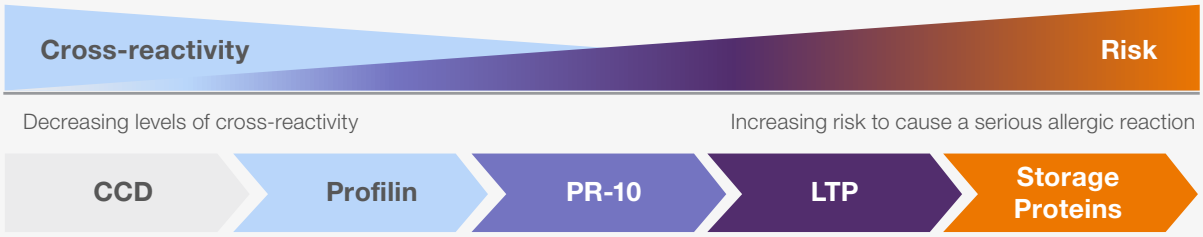
How Well Do You Understand **Your Walnut, Cashew, Brazil Nut, and/or Hazelnut Allergy?**

A positive blood or skin prick test to a tree nut means that a person is sensitized to that tree nut. But sensitization to tree nuts isn't the whole story. To truly understand your allergy, it helps to understand the tree nut component proteins that your body may be reacting to.

*Hazelnut is among **the top 5 causes of serious food allergic reactions**[1]*

What proteins in tree nuts are causing your symptoms?

A certain subset of tree nut proteins "look" so much like proteins found in other foods and pollens that the body mistakes these tree nut proteins for their "look-alike" family members such as cross-reactive carbohydrate determinants (CCD) or Profilin. This is called **cross-reactivity**. If your body is reacting to only these tree nut proteins, you are less likely to be at risk for a severe clinical reaction.[2] Alternatively, if you are reactive to the **LTP** or **storage protein** family component members, you are more at risk for a severe reaction.[2-5]



	PR-10	LTP	Storage Proteins
Hazelnut	Cor a 1	Cor a 8	Cor a 9, 14
Walnut		Jug r 3	Jug r 1
Brazil nut			Ber e 1
Cashew nut			Ana o 3

What does your specific IgE sensitization mean?

Depending on which family of component proteins you're sensitized to, you'll have a better idea of how to manage your tree nut allergy. This handy chart breaks it down for you.[2,6-9]

KEY: + Sensitized - Non-sensitized

CCD, Profilin, PR-10	LTP	Storage Proteins	
+	-	-	**Oral food challenge (OFC) with a specialist may be recommended. High likelihood that patient may pass OFC. If patient passes an OFC:** • Foods prepared with or around the specific tree nut may be consumed. • Patient can consume the specific tree nut as guided by their healthcare provider.
+/-	+	-	• If there is no clinical history of symptoms, please see considerations above. • If there is a clinical history of symptoms, please see considerations below.
+/-	+/-	+	• Choose nut-free zones for patient's safety. • Consider prescribing epinephrine auto-injector. • Family, colleagues, and teachers should be made aware of allergy and have a plan.

As in all diagnostic testing, any diagnosis or treatment plan must be made by the clinician based on test results, individual patient history, the clinician's knowledge of the patient, as well as their clinical judgment.

1. Flinterman AE et al. Hazelnut allergy: from pollen-associated mild allergy to severe anaphylactic reactions. Current Opinion in Allergy and Clinical Immunology 2008, 8:261–265. 2. Roux K et al. Tree nut allergens. *Int Arch Allergy Immunology* 2003; 131: 234–244. 3. Pastorello E et al. Lipid transfer protein and vicilin are important walnut allergens in patients not allergic to pollen. *J Allergy Clin Immunol* 2004; 114(4): 908–14. 4. Egger M et al. The Role of Lipid Transfer Proteins in Allergic Diseases. *Curr Allergy Asthma Rep* 2010; 10:326–335. 5. Robotham J et al. Ana o 3, an important cashew nut (Anacardium occidentale L.) allergen of the 2S albumin family. *J Allergy Clin Immunol.* 2005; 115(6): 1284–90. 6. Davoren M et al. Cashew nut allergy is associated with a high risk of anaphylaxis. *Arch Dis Child* 2005; 90(10): 1084 –5. 7. Clark A et al. Cashew nut causes more severe reactions than peanut: case-matched comparison in 141 children. *Allergy* 2007; 62(8): 913–6. 8. Borja J et al. Anaphylaxis from Brazil nut. *Allergy* 54, 1999 / 1004-1013. 9. Schussler E et al. Allergen component testing in the diagnosis of food allergy. *Curr Allergy Asthma Rep* 2015; 15:55.

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