

Might lefties and righties benefit differently from a power nap?

October 17, 2012 in [Neuroscience](#)

People who like to nap say it helps them focus their minds post a little shut eye. Now, a study from Georgetown University Medical Center may have found evidence to support that notion.

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The research, presented at Neuroscience 2012, the annual meeting of the Society for Neuroscience, found that when participants in a study rested, the [right hemisphere](#) of their brains talked more to itself and to the left hemisphere than the left hemisphere communicated within itself and to the right hemisphere – no matter which of the participants' hands was dominant. (Neuroscientists say right-handed people use their left hemisphere to a greater degree, and vice versa.)

Results of this study, the first known to look at activity in the two different hemispheres during rest, suggests that the right hemisphere "is doing important things in the resting state that we don't yet understand," says Andrei Medvedev, Ph.D., an assistant professor in the Center for Functional and [Molecular Imaging](#) at Georgetown. The activities being processed by the right hemisphere, which is known to be involved in [creative tasks](#), could be daydreaming or processing and storing previously acquired information. "The brain could be doing some helpful housecleaning, classifying data, consolidating memories," Medvedev says. "That could explain the power of napping. But we just don't know yet the relative roles of both hemispheres in those processes and whether the power nap might benefit righties more than lefties."

To find out what happens in the resting state, the research team connected 15 study participants to near-infrared spectroscopy (NIRS) equipment. This technology, which is low cost and portable, uses light to measure changes in oxygenated [hemoglobin](#) inside the body.

The [study participants](#) wore a cap adorned with optical fibers that delivers [infrared light](#) to the outermost layers of the brain and then measures the light that bounces back. In this way, the device can "see" which [parts of the brain](#) are most active and communicating at a higher level based on increased use of oxygen in the blood and heightened synchronicity of their activities.

"The device can help delineate global networks inside the brain—how the components all work together," Medvedev says. "The better integrated they are, the better cognitive tasks are performed."

To their surprise, the researchers found that left and right hemispheres behaved differently during the resting state. "That was true no matter which hand a participant used. The right hemisphere was more integrated in right-handed participants, and even stronger in the left-handed," he says.

Medvedev is exploring the findings for an explanation. And he suggests that brain scientists should start focusing more of their attention on the right hemisphere. "Most brain theories emphasize the dominance of the left hemisphere especially in right handed individuals, and that describes the population of participants in these studies," Medvedev says. "Our study suggests that looking at only the [left hemisphere](#) prevents us from a truer understanding of brain function." The research was funded by the National Institutes of Health (grants # RR025786, GM103526 and EB006589). Medvedev and his co-authors report having no personal financial interests related to this study.

More information: This research will be presented on poster BBB36 in Hall F-J on Wed., Oct 17, from 1:00 to 2:00 pm CT.

Provided by [Georgetown University Medical Center](#)




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My own pet theory is that the key benefit of lateralisation is in delineating and apportioning spatiotemporal components of information to opposite nuclei - simply put, parallel processing of spatial and temporal aspects of a given information stream.

The difference between whether a given component is processed as spatial or temporal information boils down to the relative sizes of the temporal integration windows - the 'sampling bandwidths' - of the resolving nuclei. This differentiation is, i believe, also a key function of the thalamus and its cortical connections.

Thus if one hemisphere appears busier with a task than the other, it's likely because the complementary processes on the opposite side are occurring at vastly different frequencies / wavelengths, and so simply being missed by the form of data acquisition being applied.

From an informational perspective, bilateral symmetry is, it seems, only skin deep...

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When i power nap from 10 to 40 mins i always wake up feeling groggy and with an upset stomach. So i just go without a power nap. Its no fun cos power naps are comfy :(

I also feel more tired - maybe I'm waking up mid way through a sleep cycle but i dunno how long i should nap for =/

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