

Instrumental Tuition Transcript

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Did you know that every time musicians pick up their instruments, there are fireworks going off all over their brain?

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Music.

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On the outside, they may look calm and focused, reading the music and making the precise and practise movements required.

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But inside their brains there's a party going on.

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How do we know this?

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Well, in the last few decades, neuroscientists have made enormous breakthroughs in understanding how our brains work by monitoring them in real time with instruments like fMRI and PET scanners.

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When people are hooked up to these machines, tasks such as reading or doing math problems each have corresponding areas of the brain where activity can be observed.

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But when researchers got the participants to listen to music, they saw fireworks.

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Multiple areas of their brains were lighting up at once as they processed the sound, took it apart to understand elements like melody and rhythm, and then put it all back together into unified musical experience.

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And our brains do all this work in the split second between when we first hear the music and when our foot starts to tap along.

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But when scientists turn from observing the brains of music listeners to those of musicians, the little backyard fireworks became a jubilee.

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It turns out that while listening to music engages the brain in some pretty interesting activities, playing music is the brain's equivalent of a full body workout.

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The neuroscientists saw multiple areas of the brain light up simultaneously, processing different information in intricate, interrelated, and astonishingly fast sequences.

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But what is it about making music that sets the brain alight?

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The research is still fairly new, but neuroscientists have a pretty good idea.

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Playing a musical instrument engages practically every area of the brain at once, especially the visual, auditory and motor cortices.

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And as with any other workout, disciplined, structured practise in playing music strengthens those brain functions, allowing us to apply that strength to other activities.

3:10

Music.