

Atlantic Fellows

FOR EQUITY
IN BRAIN HEALTH

BASED AT

Global Brain Health Institute



Trinity College Dublin
The University of Dublin

Music and Brain Health

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Brain Connections
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BRAIN CONNECTIONS

Overview

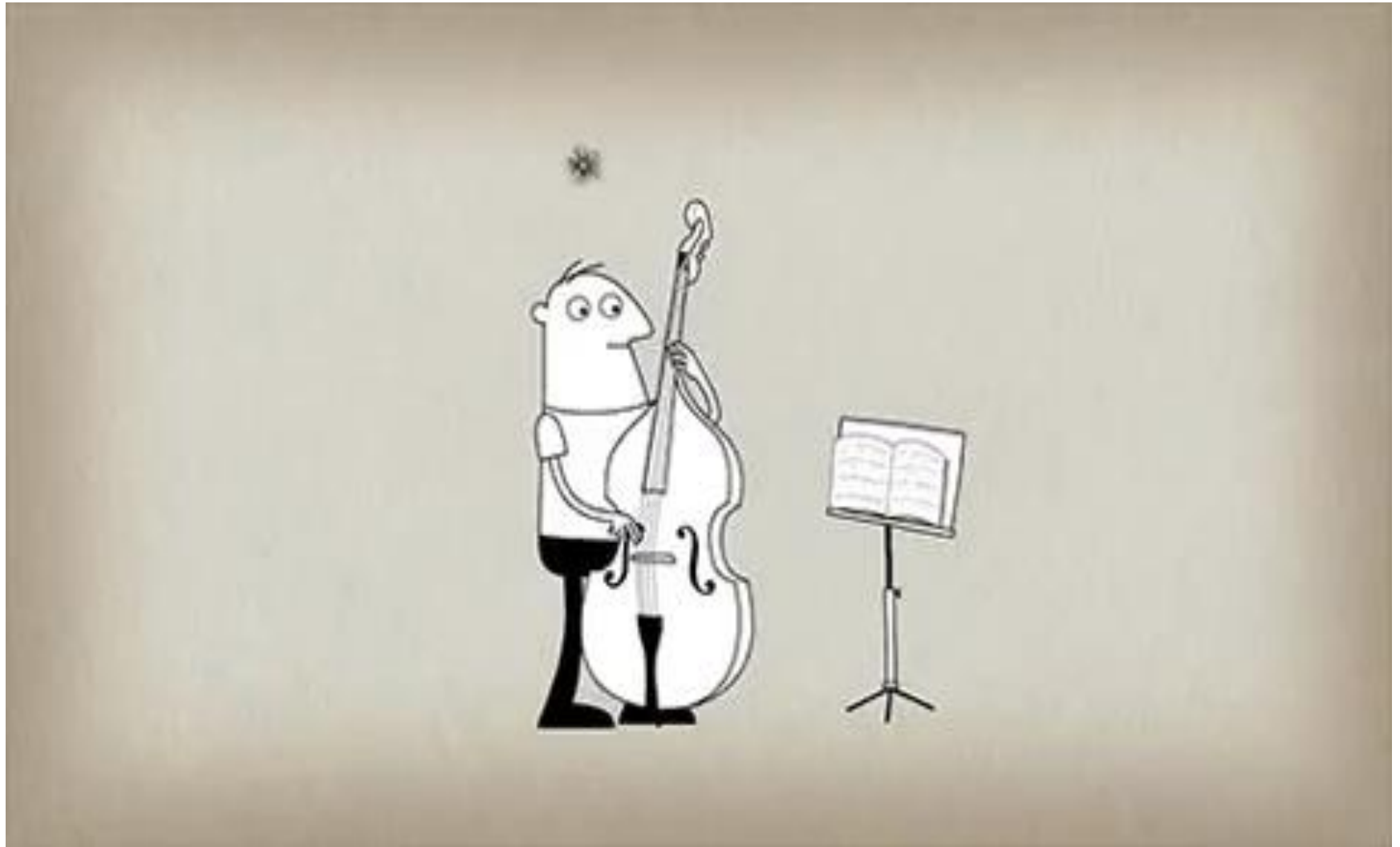
- **Music and the brain**
- **Music and brain health**
- **Music and dementia**

How does playing a musical instrument benefit your brain?

