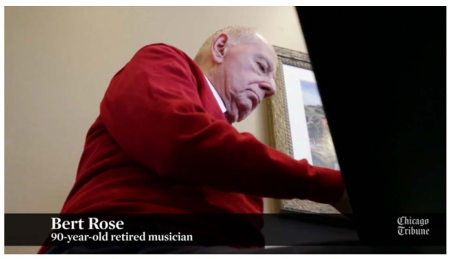
Music lights up the brain for longtime musician with Alzheimer's



Being diagnosed with Alzheimer's disease hasn't prevented 90-year-old Bert Rose from continuing to play and share the joy of his music with others. (Stacey Wescott/Chicago Tribune)

By Bonnie Miller Rubin
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For more than 60 years, Bert Rose was a celebrated pianist, who played at numerous benefits and weddings — including the Sharon Percy/Jay Rockefeller nuptials — and accompanied Ann-Margret, Debbie Reynolds and Brooke Shields at glittering venues.

But now, at age 90, Rose remembers almost none of it. For the last two years, he has lived at Autumn Leaves, a Vernon Hills facility for people with dementia, which has stolen his ability to manage the most basic tasks of daily living.

Still, when he sits down at the baby grand piano in the lobby — as he does almost every day — the fog evaporates. Moments earlier, Rose had asked if his wife, who died in 1984, would be visiting. Now, his fingers fly over the keys, retrieving "Somewhere Over the Rainbow," "You Are My Sunshine" and "When the Saints Go Marching In" from the recesses of his ravaged brain.

"It's just so heartbreaking," said his daughter, Nancy Berg, looking on. "Music is the only thing he has left."

The music engages other residents as well, who are hand-clapping, toe-tapping and singing along.

The responsiveness observed at Autumn Leaves is hardly unique. There's increasing evidence that music can be a potent and cost-effective weapon in the battle against Alzheimer's, the most common form of dementia. The disease, shared by about 5.2 million Americans, is rising steadily, according to the Alzheimer's Association. One person is diagnosed every 67 seconds.

With no cure in sight, finding ways to relieve symptoms and enhance quality of life for elders — who can live for years — is paramount, experts said.

"People living with dementia may lose the ability to express themselves verbally but may also sing with great gusto upon hearing a familiar song," explained Caroline Edasis, an arts therapist at Mather LifeWays, an Evanston nonprofit organization. "Music is a compelling way to see beyond the disease process to reach the individual."

Music's role in memory is an enormously privileged one, said Nina Kraus, who heads Northwestern University's Auditory Neuroscience Laboratory, which studies the link between music, cognition and the nervous system.

"It's no accident that we learn our ABCs with songs," said the neuroscientist.

Most input to the brain — including speech — is localized, but music is different, activating multiple sites, Kraus said.

"It engages the totality of the brain — centers that process ... sound, memory, attention, language, sight, touch and more. It sparks neural activity within each of these centers and sets them in motion together in a way few other experiences can."

Music also can elicit emotion and boost dopamine, a chemical that regulates the brain's pleasure and rewards centers. It's why, years later, hearing a song on the radio can immediately bring us back to a slow dance at prom.

It's not surprising, then, that Rose — who started playing at age 5 — perks up as soon as he tickles the ivories. In a 2013 study, Kraus and her team found that music lessons carried benefits into old age. Their research, published in The Journal of Neuroscience, found that subjects who had musical training logged faster responses to speech than those who had none — even if they hadn't picked up an instrument for decades.

Music's ability to connect was evident at Mather LifeWays, which collaborated with the Chicago Symphony Orchestra as part of its "Citizen Musician" project last year.

Three musicians came to the senior-living community to interact with some of its most withdrawn residents. One man, who was mostly nonverbal, "started singing in the most beautiful vibrato voice, with so much passion and feeling," said Emily Koi, a flutist from the Civic Orchestra of Chicago, CSO's training orchestra.

"Another woman just started singing along to Beethoven. ... It really made me look at music in a totally different way. Sometimes, as classical musicians, we get so involved in ourselves, in our personal quest for perfection. This experience reminded me that it has a different power — to lift spirits and trigger memories," Koi said.

Across Illinois, more than two dozen elder-care facilities participate in another program, called Music & Memory. Founded in 2010 by a New York social worker, the nonprofit brings personalized playlists to the elderly and infirm through donated digital devices. The clip of a man slumped in his wheelchair, instantly becoming more alert while listening to an iPod, went viral. (Watch the video.)

Still, while music can have an impact on the aging brain, it's not a cure-all, said Bryan D. James, an epidemiologist at the Rush Alzheimer's Disease Center.

"Once the damage to the brain from Alzheimer's has occurred, there's no way to bring those neurons back that we know of," James said.

James was part of a team of researchers at Rush who followed thousands of older adults — some of whom eventually got the disease and some of whom didn't — and found that those who had music instruction when they were young were less likely to have cognitive impairment in later life. Their findings appeared last year in the journal Neuropsychology.

"The good news is that people who keep their minds active and engaged appear to have less of a chance of developing problems with their memory and thinking than those who don't," he said.

Most of these musical initiatives are surprisingly cost-effective — an important consideration, given that federal funding for dementia lags behind other diseases.

While about $5.3 billion is allocated for cancer research and $1.9 billion for cardiovascular

disease, Alzheimer's received $562 million in 2014, according to the National Institutes of Health. Advocates hope that the recent Oscar buzz for "Still Alice," about a woman battling early-onset Alzheimer's, will do for the condition what "Philadelphia" accomplished for HIV/AIDS, which now receives $2.9 billion for research.

But it's often the psychological costs that weigh heaviest on families.

Bert Rose's son, Bob, said that after a visit, he has had to pull over to the side of the road to collect himself.

"You don't lose them all at once," he said, "just a little bit at a time."

For Rose, the disease followed a common arc. He was functioning well in Northbrook, where he had lived since the 1950s. While the days of 300 gigs a year had dwindled — in his heyday, it was common to book a bar mitzvah on a Saturday afternoon, followed by a black-tie soiree at night — he still played professionally until his mid-80s, said Berg, his daughter. He was as sharp and gregarious as you'd expect from a man who earned his livelihood with a tux and a song.

Then, he started repeating the same stories, sometimes minutes after he had told them, she said. He lost his way driving from her Vernon Hills home to Northbrook — a trip he had made countless times.

"We knew something was just terribly wrong," said Berg, a retired music teacher for the Mundelein schools.

Two years ago, his children knew that he could no longer be on his own. Rose came to Autumn Leaves, where he can play anytime. In fact, visitors often think he's hired entertainment, said Carol Geimer, an administrator.

Geimer doesn't need any research studies to confirm what she observes every day: That music decreases agitation and provides enjoyment for residents.

"It's the magic therapy from our highest functioning people to those in the very last stages of the disease," she said.

Rose doesn't recall many of the luminaries who crossed his path. Perusing old photos elicits blank stares, even of other members in his orchestra, whom he played with for years.

Only Brooke Shields extracts a flicker of recognition. "She was the prettiest," he said.

Otherwise, conversation is difficult. He'll be present for a moment — and then he's gone, trailing off in a sentence that leads nowhere.

"There are good days and bad days," Berg said.

But then, her father is helped from wheelchair to piano bench and there's bliss — a transformation that elevates his daughter's mood as well.

"Not many people in life get to do something they love," she said, "that also makes other people happy."

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