

THE MARC POST

MGH MULTICULTURAL ASSESSMENT & RESEARCH CENTER NEWSLETTER

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IN THIS ISSUE:

- **Neuropsychological Assessments:**
 - In what contexts can they help?
- **Patient Corner:**
 - Music & Brain Health
- **Research Opportunities:**
 - Boston Latino Aging Study (BLAST)
 - Caregiver Study
 - Mobile Application Study
 - The Healthy Aging and Resilient Brain Study
- **Announcements:**
 - New Staff
 - Congratulations

Neuropsychological Assessment

- Neuropsychological assessments measure a wide array of cognitive abilities as well as behavioral and emotional functioning.
- There are several potential contexts in which these evaluations may be helpful. For instance, neuropsychologists may receive referrals from the following settings and provide assistance with:
 - Neurology: Helping with differential diagnosis for a variety of neurocognitive disorders.
 - Psychiatry: Assisting with establishing behavioral and psychological diagnoses to inform therapy treatment recommendations.
 - Academic: Providing psychoed testing that helps with determining possible accommodations in a school setting.

We thank you for the referrals to date and continue to accept new referrals through
EPIC: MARC

Providers from outside MGB can access the referral form here: [MGH MARC Website](#)

PATIENT CORNER

DID YOU KNOW THAT MUSIC CAN BE BENEFICIAL FOR YOUR PHYSICAL AND MENTAL WELLNESS?



Music, Memory, and Mental Health!



- Playing a musical instrument, singing in the shower, or even listening to your favorite songs can improve mood and overall well-being
- Listening or dancing can activate multiple brain areas, as shown in the image below
- Playing, singing, or active music-making such as taking lessons, singing in a choir, etc., can increase the release of dopamine, serotonin, and oxytocin

- Playing or dancing to music can activate the sensorimotor cortex, which can improve fine motor skills and hand-eye coordination!
- Music plays an important role in memory! The hippocampus plays an active role in not only creating memories while listening or making music but also triggers long-term memories associated with certain songs.
- People with Alzheimer's Disease and other related dementias, even in late stages of the diseases, are still able to recall early memories triggered by listening to music (such as in Disney's Coco) and allow for some level of self-expression and communication, even tap or sing along to music from their childhood even with limited verbal or written communication.

Music on the mind

When we listen to music, it's processed in many different areas of our brain. The extent of the brain's involvement was scarcely imagined until the early nineties, when functional brain imaging became possible. The major computational centres include:

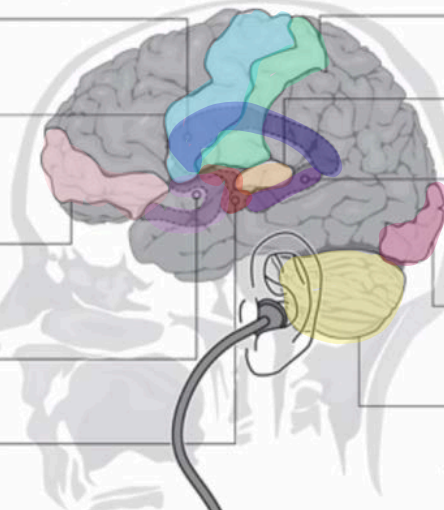
CORPUS CALLOSUM →
Connects left and right hemispheres.

MOTOR CORTEX →
Movement, foot tapping, dancing, and playing an instrument.

PREFRONTAL CORTEX →
Creation of expectations, violation and satisfaction of expectations.

NUCLEUS ACCUMBENS →
Emotional reactions to music.

AMYGDALA →
Emotional reactions to music.



SENSORY CORTEX
Tactile feedback from playing an instrument and dancing.

AUDITORY CORTEX
The first stages of listening to sounds. The perception and analysis of tones.

HIPPOCAMPUS
Memory for music, musical experiences and contexts.

VISUAL CORTEX
Reading music, looking at a performer's or one's own movements.

