

Spotlight on: Keeping the aging brain young with Dr. Marc Milstein

Frequently Asked Questions

Spotlight On is UBS's exclusive "beyond investing" series of virtual conversations with experts from a variety of disciplines who share their science-backed, real-life strategies for happy and healthy living. This year, one of our most popular Spotlight On conversations is with go-to brain health expert Dr. Marc Milstein. His approach to keeping the aging brain young is about much more than just crossword puzzles and sudoku. In fact, says Milstein, there are many actionable, steps you can take *now* to boost brain health and reduce dementia risk.

Please note there are references to the "Keeping the aging brain young" event presentation. Please ask your advisor for a copy (or insert link).
Here are the frequently asked questions:



1. What constitutes a good night's sleep?

On average, the number of recommended hours of sleep for adults is between seven and nine hours. There is a small percentage of individuals who can thrive on less than seven hours of sleep. We can understandably become hyperaware of the number of hours of sleep required, but an easy way to determine if one is getting enough for a good night's sleep is to take an honest assessment of how one feels upon waking up and throughout the day. It is normal to feel the need for a short nap mid-day. But if one feels tired and unable to focus throughout the day, optimizing sleep is a critical step in regaining mental and physical performance.

2. What are the effects of coffee on brain health?

There have been some conflicting studies about coffee and brain health, but here are some key takeaways:

- Moderate coffee intake might benefit brain health due to its antioxidant properties.
- Anything past six cups of coffee a day is considered the upper limit of safe consumption and can raise the risk of specific diseases that negatively impact heart and brain health.
- There is evidence that if coffee is roasted and minimally processed, it may have protective effects on brain health.

Until we learn more, if you are a coffee lover, there is some evidence that the morning cup of coffee you are enjoying might protect your brain.

3. What are the most important benefits of meditation for brain health?

Meditation provides many benefits, but when it comes to keeping your brain young, three of the most important benefits are:

- 1) Even a couple of minutes of meditation a day can lower stress hormones such as cortisol.
- 2) Meditation can improve focus by strengthening key parts of the brain, such as the prefrontal cortex.
- 3) Meditation can help relieve anxiety and can be helpful in pain management. Both unmanaged anxiety and pain are damaging to the brain and two of the biggest disruptors of sleep. Thus, meditation is also an effective tool for optimizing sleep.

4. Is it common to have shorter lengths of sleep when you are over the age of 75?

It can be harder to fall asleep and stay asleep as individuals get older. Over the age of 75, the recommended number of hours of sleep is between seven and nine hours. Although it can be harder to sleep as we get older, it is vital to prioritize sleep at any age and use lifestyle methods to optimize.

5. Can using a CPAP machine reverse damage to the brain caused by sleep apnea?

Recent brain scan studies have shown that 12 months of treatment with a CPAP lead to an almost complete reversal of inflammatory damage in white matter in the brain. CPAP treatment also improved cognitive tests, mood, alertness, and quality of life. It is important to note that the number of years of untreated sleep apnea may impact the reduction in damage seen in CPAP studies. Overall, this highlights the importance of treating sleep apnea and how powerful this type of treatment can be.

6. As inflammation is associated with increased dementia risk, what vitamins can help reduce inflammation?

Deficiencies in essential nutrients can play a role in inflammation. It is vital to have a blood test to determine which nutrients are deficient. It is recommended to first address these deficiencies with diet. If diet changes do not work, vitamin supplements can be used, but it is important not to overdose on vitamins and continue monitoring vitamin levels at your annual physical examination.

There is emerging evidence that curcumin/turmeric may have anti-inflammatory properties. This supplement needs to be discussed with a personal physician before taking it. Curcumin/turmeric can interfere with other medications and have side effects. Furthermore, the correct curcumin/turmeric supplement and dosing are critical for the specific type of inflammation. On its own, curcumin/turmeric is not easily absorbed by the body, so working with your physician is recommended to determine the appropriate amount for your specific needs.

7. Is arthritis a form of inflammation to be concerned about?

There are different types of arthritis, but if the inflammation from the arthritis is systemic, meaning it is spreading from the joints to the brain, there is a concern. One way to determine if inflammation from arthritis is systemic is the CRP (C-reactive protein) blood test, which your doctor can administer.

One type of arthritis is rheumatoid arthritis (RA). A recent study found that the inflammation from RA can reduce blood flow to vital organs, which increases the risk of developing dementia. The study also revealed that some medications used by rheumatoid arthritis patients could increase the risk of developing dementia. However, biological therapies used to treat RA, such as tumor necrosis factor (TNF) inhibitors, can lower the risk of dementia.

The take-home message is that if any arthritis is causing systemic inflammation, one would want to treat it effectively and leverage the other factors that we know can help to reduce inflammation and protect the brain. These factors include sleep, diet, exercise, and stress management.

8. Are there benefits to waking up to music?

There is something to be said for waking up pleasantly. This can be individualized, but a study found that waking up to melodic music helped improve focus that day and lowered the time it took to feel awake and ready for the day, a term called sleep inertia. The take-home message is to try waking up in a manner that starts the day off in a soothing and uplifting way versus shocking the system with a blaring alarm.

9. Are there light and sound therapies to reduce plaque in the brain?

A fascinating study found that specific light and sound therapy could reduce brain plaques in mice. Researchers discovered that light flickering at 40 Hz mobilized microglia in mice afflicted with Alzheimer's to clean up the brain trash. These are like the bottom feeder immune cells we discussed in the presentation that gobble up plaques and waste. A study is being done at Emory University to test this light and sound therapy on humans. If this type of treatment were helpful in humans, that would be incredible and a game changer. However, the scientists involved in this study warn against anyone trying to treat any brain dysfunction with bright flashing lights until more is known, as this could cause more harm than good. In the meantime, this is one of several hopeful studies to keep our eyes on.

10. Do prescription sleep aids or over-the-counter options help or harm brain health?

With virtually all medications, be they pharmaceutical or over-the-counter items, each comes with its own set of benefits and downsides. As many medications will have an impact on your brain, it's essential to discuss your specific needs with your doctor, who will not only have insight into your personal medical condition but will also be able to help you avoid troublesome combinations or interactions. Also, if you feel you may be having memory issues, be sure to ask your doctor about any of the medications you're taking, which may be a contributing factor worth investigation.

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