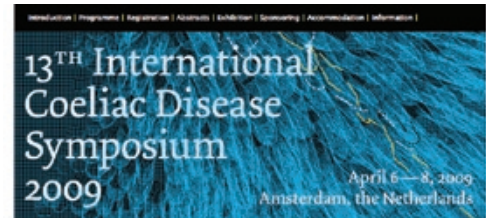
Common biological mechanisms may be features of both celiac disease and type 1 diabetes.

component of the immune system—the researchers looked only at non-HLA genes.

“A genetic susceptibility to both type 1 diabetes and celiac disease shares common alleles [variants]. These data suggest that common biological mechanisms, such as autoimmunity-related tissue damage and intolerance to dietary antigens, may be etiological features of both diseases,” the report’s authors write. The new findings suggest that similar genetic variants combine with HLA gene variation and environmental factors to determine the development of both diseases. Moreover, the report notes, the “results support further evaluation of the hypothesis that cereal and gluten consumption might be an environmental factor in type 1 diabetes.” ■

13th International Coeliac Disease Symposium

The International Coeliac Disease Symposium, a biennial gathering of celiac disease scientists, physicians and other clinical practitioners, and patients will be held April 6–8 in Amsterdam, the Netherlands. The symposium will offer two concurrent programs: an International Symposium, which will provide updates on scientific and clinical developments for scientists and physicians, and a Clinical Forum, which will focus on evidence-based practical solutions for patients and health care providers.



Complete information is available at www.icds2009.org. ■

Celiac Disease News

Celiac Disease News, an email newsletter, is sent to subscribers by the National Digestive Diseases Information Clearinghouse (NDDIC). The newsletter features news about celiac disease, special events, patient and professional meetings, and new publications available from the NDDIC and other organizations.

If you would like to subscribe, send an email to celiac@info.niddk.nih.gov. Please visit www.celiac.nih.gov/News.aspx to read or download a PDF version of the newsletter.

To meet the need for comprehensive and current information about celiac disease, the NDDIC, a service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), launched the Celiac Disease Awareness Campaign. The Awareness Campaign is the result of the



combined ideas and efforts of the professional and voluntary organizations that focus on celiac disease, along with the NIDDK, the National Institutes of Health, and the Centers for Disease Control and Prevention.

Visit www.celiac.nih.gov to learn more about the Awareness Campaign.

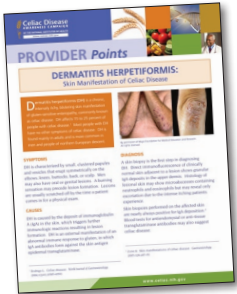
Executive Editor: Stephen P. James, M.D.

Dr. James is the director of the Division of Digestive Diseases and Nutrition within the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). As director, Dr. James oversees planning, implementation, and evaluation of a national research effort focused on gastrointestinal, pancreatic, hepatobiliary, and nutrition diseases and conditions. Before joining the NIDDK in 2001, Dr. James directed the division of gastroenterology at the University of Maryland’s School of Medicine for 10 years.



Provider Points Fact Sheet about Dermatitis Herpetiformis Now Available

Dermatitis Herpetiformis: *Skin Manifestation of Celiac Disease*—the first in the National Institutes of Health Celiac Disease Awareness Campaign’s new Provider Points Series—is now available for download at www.celiac.nih.gov.



This concise fact sheet summarizes information about dermatitis herpetiformis, a blistering skin rash associated with celiac disease. The fact sheet briefly describes symptoms, causes, diagnosis, and treatment and provides photographs to illustrate the classic presentation of dermatitis herpetiformis.

The next Provider Points fact sheet will describe available serologic and genetic tests used to evaluate patients who may be candidates for biopsy, the gold standard for celiac disease diagnosis. ■

The Provider Points Series is designed to aid primary care physicians in recognizing the symptoms and complications of celiac disease. Most health care professionals must choose among multiple sources of information to keep up to date about the myriad conditions they see in their practices. Provider Points allow health care providers to access essential information in a concise and practical format. Additional planned topics in the Provider Points Series include celiac disease in children and the relationship of celiac disease to other autoimmune disorders.

Featured in the NIDDK Reference Collection

Gluten-Free Diet Guide for Families

This booklet, from the Children’s Digestive Health and Nutrition Foundation (CDHNF), is designed to help people newly diagnosed with celiac disease and their families manage the emotional stress and confusion associated with the initial stages of moving into a gluten-free lifestyle.