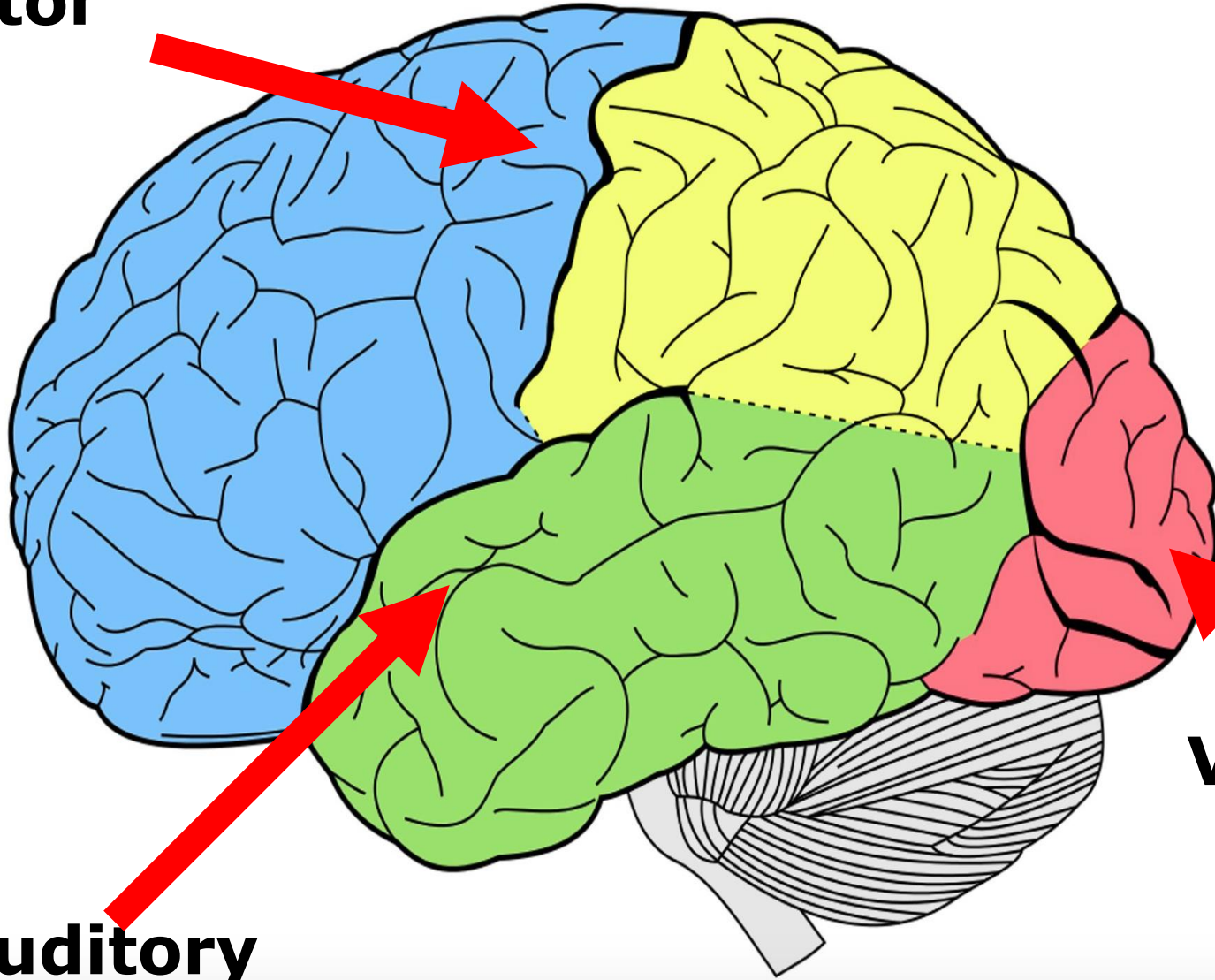
Music and the brain



Music and the brain



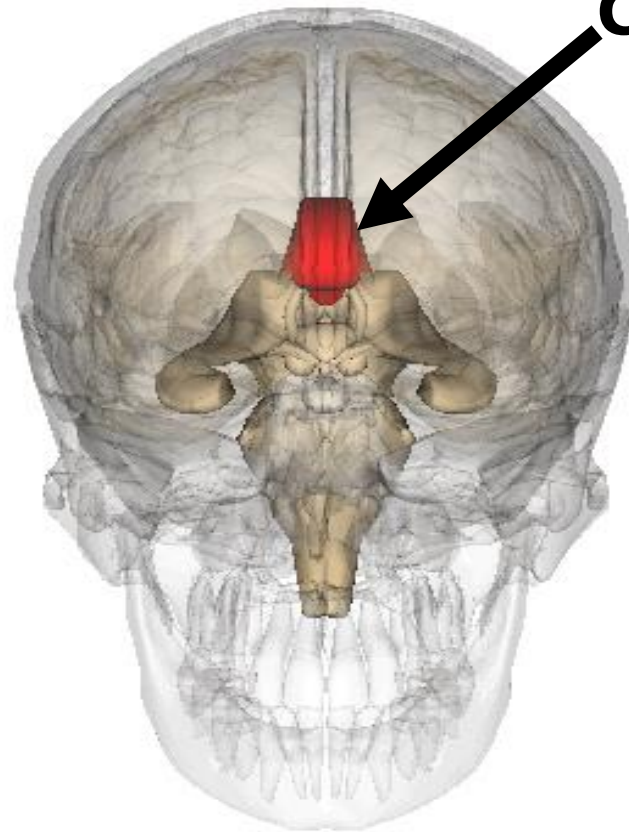
Motor



Visual

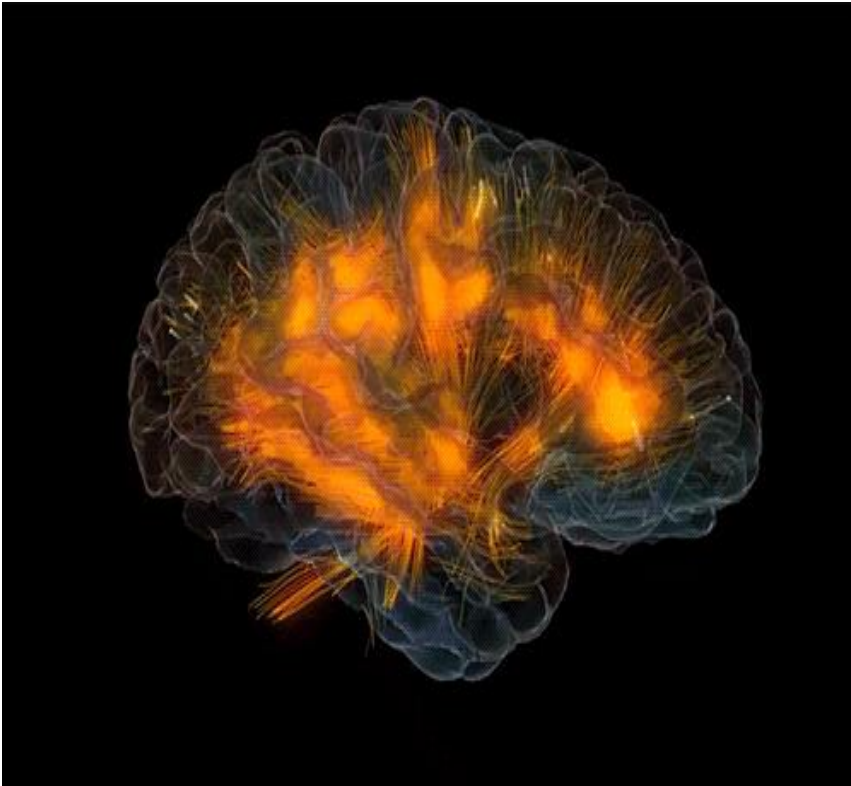
Auditory

Corpus Callosum



Music and Brain Health

THE BRAIN & AGE



- Brain volume reduces 5% per decade after age 40
- Decline in cognitive ability
 - Attention
 - Short-term Memory
 - Episodic Memory

Cognitive Reserve

Brain's ability to cope with damage and age-related deterioration

- Education
- IQ
- Occupation
- Social Networks
- Dietary Habits
- Leisure & Cognitive Activities

