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Role of Sleep Coaching, Sleep Reset in the Care of Sleep Problems

Oct 6, 2023 By Marco Meglio



Michael Grandner, PhD, associate professor of psychiatry at the University of Arizona College of Medicine, discussed Sleep Reset, an app-based, personalized sleep program that uses sleep coaches to help guide patients in the care of their sleep disorders.

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Michael Grandner, PhD

In the case of sleep health, clinical interventions at the higher end of the spectrum such as cognitive behavioral therapy for insomnia and positive airway pressure therapy for sleep-disordered breathing are well-established. In recent years, sleep coaching programs have emerged as a potential alternate. Sleep coaching differs from therapy, in that the goal of coaching is not to diagnose or manage clinical conditions, but rather provide education, support, and motivation to engage in helpful behaviors and perspectives.

Earlier this year, a group of investigators published findings from a 12-week study assessing the impacts of Sleep Reset, a personalized sleep coaching program, on patients with sleep difficulties. The study consisted of 564 adults who underwent a screening process, onboarding process, and intervention period that included tracking and assessment, education about healthy sleep and circadian habits, and interactive coaching with a live coach. In the trial, participants were able to text their sleep coach directly through the app as needed to ask questions.

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At the conclusion of the 12-week program, treatment with Sleep Reset resulted in mean sleep latency reduced by 11 minutes, wake after sleep onset reduced by 28 minutes, mean sleep efficiency increased by 6.6%, and mean total sleep time increased by about 44 minutes (all P <.00001). To learn more about the findings, including the impacts of Sleep Reset and sleep coaching in general, *NeurologyLive*® sat down with Michael Grandner, PhD, lead investigator of the study and associate professor of psychiatry at the University of Arizona College of Medicine.

Grandner provided perspective on the value of sleep coaching and how it can help patients who experience sleep issues but may not have a fully diagnosed sleep disorder. Additionally, he spoke about the study and some of the major clinical takeaways. Furthermore, he spoke on whether the general public is aware of the benefits of sleep coaching, the complications with integrating it into the field, and the future plans of Sleep Reset.

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NeurologyLive[®]: From the coach's perspective, what should they be valuing when helping these patients? Talk a little bit about the approach from the coach's perspective and some of the things that they go through.

Michael Grandner, PhD: Coaching walks an interesting line where it's not quite therapy, but it's not just advice either. Advice is anything you can Google, and you probably already know enough of it. It's about how you apply that information. So the coaches receive training to figure out how to apply that information to specific situations. They consider what's supported by the science, what isn't, when to apply certain strategies, and how to help people stay on track with their plans and programs. What the coaches do is help individuals stay on track, align their expectations and experiences with available information, and keep an eye out to determine if someone needs a higher level of care and a referral to a clinical professional.

What were the greatest take-home points from your study?

Tway this study came about was by reviewing the first round of participants who had completed the program. We looked at the pre-post data to compare participants' sleep patterns when they entered the program to when they completed it. The data were surprisingly positive. I remember thinking that there's not much published data on such programs, and we needed to show that it can genuinely help people. So we developed a conference abstract to present the data at a sleep conference. During this process, the number of participants grew, so we reran the analysis with over 500 people who had completed the program. This study lacked a control group, unlike typical clinical trials. Nonetheless, on average, we found significant improvements. The time it took to fall asleep decreased significantly, wake time during the night decreased, sleep efficiency improved, sleep satisfaction increased, and participants slept longer. These effects were particularly encouraging, even compared to studies with sleeping pills, albeit without a control group. The next step should be a randomized controlled trial with a placebo control. This study provides proof of concept that sleep coaching can be effective.

Does the field not fully recognize the benefits of sleep coaching? Will it take time for people to understand its place in the field?

Yes, I think the issue is that sleep coaching has the potential to fit within a stepped care system. This means providing the highest level of care to those with the greatest need and lighter support to those who don't require intensive intervention. Currently, we lack data-supported strategies for individuals with sleep complaints who may not meet criteria for a sleep disorder or those with a sleep disorder like sleep apnea but still experience sleep-related issues. Sleep coaching could fill this gap in the future. The problem now is that sleep coaching lacks a solid definition, and many self-proclaimed sleep coaches lack proper training. Some even offer therapy outside their scope of practice, which is unethical. Certification programs for sleep coaching exist, but most are not recognized by legitimate sleep organizations, except for the CCSH (Certification in Clinical Sleep Health) from the BRPT (Board of Registered Polysomnographic Technologists). Hopefully, this will change soon, and accredited programs will help

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Additionally, for people who might need therapy but face barriers to access, such as long waitlists, sleep coaching can offer some support. For example, if a sleep apnea patient has to wait months for a sleep study and CPAP treatment, sleep coaches can provide advice on managing their condition in the interim, like positional adjustments and reducing alcohol intake. In places where proper insomnia therapy is scarce or delayed, sleep coaching could be an essential bridge. I believe that sleep coaching will become an integral part of the sleep care ecosyst. However, we haven't yet defined its precise place or established the right standards. Companies like Sleep Reset are leading the way by developing scientifically sound programs and involving the clinical and scientific communities. They're committed to ensuring that what they offer is correct, not just easy.

What are some of the future plans for Sleep Reset?

