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A Note from Our Principal Investigator

Happy Spring!

We so appreciate when participants tell us about their interests, so I thought I would take this opportunity to provide an update on our latest research related to menopause, which as you can see below is a hot topic (pun intended!) for Viva moms. As many already know, menopause officially begins when a woman has not had a menstrual period for 12 months, which occurs on average at age 51, which is exactly the average age of Project Viva women at the Mid-Life Visit.

We are assessing several characteristics related to menopause in Project Viva:

1. Firstly, we ask you to report whether your periods have stopped and when.
2. Second, we ask about your symptoms using the Menopause Rating Scale (MRS) [questionnaire](#). This survey includes 11 questions about symptoms commonly experienced around the time of menopause.
3. Finally, we have measured a hormone called [AMH](#) in the blood we collected at both the 3-year visit (2002-2006) and the Mid-Life visit (2017-2021). In menstruating women, AMH levels correlate with the number of follicles in the ovary (which is called “ovarian reserve”) and drop to undetectable after menopause.

Here are a few of Viva’s findings related to pregnancy and menopause:

- Although all Viva Moms have had a pregnancy, about one-third have experienced fertility issues at some point in their lives. We have [found](#) that Project Viva participants with prior infertility were more likely to report symptoms on the MRS, especially mood and sleep problems.
- Similarly, other stressors, such as financial instability or early life history of physical or sexual abuse (which we assessed in your Viva pregnancy) were [associated](#) with worse menopausal symptoms.
- We have also [found](#) that, compared with women with normal menstrual cycle length, those with short menstrual cycles during their reproductive years had a more menopausal symptoms at midlife and reached menopause earlier. Those with lower AMH in their mid/late 30s had younger age at menopause, in addition to higher body [fat](#), and lower bone density, around the time of menopause.

This kind of research, showing how experiences across the reproductive years predict health around the time of menopause, is only possible with a long-term study such as Project Viva. It reminds us how grateful we are to all of you for your continued participation. You are ahead of the curve in highlighting the importance of this topic. Nationally, the White House issued an [Executive Order](#) in March prioritizing research on women’s health and especially midlife health, including a pledge of \$200 million for more research.

Thanks so much for sharing your interests. Keep them coming, and please contact our study team if you have any follow-up questions about these study results!

Emily Oken, MD, MPH
Principal Investigator of Project Viva



Moms: Menopause, Sleep, and Heart Health

Many of you have shared that you are interested in contributing to research on menopause and women’s cardiovascular health, so this year’s survey for moms focuses on these understudied topics.

Young Adults: All About Mental Health

Based on your feedback, this year’s survey focuses on the experiences, feelings, and behaviors that may influence, and/or be influenced by mental health. This survey also only takes about 10 minutes to complete!



Over **600** of you have completed the survey so far.

Thank you so much!

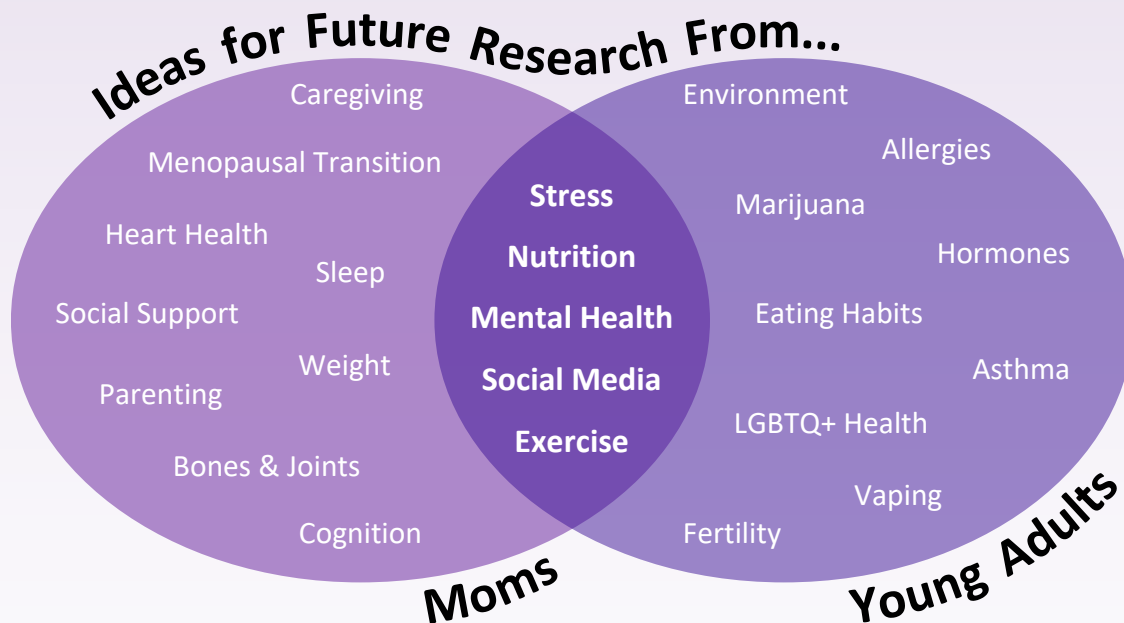
If you have not already, take our shortest Annual Survey yet to earn a **\$10 Amazon** gift card.

Need your survey link?

Email us at
project_viva@
hphci.harvard.edu

What Do You Think Project Viva Should Study?