CEREBELLUM
Movement such as foot tapping, dancing, and playing an instrument. Also involved in emotional reactions to music.

MIKE FAILLE/THE GLOBE AND MAIL | SOURCE: THIS IS YOUR BRAIN ON MUSIC: THE SCIENCE OF A HUMAN OBSESSION

Next from: Music, Memory, and Mental Health - Recommendations!



Listen to more music! Actively listening to all kinds of music can create new synapses in the brain.



Get involved in a music group or take up lessons. Socialization also improves mood and quality of life, especially when combined with making music.



Look into music interventions such as music therapy or meditation with music.



Combine music with dancing or physical activity.

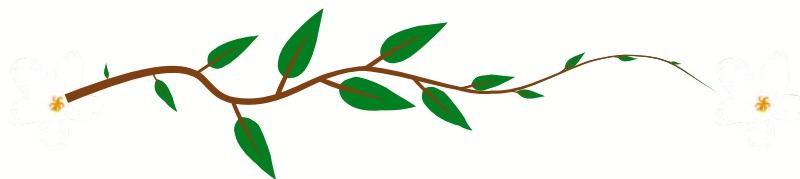
Research Opportunities

BOSTON LATINO AGING STUDY (BLAST)

We are conducting a study to understand age-related memory changes in older Latino adults. We seek participants older than 55 who are fluent in Spanish or Portuguese. Participants can receive up to \$750 for participation. For more information, call Lusiana for Spanish or Liana for Portuguese at **(617) 643-5880**.

MOBILE APPLICATIONS STUDY

We are seeking healthy, Spanish-speaking Latino adults older than 55 years old to help pilot mobile applications that measure memory. Only 1 visit, virtual or in person, is required, and compensation of \$50 will be provided. For more information, please call Randy at **(617) 643- 5880** or email mapp@mgh.harvard.edu.



CAREGIVER STUDY

We are looking for caregivers of family members with memory problems or Alzheimer's Disease interested in joining a remote/virtual study about relaxation techniques and how they may help their family member with dementia. Participants can receive up to \$120 for their participation. Interested participants can call Miranda or Paulina at **(617) 724-7244** or email at cuidadores@mgb.org.

THE HEALTHY AGING AND RESILIENT BRAIN STUDY

Help us to understand what keeps our brains healthy and our minds sharp at advanced age. We are seeking adults ages 90+ years old who have no known memory issues. Participants can receive up to \$425 for their participation. For more information, please call Diana at **(617) 643- 5880** or email mapp@mgh.harvard.edu.

ANNOUNCEMENTS



MARC WELCOMES OUR NEW STAFF



Alexandre Closs Fanfa Ribas

Alexandre joined the Multicultural Alzheimer's Prevention Program (MAPP) in March 2024 as a bilingual (English/Portuguese) Clinical Research Coordinator. He is currently pursuing his Biomedical Engineering education at Boston University and is set to graduate in December 2025. Alexandre has a strong interest in neuropsychology and biomedical research. In his free time, he enjoys watching new movies and exploring different cultures through their culinary ways.



Nadeshka Ramirez Perez, BA

Nadeshka joined the Multicultural Assessment and Research Center (MARC) as a Bilingual Clinical Research Coordinator in June 2024. She received her bachelor's degree in Psychology at the University of Puerto Rico, Rio Piedras campus where she developed an interest in neuroscience research. She is particularly interested in neuroimaging and Alzheimer's disease research, and she enjoys collaborating with like-minded brain enthusiasts. Outside of work, she enjoys reading, baking, and visiting art museums.



Randy Medrano, BS

Randy joined MAPP as a Bilingual Clinical Research Coordinator in June 2024. He received his Bachelor of Science in Psychology with a concentration in Biological and Chemical sciences in 2023 from Northeastern University where he conducted research on child development and aggressive behaviors. Randy has strong interests in clinical operations and data collection specializing in neurological disorders with the hope of attending medical school one day. In his free time, Randy enjoys strength training and cooking.



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