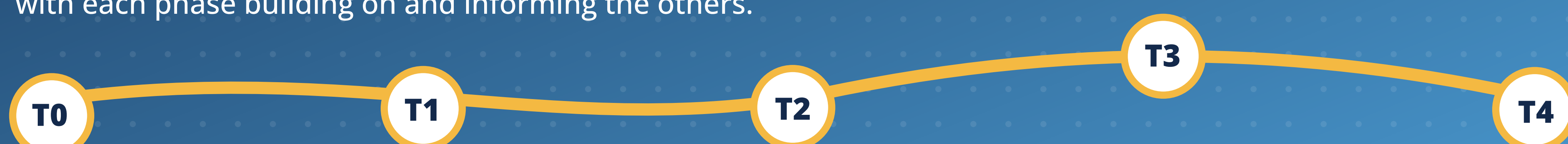




FROM DISCOVERY TO BETTER HEALTH

Research Across the Translational Spectrum

Nutrition research rarely moves in a straight line. Discoveries move among laboratories, human studies, clinical care, and communities, with each phase building on and informing the others.



T0

T0: Basic Research and Discovery

THE QUESTION

What is happening inside the cell?



In this phase researchers:

Study the biology behind nutrition and health, including how nutrients influence genes, cells, organs, metabolism, and disease pathways.

NRI EXAMPLE

Sergey Krupenko, PhD, and Natalia Krupenko, PhD

Their research examines folate metabolism and ALDH1L1, an enzyme that may suppress tumors, to understand how cellular changes affect cancer growth and metabolism.

HOW IT MOVES SCIENCE FORWARD

Identifies mechanisms, vulnerabilities, and possible targets for future prevention or treatment.



T1

T1: Moving Discoveries Into Human Research

THE QUESTION

Can this discovery be studied in people?



In this phase researchers:

Use small, focused human studies to test promising ideas, evaluate methods, and gather preliminary evidence for larger trials.

NRI EXAMPLE

Saroja Voruganti, PhD

A three-week pilot study measured how a daily sugar-sweetened beverage affected liver fat and blood lipids, and whether genetic variants helped explain different responses.

HOW IT MOVES SCIENCE FORWARD

Refines research questions, measurements, biomarkers, and study designs before broader clinical testing.



T2

T2: Testing Effectiveness Through Clinical Research

THE QUESTION

Does the intervention work, and for whom?



In this phase researchers:

Conduct larger clinical studies to determine whether nutrition, behavioral, or technology-based interventions work, when they work, and for whom.

NRI EXAMPLE

Deborah Tate, PhD

The Nudge trial follows 201 young adults in a six-month mobile program using food tracking, activity monitors, smart scales, lessons, and timely personalized messages.

HOW IT MOVES SCIENCE FORWARD

Builds evidence for precision approaches that deliver the right support to the right person at the right time.



T3

T3: Putting Research Into Practice

THE QUESTION

How can evidence work in everyday care?



In this phase researchers:

Study how proven approaches can be delivered in practical, accessible ways that respond to individual patients and everyday health care settings.

NRI EXAMPLE

John Batsis, MD

A 24-week program combined virtual nutrition counseling with group exercise for older adults with obesity, improving weight and aspects of physical function.

HOW IT MOVES SCIENCE FORWARD

Closes the gap between an intervention that works in a study and one that can work in routine care.



T4

T4: Improving Health Across Populations

THE QUESTION

Can it improve health across communities?



In this phase researchers:

Examine whether health approaches are practical, equitable, sustainable, and capable of benefiting diverse communities and populations.

NRI EXAMPLE

Rachel Goode, PhD, MPH, LCSW

Community partnerships explore how culture, trust, food costs, transportation, and food access shape nutrition decisions and intervention design.

HOW IT MOVES SCIENCE FORWARD

Turns evidence into sustainable community health improvements and reveals new questions that restart the cycle.

A CONTINUUM, NOT A FINISH LINE

Every phase contributes to the journey from discovery to better health.