NKI-Rockland Sample

Open House 2026 Recording Link and Summary

How Your Participation Helps Advance Brain Science

Links to recording:

Shorter for ease of use: https://tinyurl.com/NKIRocklandOpenHouse2026

Longer link:

https://us02web.zoom.us/rec/share/KCyf1iMmvIRB1zfBN__UqLvQAqPwagbrU6yUTI-cvHbauuaDjVTHgmZH6q0FrEDY.KMaVMEVsP2iPVPYA?startTime=1769450642000

Passcode: +a?t9zNA

About the Rockland Sample

The NKI-Rockland Sample is a landmark research initiative from the Nathan Kline Institute for Psychiatric Research in Orangeburg, NY. Over 15 years and with more than 1,500 participants, this community-based study has become one of the most influential brain research resources in the world, contributing to over 1,000 published research papers.

The study focuses on understanding how the brain develops, matures, and ages across the entire lifespan, with participants ranging from ages 6 to 90+. All data is shared with the global research community as part of an *open science* commitment, accelerating discoveries in mental health worldwide.

New Insight: The ADAPT Framework

A central innovation of Rockland Sample II was the Mobile Brain and Body Imaging (MoBI) lab, which measures brain activity, physiology, and behavior simultaneously. This approach was inspired by a groundbreaking new framework called **ADAPT** (Autonomic Dynamics And Performance Tuning).

What is the Autonomic Nervous System?

Your autonomic nervous system (ANS) is like your body's autopilot. It controls things you don't consciously think about: your heartbeat, breathing, digestion, and body temperature. Its main job is to balance your body's activity with available energy.

The ANS has two main modes:

- **Sympathetic ("Fight or Flight"):** The active mode that prepares your body to respond to challenges or threats

- **Parasympathetic ("Rest and Digest"):** The calming mode that allows your body to recover and focus

The Brain-Body Connection

The key insight from this research is that your brain also operates in two corresponding modes:

- **Focused Mode:** Brain regions form tight networks for deep concentration and problem-solving. This strengthens useful neural connections.
- **Flexible Mode:** Looser brain networks enable creativity and big-picture thinking. This weakens unhelpful connections.

Your brain naturally oscillates between these states about 6-10 times per minute. This rhythm is essential for healthy brain function. **The ability to smoothly shift between these modes, guided by your autonomic nervous system, is what keeps your brain healthy and adaptable.**

When this shifting becomes less flexible, we see problems in attention, memory, mood, and more.

Why This Matters

This framework provides new insights across multiple areas:

- **Child Development:** Understanding attention differences in children and how the brain is shaped during development
- **Mental Health:** New insights into anxiety, depression, and ADHD, and how developmental challenges might lead to these conditions
- **Healthy Aging:** Early detection of cognitive changes; changes in ANS function may appear before behavioral symptoms
- **Prevention:** Identifying who might benefit from intervention and pointing to new types of treatments

The Good News: You Can Improve Brain Flexibility

Research shows that your autonomic flexibility can be improved through:

1. **Aerobic Exercise:** Current guidelines recommend 150 minutes of moderate or 75 minutes of vigorous aerobic activity per week
2. **Mindfulness Meditation:** Mindfulness-Based Stress Reduction (MBSR) and similar practices have shown benefits for memory and reduced anxiety
3. **Cognitive Challenges:** Variable-priority multitasking training has been shown to improve cognitive function in older adults

Hormonal Aging: Menopause and Andropause

The research team also presented findings on how hormonal changes affect brain and body health:

Menopause

- Occurs roughly between ages 45-55, defined as 12 months without a period
- Symptoms affect about 85% of women and last an average of 7 years
- Common symptoms include hot flashes, night sweats, insomnia, joint pain, brain fog, and mood changes

Andropause

- Testosterone gradually declines in men starting around age 50
- Sleep disturbance is the most commonly reported symptom
- Other symptoms include low libido, fatigue, and mood changes

Key takeaway: Hormone therapy can help relieve symptoms for most people. The benefits often outweigh the risks, but it's important to discuss options with your healthcare provider. Exercise also helps reduce many symptoms of hormonal changes.

Translating Research to Everyday Life

The National Institute on Aging recommends several lifestyle factors that may reduce dementia risk:

- Control high blood pressure
- Sleep well (generally 7-9 hours per night)
- Eat a healthy diet low in animal fats and high in vitamins and fiber
- Stay physically active
- Stay socially connected with family and friends
- Keep your mind engaged
- Limit alcohol use and avoid smoking

The research team acknowledged that long lists of recommendations offered can be daunting and are likely to positively impact different people to different degrees. They discussed the need to further work to help make recommendations tailored and individually meaningful to help people choose what to focus on. Work is underway to better track individual benefits from different lifestyle factors.

Important note: Be skeptical of "brain training" or “brain health” products that make broad claims. The FTC has taken action against companies like Lumosity and Prevagen for making unsupported claims. Look for interventions that compare against control groups. Improvement in memory and thinking abilities happens for most people with practice, so products need to show more than a “practice effect”.

What's Next

The research team has several new projects planned:

- **RS2 Wrap-Up:** Still recruiting participants ages 9-95 through April 2026
- **New Study:** A shorter, streamlined study for adults 40-95, focused on tracking the impact of lifestyle factors across individuals for tailored recommendations (pending NIA funding)
- **Movie to Memory:** Developing a new method to predict memory performance based on brain activity while watching a movie. This might lead to new ways to test for memory changes.

Key Takeaways

1. Your body and brain are deeply connected. The autonomic nervous system orchestrates how your brain thinks, adapts, and stays healthy.

2. Flexibility is the key. The ability to smoothly shift between focused and flexible brain states is central to healthy development, mental health, and aging.

3. This can be measured and improved. Exercise, mindfulness, and cognitive challenges can enhance autonomic flexibility and have been shown to improve memory and other thinking abilities.

Get Involved

The research team welcomes participants and community input:

Phone:	845-835-3008
Email:	rocklandsample@nki.rfmh.org
Website:	rocklandsample.org
About NKI:	nki.rfmh.org

We can't do it without you. Thank you for your support!

Nathan Kline Institute for Psychiatric Research
140 Old Orangeburg Road, Orangeburg, NY 10962