I don't work for the company. They ask me questions, and I advise them. My advice to them is to consistently maintain the highest standards, even when tempted to take shortcuts. Companies that prioritize substance over quick

gains tend to have better longevity. It's crucial not to be afraid of making mistakes at times, especially when leading on a controversial issue like sleep coaching. The controversy arises from the fine line it walks, treating patients clinically requires licensure, adherence to defined scopes of practice, and legal liability in case of mistakes. On the other hand, coaching, being less clinical, operates with fewer rules. This creates a lot of debate. However, I believe these are issues that can be resolved. Ultimately, the most important aspect is the well-being of the patients and the community. People struggling with sleep issues, especially those that don't necessarily fall under sleep disorders, need options. Often, they turn to either unreliable information or clinical solutions that may not be suited for minor problems and may even cause harm. That's why the future for Sleep Reset and other sleep coaching programs is to simultaneously establish and maintain high standards, accountability, and trust within the community. Additionally, refining methods and targeting approaches appropriately to optimize help for the right individuals will be crucial. This may require innovation, iteration, and creative thinking on how to make these services accessible to those who need them.

Transcript edited for clarity by artificial intelligence.

Vitamin D Deficiency Observed in Neuromyelitis Optica Spectrum Disorder

Jan 11, 2024 By Isabella Ciccone, MPH



A recent analysis revealed patients with neuromyelitis optica spectrum disorder exhibited significantly lower vitamin D levels, suggesting a potential association with impaired immune tolerance in the disorder.

Newly published in the *Journal of Clinical Neuroscience*, a meta-analysis demonstrated that patients with neuromyelitis optica spectrum disorder (NMOSD) had significantly lower serum 25(OH)D levels compared with the healthy controls. These findings suggest that impaired immune tolerance because of vitamin D deficiency is involved in the pathogenesis of NMOSD and thus, routine vitamin D supplementation may be advantageous for

patients.1

Among 6 studies with 794 participants (NMOSD group, n = 347; healthy control group, n = 447), the NMOSD group showed significantly lower serum 25(OH)D levels (mean difference [MD], -7.83; 95 % CI, -10.99 to -4.68). At different stages of NMOSD, the levels of 25(OH)D during both the acute phase (MD, -8.86; 95 % CI, -13.05 to -4.67) and the remission phase (MD, -7.45; 95 % CI, -12.91 to -1.99) were significantly reduced compared with the healthy control group.

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"In the studies included, it was observed there were more studies focusing on the acute phase and fewer studies on the remission phase. This could be attributed to 2 main reasons, differences in study design and challenges in clinical practice. Researchers may have different focuses when designing their studies, with some primarily interested in the 25(OH)D levels during the acute phase of the disease while overlooking the remission phase," senior author Junjie Yin, MD, professor of neurology, Hunan University of Medicine General Hospital, in China, and colleagues wrote.¹ "Data collection during the acute phase is relatively easier as patients actively seek medical attention. However, during the remission phase, patients are often outside the hospital, and the ability to collect relevant data in the specified timeframe is closely related to patient cooperation. This significantly increases the difficulty and time constraints of data collection."

Top Clinical Takeaways

- The meta-analysis underscores the potential benefits of routine vitamin D supplementation for patients with neuromyelitis optica spectrum disorder.
- Difficulties in collecting data during the remission phase highlight the need for innovative approaches and increased patient cooperation in research on NMOSD.
- The study prompts future investigations focusing on early blood sample collection, expanding research beyond Asian regions, and exploring the relationship between 25(OH)D and patients with AQP-4-IgG seronegative NMOSD.

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Investigators searched English and Chinese databases including PubMed, Embase, Cochrane Library, Web of Science, CBM, CNKI, WanFang Med, and VIP for observational studies published up to August 24, 2023, related to serum 25(OH)D levels in NMOSD. Studies with healthy controls and compared serum 25(OH)D levels between patients with NMOSD and controls were included in the analysis. The researchers computed the MD and 95% CI for continuous variables to assess serum 25(OH)D levels and combined odds ratios (ORs) and 95% CIs for dichotomized 25(OH)D data.

The analysis also showed that the risk of 25(OH)D deficiency was 23.36 times higher in the NMOSD group (95 % CI, 0.85-640.76; P = .06 > .05), with a 94% occurrence rate, compared with the healthy controls. Overall, the authors noted that there was no significant difference in the risk of having sufficient 25(OH)D between both of the groups (P = .12 > .05).

All told, the findings did not demonstrate a causal relationship but rather revealed a reduction in 25(OH)D levels in the NMOSD population. The authors suggest that having minimal sunlight exposure because of severe physical disability might cause patients to stay indoors for extended periods, which then results in decreased synthesis of 25(OH)D.² The study was also limited by the lack of findings on the long-term effect of therapies such as glucocorticoids or immunosuppressants on serum 25(OH)D in patients with NMOSD. Also, there were few relevant data for regions other than the Asian

region, which may lead to varying levels of 25(OH)D.3,4 The authors also that the study did not provide data for grouping based on aquaporin 4reacting autoantibody (AQP-4-IgG) status since risk factors between AQP-4-IgG seronegative and seropositive patients may be different.5

"Future research could consider the following points in relation to 25(OH)D and NMOSD. First, distinguishing whether 25(OH)D deficiency is a risk factor for the disease or a concomitant outcome may be possible by collecting blood samples early in the development of NMOSD before it significantly affects the patient's daily life. This approach would also help to rule out any potential drug interference with 25(OH)D levels," Yin et al noted.¹ "Second, it is worth noting that the number of studies exploring the relationship between 25(OH)D and NMOSD is relatively limited. Therefore, it is expected that further studies will be conducted in the future, with a specific focus on nonAsian regions, to refine these findings. Third, it is hoped that more studies on the relationship between 25(OH)D and AQP-4-IgG seronegative NMOSD will be included in future research."

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