Understanding Your Avuncular (Aunt/Uncle) DNA Test Results

A simple guide to the numbers you will see on your report

Prepared for informational purposes only
This guide explains the main numbers and what they typically mean.
It is not a substitute for professional genetic counseling.

1. The Two Key Numbers on Your Report

A. Avuncular Index (or Combined Kinship Index / Aunt-Uncle DNA Index)

This number (also called a likelihood ratio) shows how much more likely it is that the tested aunt/uncle and niece/nephew are biologically related compared to being unrelated.

Typical interpretation:

- **> 1.0** → The DNA evidence **supports** an aunt/uncle−niece/nephew relationship
- **10 or higher** → Strong support for the relationship
- **50+** → Very strong support for the relationship
- **< 0.1** → Strong evidence **against** an aunt/uncle−niece/nephew relationship
- **Around 1** → Inconclusive (data neither strongly supports nor rejects)

The index is usually lower than in direct parent-child or full-sibling tests because aunts/uncles share only about 12.5−25% of DNA with nieces/nephews on average.

B. Probability Percentage

This is the final number most people look at first. It estimates the chance (0−100%) that the tested individuals are aunt/uncle and niece/nephew.

Common ranges and meanings:

- **> 90%** → Strong support for an aunt/uncle−niece/nephew relationship (often considered positive/conclusive)
- **10% − 90%** → Inconclusive − result does not clearly confirm or exclude
- **< 10%** → Strong evidence **not** an aunt/uncle−niece/nephew relationship (often considered negative/conclusive)
- **< 1%** → Extremely strong evidence **not** related

Higher probabilities are more likely when the child's mother is included (to isolate the paternal side) or when both potential aunts/uncles from the same side are tested.

2. Quick Reference Table

Avuncular Index	Approximate Probability	Most Likely Interpretation
Very high (50+)	> 90%	Strong support for aunt/uncle−niece/nephew relationship
High (10 − 50)	80 − 90%	Good support for the relationship
Moderate (1 − 10)	50 − 80%	Supports relationship (but not definitive)
~1	~50%	Completely inconclusive
Very low (< 0.1)	< 10%	Strong evidence against aunt/uncle−niece/nephew relationship

Note: Avuncular tests are indirect and often produce lower indices/probabilities than closer relationships. Testing only one aunt/uncle or not including the mother can result in inconclusive outcomes even when related.

3. Important Things to Know

- These are **statistical probabilities**, not absolute yes/no answers. Rare genetic variations can influence outcomes.
- Including the biological mother of the child usually makes results **much clearer** by removing her DNA contribution and focusing on the relevant side of the family.
- Testing **both potential aunts/uncles** (if available) from the same side of the family significantly improves accuracy and conclusiveness.
- If the result is inconclusive (roughly 10%−90%), the most common next step is additional testing (more genetic markers, include the mother, test additional relatives, or consider sibling or grandparent testing if appropriate).
- Avuncular tests confirm relationships through shared genetic patterns across generations and are less conclusive than direct parent-child tests.
- This test is for personal knowledge only. It is not intended for legal, court, immigration, or child-support purposes unless chain-of-custody procedures were followed.

We hope this guide helps you understand your report more easily.

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