The Venn diagram below shows some of the suggestions we have received so far in comments on this year’s survey. We love getting feedback from you and look forward to integrating more of your recommendations into our upcoming surveys and visits!



There is still time to participate in the Women's Health Visit 1 before it ends on May 31st! If you have not already, sign up for a visit at our office in Boston, at your home, or via video call.



- In-office visit: https://calendly.com/p_viva/whiov
- Home visit: [Contact us to schedule](#)
- Remote (video call) visit: <https://calendly.com/projectviva/remote>

In addition to earning the visit incentives (up to \$125), by completing a visit you will be entered into a raffle for a chance to win:

- One of ten **\$100** Amazon e-gift cards
- One of four **\$250** Amazon e-gift cards



No time for a visit? Just complete the WHV1 Questionnaire! [Email us for the link.](#)

Thank you so much to everyone who has participated so far! Your efforts help keep this study going, and we cannot wait to work with you again soon.

Additional Research Opportunity for Viva Moms

Interested in contributing to further research on menopause and sleep?

The Women's Hormones and Aging Research Program (WHARP) is now recruiting women aged 45-65!

HOW DOES THE BRAIN AFFECT HOT FLASHES?

By examining the connections between the brain, sleep, and menopause, this study aims to explain why some women get hot flashes.



PARTICIPATION INCLUDES:

- 2 in-person visits
- 2 remote visits
- At-home surveys
- Sleep/hot flash monitoring
- **Compensation up to \$1,100**

INTERESTED IN PARTICIPATING?

Take this brief survey to see if you are eligible: redcap.link/rosa1pv



Brigham and Women's Hospital
Founding Member, Mass General Brigham

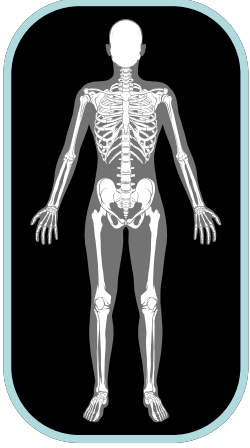


ROSA
CENTER

This study is separate from Project Viva, so participating (or not) in WHARP will not impact your participation in Project Viva.

We are also still scheduling visits for the Young Adult Visit 1!

Complete a visit at our Boston office, at your home, or just fill out three online surveys on your own time, without a scheduled visit.



Measure your muscle mass with the new DXA machine!

If you come to our Boston office, you can get a scan on our brand-new Dual Energy X-Ray Absorptiometry (DXA) machine! This scan will show you your skeleton and provide information about your muscle mass and body composition.

If you have already completed a visit in the last year and would like to do the DXA scan, [email us!](#)

SIGN UP:

- In-office visit: https://calendly.com/project_viva/in-office
- Home visit: [Contact us to schedule](#)
- Remote visit (online surveys): [Contact us for your survey links](#)

From A to Z, Explore The Viva Glossary

We recently created [a Viva glossary on our website](#), which defines many of the terms and concepts we commonly use in Project Viva.

Within the glossary, you will find:



- Science terms
- Visit-related language
- Research and publication terms
- Staff roles

This is a living webpage document intended to grow and change. We hope you find it helpful, and if you have further suggestions or additions, please let us know!

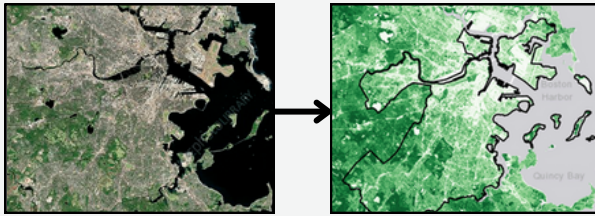
FEATURED FINDING

Sleep & Greenspace: Comparing Two Methods in Project Viva

In [this study](#), researchers examined how different types of greenspaces impacted sleep among Project Viva teens. They measured greenness surrounding participants' residential addresses and compared it to their Actigraph sleep watch data from the Early Teen Visit. **To calculate greenness, researchers used two methods:**

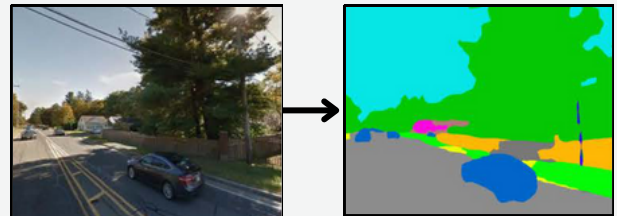
Normalized Difference Vegetation Index (NDVI)

Calculated greenness score from satellite images



Street View Imagery (SVI)

Calculated total greenness and greenspace components from Google Street View images (% grass and % trees)



Key Takeaways:

Both methods (satellite and street view images) showed positive correlations between greenness and sleep.

- Living in a greener area was associated with getting longer and more efficient sleep before accounting for demographic factors.
- Analyzing street view images to measure different types of greenness is a new method that shows tremendous potential for clarifying the complicated relationships between nature and health — *evaluating the impact on sleep is just the beginning!*

Trees had the largest positive relationship with sleep, especially for Black participants.

- Trees absorb sleep-disrupting exposures like noise, heat, and air pollution better than grass, which could help explain why trees had the strongest connection with sleep quality.
- Given the importance of the neighborhood environment for sleep, investing in green spaces and planting more trees could help address health disparities by improving sleep.

To read more Viva findings, visit [our website](#).

Thank you for reading!