Executive Function

A set of cognitive abilities that control and regulate other abilities

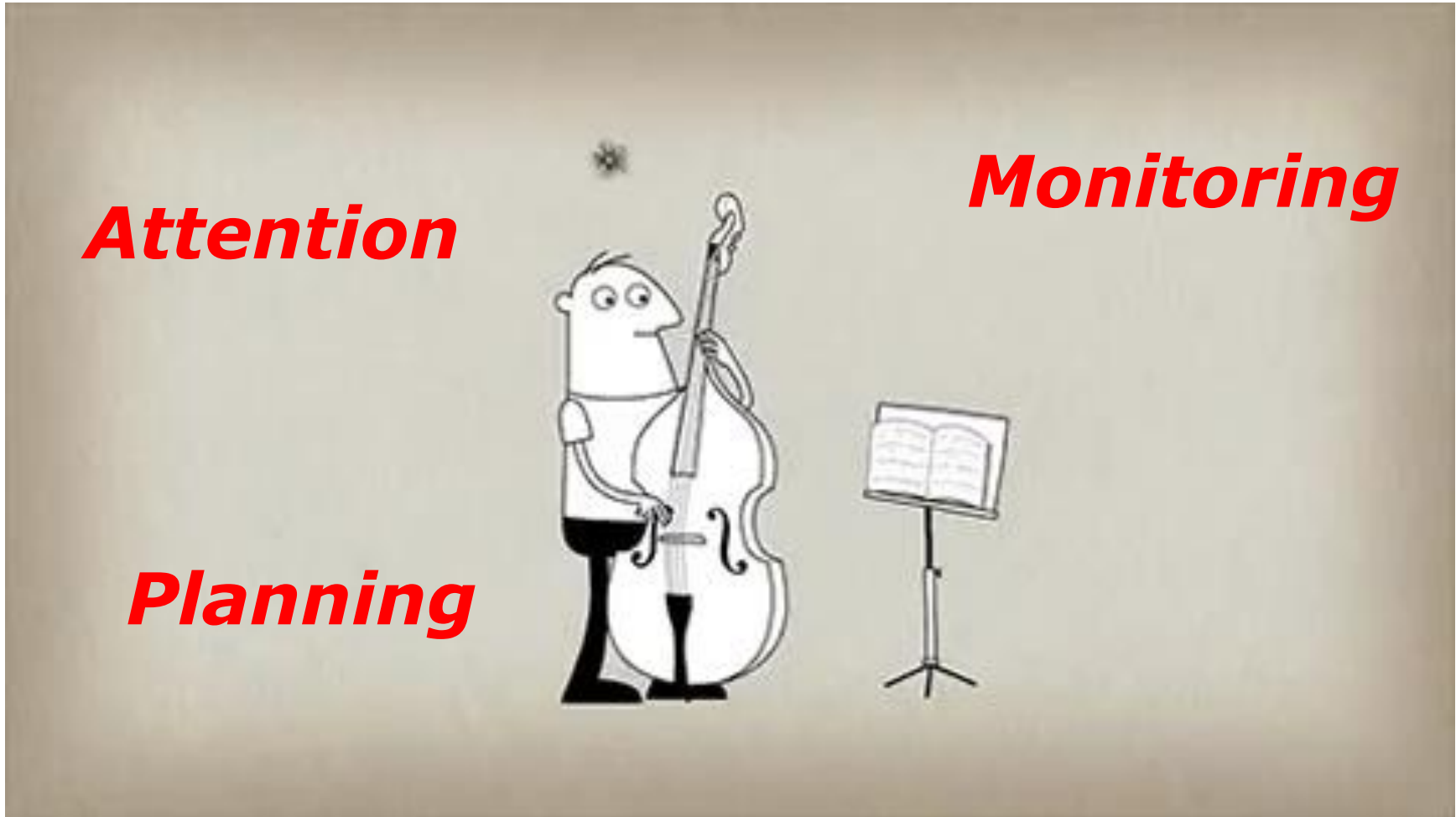
- Attention
- Memory
- Planning & Problem Solving
- Organisation
- Impulse control/self regulation
- Time Management

How does music help our cognition as we get older?

Shown advantages on

- **Executive Function**

Musical Expertise & Executive Function



Executive Function

How does music help our cognition as we get older?

Musicians shown advantages

- Executive function
 - Musical memory
-
- **Music Intervention - after 6 months of piano lessons older adults showed advantages on executive function**

Music and Dementia

- **Anecdotal reports of the listening to music for people with dementia**
- **Music has the potential to decrease stress, anxiety & help regain a sense of self**

Organisations using familiar music & dementia

- **Music & Memory Project (USA)**
<https://youtu.be/fyZQf0p73QM?t=2m2s>
- **Playlist for Life (UK)**

Summary

- **Music = “Full body workout” for our brains**
- **Help keep our brains healthy**
- **Can help people living with dementia – lower stress, anxiety and regain a sense of self.**

THANK YOU

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BRAIN CONNECTIONS



Cork NeuroScience Centre
Integrating Clinical and Basic Research

