

Consumer nutrigenetic susceptibility testing

What it can and cannot tell us

Consumer nutrigenetic susceptibility tests examine selected DNA variants linked to diet-related traits or predispositions. They can inform risk interpretation, but they do not diagnose disease or replace clinical assessment. Genetic testing more broadly can have screening, predictive, prognostic or diagnostic uses.

1 What it can show

- Selected variants included in the test.
- Reported associations with nutrients, foods, substances or behaviours.
- Information about predispositions—not certainty about an individual outcome.

Example

A variant near LCT, often in a regulatory region of MCM6, can be associated with lactase persistence or non-persistence and therefore with lactose digestion in adulthood.

2 What it cannot show

- It does not diagnose disease.
- It does not predict with certainty whether disease will develop.
- It does not capture lifestyle, environment or every genetic factor.
- It does not by itself provide treatment advice.

Example

Having a risk-associated variant does not mean that a person will develop the related disease.

3 What depends on context

- Effects can vary with lifestyle, diet, environment, other genes and population.
- The same variant can have different implications in different people.
- A favourable lifestyle can change absolute risk without necessarily removing a genetic association.

Example

A risk-associated variant may contribute only a small part of overall risk. Lifestyle and other factors can substantially affect absolute risk without necessarily removing the genetic association.

4 How to use results responsibly

- Interpret results with a qualified health professional where appropriate.
- Consider lifestyle, medical history and other relevant evidence.
- Focus on practical, evidence-based steps.
- Be cautious of exaggerated or deterministic claims.

Example

A caffeine-sensitivity result may inform choices, but it does not automatically mean avoiding coffee completely.

Key takeaways

- These susceptibility tests report associations or predispositions, not certainty.
- Test value depends on the question, test quality and context.
- Results have limitations and uncertainty.
- Genetic information is most useful alongside relevant clinical and lifestyle information.

Why this matters

- avoid unnecessary anxiety
- recognise strengths and limitations
- make informed, balanced decisions
- use results as one input—not a complete health assessment

Questions to ask

- What does this consumer test analyse?
- What can and cannot be inferred?
- How does the result fit the wider clinical and lifestyle context?
- What practical steps are supported by evidence?
- Is the claim supported by high-quality, independent evidence?

Key message

Interpret a genetic result in context, alongside relevant clinical and lifestyle information.

