

CLINICAL SPECIFICATIONS

WHEAT

Function:

Wheat is a commercially grown grain, which is processed and used in cereals, pasta, baked goods, sauces, and beverages. It is also used in pastes and glues and is raised as a fodder crop for livestock.

Antibodies Appear:

Baker's Asthma⁴
 Celiac disease^{1,2}
 Dermatitis Herpetiformis¹
 Gluten-sensitive enteropathy^{1,2}
 Type 1 Diabetes^{2,3}
 Wheat allergy⁴
 Wheat-dependent, exercise-induced anaphylaxis⁴

Known Cross-Reactions: Rye, Barley, Soy⁴

Clinical Significance:

The presence of antibodies to wheat is an indication of food sensitivity. The offending food and its known cross-reactive foods should be eliminated from the diet. Patients with gluten-sensitive enteropathy (Celiac disease) and/or Dermatitis Herpetiformis typically have high levels of IgG antibodies against wheat.¹ IgA antibodies against wheat are found in patients with gluten-sensitive enteropathy (Celiac disease).¹ Genetically susceptible people, prone to diabetes, have higher incidence of spontaneous Type 1 Diabetes when exposed to wheat antigens in association with a pro-inflammatory gastrointestinal environment.³ Therefore, if antibodies to Wheat are elevated, consider follow-up testing of intestinal barrier integrity.

References:

1. Huff, et al. Wheat protein antibodies in dermatitis herpetiformis. J Invest Dermatol, 1979; 73(6):570-574.
2. MacFarlane, et al. A type 1 diabetes-related protein from wheat. (Triticum aestivum). J Biologic Chem, 2003; 278(1):54-63.
3. Mojibian, et al. Diabetes-specific HLA-DR-restricted proinflammatory T-cell response to wheat polypeptides in tissue transglutaminase antibody negative patients with type 1 diabetes. Diabetes, 2009; 58:1789-1796.
4. Palosuo. Update on wheat hypersensitivity. Curr Opin Allergy Clin Immunol, 2003; 3:205-209.