

Can Piano Lessons Relieve Chemotherapy Brain Fog?

Group music lessons during cancer treatment were linked to improvements in executive function and mood.

January 16, 2025 By [Liz Highleyman](#)

Learning to play the piano—especially in a group setting—might help alleviate cognitive side effects associated with cancer chemotherapy, according to a small study of [breast cancer](#) patients at Moffitt Cancer Center in Tampa.

Many people who undergo chemotherapy experience slowed thinking, impaired concentration and memory lapses, commonly known as [brain fog](#) or chemo brain. Cognitive impairment may result from the drugs themselves or associated side effects, such as fatigue, emotional stress and poor sleep. Numerous remedies have been proposed for managing chemo brain, including efforts to stimulate and exercise the brain.

“Receiving a cancer diagnosis and undergoing cancer treatment can significantly impact mental health and overall patient wellness,” breast oncologist Melissa Mallory, MD, of Moffitt Cancer Center, said in a [news release](#). “Identifying new strategies to improve outcomes in these arenas—especially medication-free options—is needed to facilitate truly comprehensive patient-centric cancer care.”

Mallory and Jennifer Bugos, PhD, of the University of South Florida’s College of Design, Art & Performance, evaluated the effects of one-on-one and group piano lessons on cognition and everyday functioning. This pilot study included 15 people receiving treatment for breast cancer.

The piano training protocol—dubbed Keys to Staying Sharp—is more rigorous than typical piano lessons and includes comprehensive instruction with a greater focus on patterns, repetition and fine motor skills as well as music theory and music reading, [Bugos told Healio](#). Participants attended once-weekly classes for nine weeks and were asked to practice for at least half an hour every day.

“We are interested in examining whether social support while learning a musical instrument can increase cognition in patients undergoing treatment for cancer when holding curriculum constant, which areas of cognition may be improved and what duration of music training is optimal for patients,” Bugos said. “Learning a challenging new activity, such as learning a musical instrument,

can increase sensorimotor activity leading to strengthened neural pathways and enhanced cognition.”

Preliminary data suggest that patients who took group piano lessons experienced gains in attention and focus and enhanced executive function. While both individual and group lessons have demonstrated some benefit, the group program is yielding significant improvements in cognition, according to Bugos.

What’s more, participants reported that they found learning the piano to be enjoyable and relaxing.

“There were a lot of outside stressors contributing to my mood, but piano practice and going to lessons were always something good and positive that I would look forward to, no matter what else was happening,” said Robin Hesselink, who is receiving treatment for metastatic breast cancer. “Even for those 30 minutes or an hour, I could forget about the other stuff and have something enjoyable. At least temporarily, while I’m doing it, it has a very positive effect on me.”

This study was small, and the findings have not yet been published in a peer-reviewed journal, but the results are promising enough to warrant further research. Bugos and her team at the Cognition and Coordination Across the Lifespan in Music (CALM) lab, with support from the National Endowment for the Arts, are now broadening their research to include larger populations with different medical conditions.

Click here to learn more about [music therapy for people with cancer](#).