Sections of the booklet include “What can the celiac patient eat?,” “How do I start?,” “Gluten-free shopping list,” “Life goes on!,” and “Once the diet has started.” An extensive resource list includes support groups, websites and other Internet resources, cookbooks, and other books and publications.

The CDHNF was established by the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition as a resource for medical professionals, parents, and patients. ■



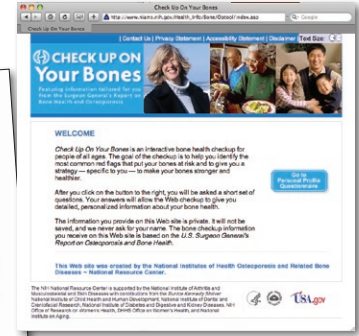
Celiac Disease and Osteoporosis

The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) has published *What People With Celiac Disease Need to Know About Osteoporosis*. This fact sheet describes the links between celiac disease and osteoporosis—a condition in which the bones become less dense and more likely to fracture. The fact sheet provides guidance on how people with celiac disease can maintain bone health through diet and exercise and describes diagnosis and treatment of osteoporosis. The fact sheet is available at the Celiac Disease Awareness Campaign website at www.celiac.nih.gov/Materials.aspx. ■



Bone Health

The NIAMS also offers Check Up On Your Bones, an interactive “bone health checkup”—a short set of questions used to develop detailed, personalized information about your bone health. Visit www.niams.nih.gov/Health_Info/Bone/Optool/index.asp. ■



Additional Resources

Newly Revised

The National Digestive Diseases Information Clearinghouse has updated two fact sheets.

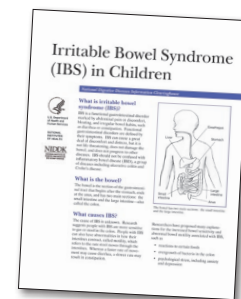
Indigestion

Provides information about the causes, symptoms, diagnosis, and treatment of indigestion. Go to www.digestive.niddk.nih.gov/ddiseases/pubs/indigestion.



Irritable Bowel Syndrome (IBS) in Children

Provides information about what causes IBS and who gets it, its symptoms, how it can be treated with medication and diet, and how to manage the stress that frequently is associated with IBS in children. Go to www.digestive.niddk.nih.gov/ddiseases/pubs/ibschildren. ■



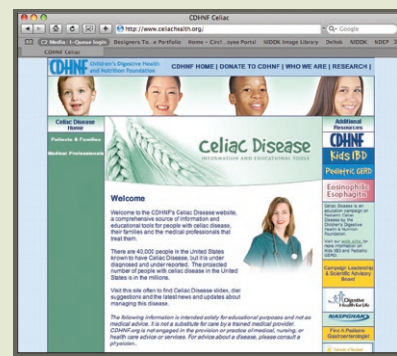
ADDITIONAL RESOURCES,
continued on page 5

ADDITIONAL RESOURCES, from page 4

Featured Websites

The Children's Digestive Health and Nutrition Foundation's Celiac Disease website, www.celiachealth.org, was developed to provide information, educational tools, and links to resources for people with celiac disease, their families, and the health care practitioners who treat them.

The University of Maryland Center for Celiac Research website, www.celiaccenter.org, describes the center's activities related to clinical care, diagnostic support, education, and clinical and basic science research in celiac disease. The center's goal is to increase the awareness of celiac disease to provide better care, better quality of life, and more adequate support for the celiac disease community. ■



Upcoming Meetings, Workshops, and Conferences

The National Institute of Diabetes and Digestive and Kidney Diseases Information Clearinghouses will be exhibiting or displaying materials at the following upcoming events:

American College of Physicians Internal Medicine 2009

April 23–25 in Philadelphia. For more information, go to www.acponline.org/meetings/internal_medicine/2009/attendees/?pr13r.

Celiac Disease Foundation Annual Education Conference & Food Faire

May 2 in Pasadena, CA. For more information, go to www.celiac.org/newsEvents/conference2009.php.

Society of Gastroenterology Nurses and Associates Annual Course

May 15–20 in St. Louis. For more information, go to www.sgna.org/Education/events/AnnualCourse/2009/registration09.cfm.

American Academy of Physician Assistants 37th Annual Conference

May 23–28 in San Diego. For more information, go to www.aapa.org/annual-conf/sandiego09/index.php.

Digestive Disease Week

May 30–June 4 in Chicago. For more information, go to www.ddw.org/wmspage.cfm?parm1=679. ■