



Food Cross Reactivity

Proteins in foods: same family and different families

What is cross reactivity?

- Foods from the same botanical or animal family often share similar proteins (epitopes).
- The immune system may recognise them as the same, even if they have never been eaten.
- See below for examples of cross-reactivity; refer to the Providers Handbook for a comprehensive list.

Birch Pollen	Apple, pear, peach, apricot, cherry, plum, carrot, celery, hazelnut, soybean	Classic birch pollen–food syndrome. Reactions often mild, more noticeable with raw foods.
Latex	Banana, avocado, kiwi, chestnut, papaya	Latex–fruit syndrome. Cross-reactivity risk in around 30–50% of latex-allergic patients.
Grass Pollen	Melon, tomato, orange	Often mild OAS (Oral Allergy Syndrome) reactions Melon/tomato are the strongest associations.
Rosaceae fruits	Peach, apricot, cherry, plum, almond	Often cause more severe reactions as proteins are heat-stable.

Why it matters in food sensitivity

- Eating related foods during an elimination diet can delay recovery.
- IgG antibody levels fall after 6–8 weeks of strict avoidance.
- During the challenge phase, similar foods must be tested one at a time, and if symptoms recur, remove both foods from the diet.
- IgE and IgG can be triggered by the same protein.

Beyond food families: Pollen-food cross reactivity

- Some proteins are highly conserved across different plants.
- Birch pollen proteins (Bet v 1, Bet v 2, Bet v 6, LTPs) cross-react with many fruits, vegetables, and nuts.
- People with pollen allergy/sensitivity may also react to unexpected foods (see above).
- Cooking often reduces reactions, but not always (e.g. nuts, celery).

Takeaway: Practical implications for elimination diets

- ✓ Avoid both the test-positive food and its likely cross-reactives.
- ✓ Use dietary history to separate true consumption reactions from pollen cross-reactivity.
- ✓ Reintroduce cautiously, one food at a time, after elimination.
- ✓ Consider that questionable positives on a FIT test may reflect cross-reactivity, not direct exposure.
- ✓ Cross reactivity may extend beyond a single food.

