BRAIN MATTERS

Why birds and their songs are good for our mental health

Birds are a way to connect with nature, which is associated with better body and brain health, research shows

By Richard Sima

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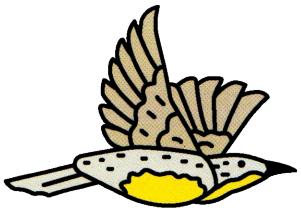
Listen to the birdsongs

Research has consistently shown that more contact and interaction with nature are associated with better body and brain health.

Birds appear to be a specific source of these healing benefits. They are almost everywhere and provide a way to connect us to nature. And even if they are hidden in trees or in the underbrush, we can still revel in their songs.

“The special thing about birdsongs is that even if people live in very urban environments and do not have a lot of contact with nature, they link the songs of birds to vital and intact natural environments,” said Emil Stobbe, an environmental neuroscience graduate student at the Max Planck Institute for Human Development and author of one of the studies.

Recent research also suggests that listening to recordings of their songs, even through headphones, can alleviate negative emotions.



Meadowlark

Being around birds is associated with better mental health

Everyday encounters with the bird kind are associated with better mental health.

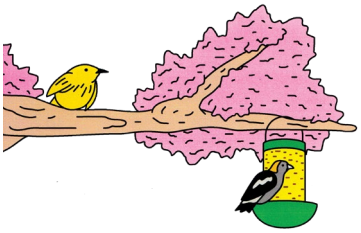
In one study, researchers asked about 1,300 participants to collect information about their environment and well-being three times a day using a smartphone app called Urban Mind.

The participants were not explicitly told that the researchers were looking at birds — the app was also collecting data about other vitals such as sleep quality, subjective assessment of air quality, and location details. But the 26,856 assessments offered a rich data set of what is associated with mental well-being in real time in the real world.

By analyzing the data, the researchers found a significant positive association between seeing or hearing birds and improved mental well-being, even when accounting for other possible explanations such as education, occupation, or the presence of greenery and water, which have themselves been associated with positive mental health.

The benefits persisted well beyond the bird encounter. If a participant reported seeing or hearing birds at one point, their mental well-being was higher, on average, hours later even if they did not encounter birds at the next check-in.

Warbler



Bobolink

Ryan Hammoud, a PhD candidate at the Institute of Psychiatry, Psychology & Neuroscience at King's College London and an author of the study, called it a "time-lasting link."

Intriguingly, the birds benefit both healthy participants and those who have been diagnosed with depression, which is one of the most common mental illnesses worldwide and does not always respond to conventional pharmaceutical treatments.

This has an interesting implication for trying to protect and preserve environments to sustain bird life, Hammoud said, "because people with depression do show positive effects toward birdsong and birdlife in the area."

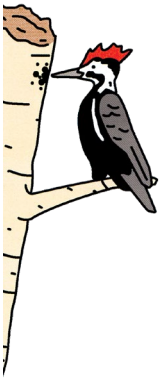
Listening to birdsongs alleviates feelings of anxiety and paranoia

The birdsongs you are hearing may already be helping your mood.

A second study found that listening to short — just six-minute — audio clips of birdsong could reduce feelings of anxiety, depression and paranoia in healthy participants.

“Listening to birdsong through headphones was able to hit the same pathways that might be beneficial toward mental well-being,” said Hammoud, who was not involved in the second study. “That’s a very, very nice finding,”

Researchers asked 295 online participants to self-assess their emotional states and to take a cognitive memory test. Then they randomly assigned the participants to listen to birdsongs or traffic noise, of more or less diversity. The researchers then had the subjects remeasure their emotional and cognitive states.



Woodpecker

Participants who listened to more diverse birdsongs (featuring the acoustic acrobatics of eight species) reported a decrease in depressive symptoms in addition to significant decreases in feelings of anxiety and paranoia. And those who listened to less diverse birdsongs (two bird species) also reported a significant decrease in feelings of anxiety and paranoia.

(This study was conducted in Europe, and the birds featured were also European. The ones you are seeing and hearing now are more likely to be encountered by our North American readers in their backyards.)

By contrast, listening to more or less diverse traffic noise worsened symptoms of depressive states.

The research shows the “healing aspects of nature, or also the not-so-positive effects of urban surroundings,” said Stobbe, an author of the second study.

Previous research on the health effects of nature sounds found that they could even confer cognitive benefits, though the second study did not replicate that finding.

Why nature and birds may benefit us

Birds help us feel more connected with nature and its health effects, Stobbe said, and the more connected we are to nature, the more we can benefit from those effects.

One hypothesis on nature's salubrious effects, known as the attention restoration theory, posits that being in nature is good for improving concentration and decreasing the mental fatigue associated with living in stressful urban environments. Natural stimuli, such as birdsong, may allow us to engage in "soft fascination," which holds our attention but also allows it to replenish.

Nature — and birdsong — also reduce stress. Previous research has found that time spent in green outdoor spaces can lower blood pressure and cortisol levels, Hammoud said.

It is not yet understood how birdsong affects our brains, but neuroimaging studies have found brain responses of stress reduction to other forms of nature exposure.

Walking in nature vs. an urban environment decreased self-reported rumination, which is linked to a risk of depression and other mental illnesses, and decreased activity in a part of the brain's prefrontal cortex associated with rumination. Viewing green scenery engages the posterior cingulate cortex, which is associated with behavioral stress responses and may help regulate the reduction in stress responses from nature exposure.

Going out to see birds also tends to encourage more physical activity, which has its own panoply of mental health benefits, and exercising outdoors may, in turn, magnify the health benefits of exercise.

How to get the most out of birds

Be aware.

When we go outside, it is easy to forget that birds are also there singing their hearts out if we don't pay attention.

"Try to be aware. And that's actually all that you need to do," Stobbe said. "And with this little step, you can be one step closer to getting those beneficial effects or enhancing the time that you spend outdoors."

Be curious.

What is that bird? Smartphone applications such as Merlin Bird ID and BirdNet, both produced by the Cornell Lab of Ornithology, can help identify the bird producing the song and visualize its spectrogram. Apps such as these or eBird also help identify the bird you are seeing from its size, colors and location.

Tools such as BirdCast give live maps of bird migrations in your area — and reveal just how much bird activity you may be missing.

Be involved.

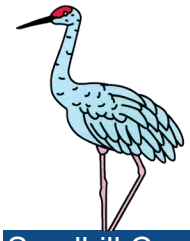
We can enjoy our feathered friends at any level of intensity. You can watch and listen to birds in your own backyard. You can also find a birding group and meet other birders in your area.

Be present.

We can find more joy by savoring the birds we see and the songs we hear. One recent preliminary study found that birdwatchers who paid attention to the joy they felt for each bird reported greater mental health benefits than those who merely counted the birds they saw.

Birdsongs can be used to soothe our minds in a stressful world, or in a clinical setting to treat patients with anxiety or paranoia, both studies suggest.

“People can use easy, accessible treatment or prevention techniques by just listening to an audio CD of things representing nature,” Stobbe said. “Or, of course, also going inside nature and trying to seek those effects.”



Sandhill Crane