

# How DNA affects your health

## Genetic predispositions and how to take control

### Definitions

**Genetic predispositions** are the potential to have various genetic traits. Examples include how your body responds to caffeine and how efficiently it uses oxygen for energy production.

**Genome** is the sum of your DNA that acts as the instruction manual for how your body functions.

**SNPs** (single nucleotide polymorphisms) are DNA sequences that account for physical variations between people, like hair and eye color, or biological characteristics such as high cholesterol.

### Case study: DNA results in the context of bloodwork

**The combination of DNA and blood biomarkers can provide unique insights into how your genes and lifestyle are affecting your health status.**

For example, if you have a “reduced risk for having lower HDL cholesterol levels,” this indicates that your genes work in favor of having optimal HDL levels. However, this genetic potential can be overridden by lifestyle habits, indicated by low HDL cholesterol levels in your blood test results.

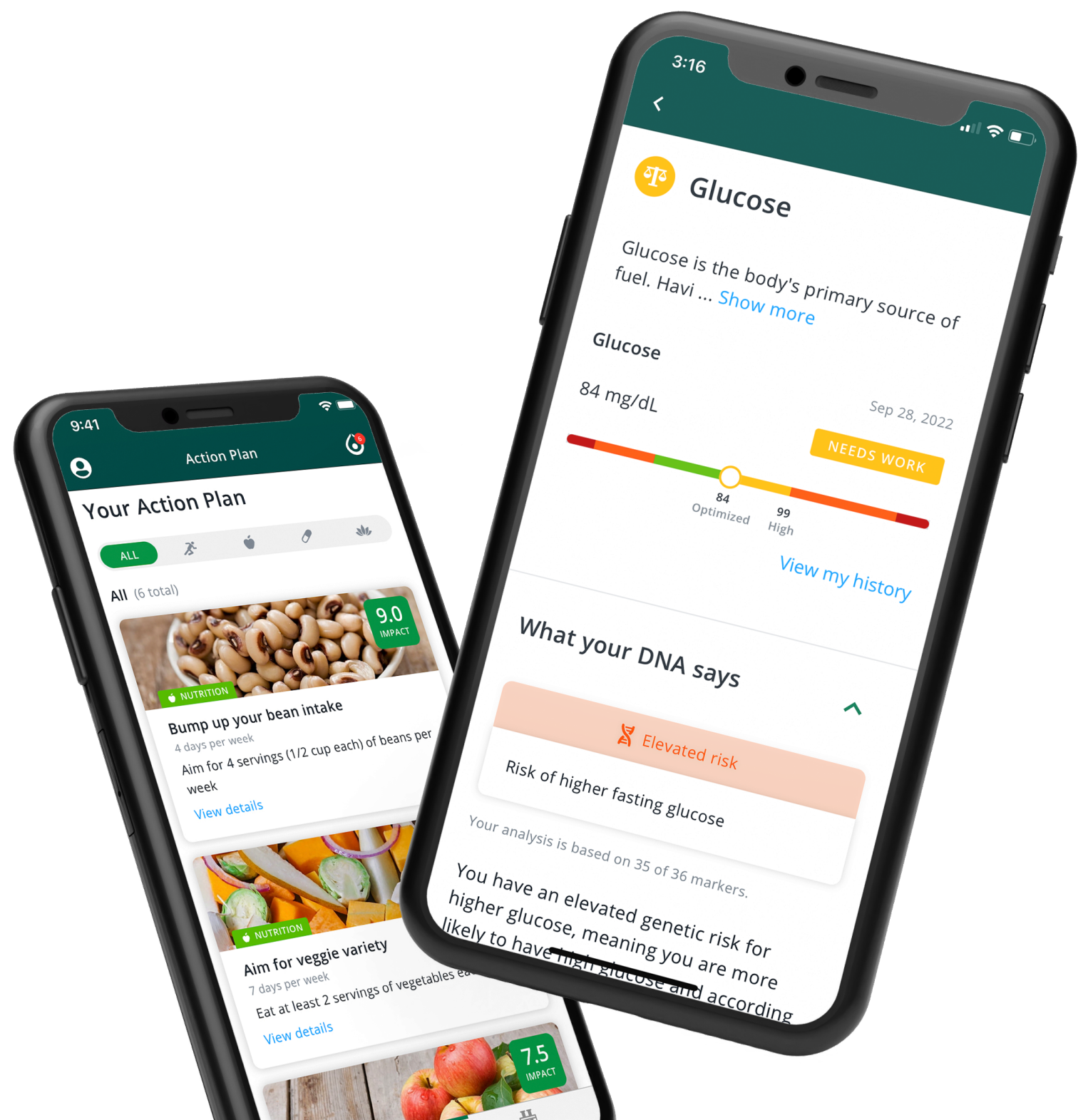
Additionally, your genetics may work against you. Your genes may show that you have an elevated risk for lower vitamin D levels, meaning it may be harder for you to achieve optimal levels of vitamin D. However, if your blood results come back and show your vitamin D in the optimal range, this means that you’ve overcome your genetic potential through your lifestyle choices.

### Course notes

**Roughly 242 billion new cells are produced every day in the body.** Cell division occurs so frequently that variations at specific locations in DNA sequences happen. These SNPs can predict a person’s traits.

**DNA is not your destiny.** While you can’t change your DNA, it isn’t the sole determinant of your health or how long you will live. For example, just because you have a genetic predisposition for high cholesterol, that doesn’t mean your cholesterol is high or that they’ll always be high.

**Genetic traits are like a light switch with a dimmer.** While your DNA manages default settings, your lifestyle factors like diet, exercise, stress management, and sleep can adjust the dimmer—impacting the expression of a trait. The brighter the “light,” the higher the potential that trait has of being expressed.



### Key takeaway

- **InsideTracker provides you with the personalized insights you need to live healthier for longer** by combining genetic data with the objective, real-time feedback that blood analysis offers.