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LETTER TO THE EDITOR

Exercise, nutrition, sleep, and waking rest?

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In 2009, the National Sleep Foundation made the case for sleep as the third piece of the puzzle for sustaining mental and physical health and well-being, along with exercise and nutrition [1]. This message has been picked up and carried throughout the media, school curriculums, and sleep campaigns so that now most people consider all three as key factors affecting health and well-being.

We would like to make the case that along with exercise, nutrition, and sleep there is a fourth puzzle piece—waking rest—that is specifically focused on mental health and sleep.

In our fast-paced society, there is always something keeping us perpetually in "go" mode. This constant state of activity may be playing a major role in the mental health and sleep problems within our country, with leading indicators of depression and suicide increasing in adults and youth in the United States [2, 3]. In addition, one in three US adults and two in three US youth report less than the recommended amount of sleep per night, with 30% of the general population reporting poor sleep and insomnia [4, 5]. Sleep restrictions and disorders are likely confounding the mental health problems in our country due to the link between poor sleep, psychiatric disorders, and suicidality [6]. Is it possible some of our mental health and sleep problems come from a lack of making space during our days for waking rest?

Waking rest is a period of quiet, reflective thought that allows the brain time to consider and process whatever arises spontaneously. Waking rest can last from 5 to 20 minutes once or multiple times per day, and should take place in an area where the participant feels safe, comfortable, and can remain uninterrupted by outside influences. It is void of effortful, focused thought and distracting stimuli such as watching television and

engaging in social media. This period may include memory consolidation, reflecting on past experiences, thoughts about the future, and any other pressing thoughts a person keeps. Waking rest is initiated by a person relaxing and letting thoughts come up as they arise, not forcing any idea or direction. The person should either be inactive or be doing a low-energy or repetitive activity that does not require focused thought to perform (e.g. yard work, folding laundry, or walking the dog). Through the implementation of waking rest, we may be able to ameliorate some of our nation's mental health and sleep problems, with amplified beneficial effects due to the links between the two problems.

Although studies on waking rest are limited, they have shed light on the cognitive benefits that can occur by allowing the brain time to consolidate and process information it is receiving [7]. Additional human studies have shown that the same neurophysiological rhythms found in sleep are present during wakeful rest [8]. These cognitive benefits are likely to have downstream beneficial effects on mental health and well-being as well, with mindfulness-based studies demonstrating positive mental health and well-being outcomes [9].

The sleep science community tells people if they cannot sleep, they should get up and do a relaxing activity or write their thoughts down to get them out of their heads [10] but what if people simply need time to think—to consolidate thoughts, feelings, and actions in a passive, non-judgmental way? We recommend that if an individual cannot sleep that they engage in waking rest. This period of waking rest can be incorporated into one's life not only during periods of insomnia but also during the day to facilitate mental rejuvenation. Creating time for waking rest may be especially important for our feelings and

emotional control, and may help remedy various mental health and sleep problems.

It is not a surprise that mindfulness and meditation are getting more attention due to societal factors such as stress and unhappiness. Some meditative practices allow thoughts to occur with non-judgment, and we are making a case for something similar, but we use the specific language and definition of waking rest in order to operationalize the concept for the general population.

To measure waking rest, a study could be conducted using a within-subjects design to assess its efficacy in improving overall sleep and well-being. Total sleep time per 24 hours could be measured with actigraphy and verified by self-report. Wellbeing could be measured with the PERMA Profiler (Positive emotion, engagement, relationships, meaning, accomplishment). There would be three study groups: one experimental group instructed to engage in waking rest, one negative control group instructed to engage in cognitive tasks, and one positive control group participating in guided physical activity. The goal would be to determine if there are any changes in sleep duration and well-being between the three groups. A follow-up study could assess waking rest's utility in consolidating memories with a protocol involving the *n*-back and Wisconsin card sorting tasks. An intervention study could be designed to purposefully elevate stress in the individual, or look at a population that tends to have elevated stress like individuals with post-traumatic stress disorder (PTSD), and see if waking rest restores baseline stress levels or decreases stress levels, respectively, compared to other activities or a lack of an intervention using objective measures of stress and self-report.

We are writing this letter as a call to action to research waking rest. If it proves to be significantly beneficial for increasing mental health and sleep, we need to make waking rest culturally acceptable to increase health and well-being for our generation and those to come.

Conflict of interest statement. None declared.

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