

## Ability to move to the beat of music is genetic

22nd September, 2022



We all love to move (or groove) to music. At the very least, we cannot resist tapping our foot or nodding our head when we hear music. New research suggests that moving our body to musical beats is genetic. Our dancing ability is in our genes. Parents pass

their sense of rhythm down to their children. The study is from the Vanderbilt University in the USA, and the genomics and biotechnology company 23andMe. Researchers found 69 genes that affect how people react to musical rhythms. The researchers said different genes affect our ability to move in sync with music beats. They said the genes work in similar ways to those for other biological rhythms, such as breathing, walking and sleeping.

The researchers used bio-data from over 600,000 people in their research. Researcher Dr David Hinds said: "The large number of...study participants offered a unique opportunity...to capture even small genetic signals." He added: "This research represents a leap forward for scientific understanding of the links between genetics and musicality." Researcher Dr Reyna Gordon said: "Rhythm is not just influenced by a single gene. It is influenced by many hundreds of genes." She added: "Tapping, clapping and dancing in synchrony with the beat of music is at the core of our human musicality." The research could one day help doctors use music and rhythm to make us healthier.

Sources: [neurosciencenews.com](https://neurosciencenews.com) / [newatlas.com](https://newatlas.com) / [nature.com](https://nature.com)

### Writing

Music is essential for our health. Discuss.

### Chat

Talk about these words from the article.

love / groove / tapping our foot / music / dancing / genes / rhythm / sleeping / researchers / unique / opportunity / leap forward / musicality / clapping / doctors

### True / False

- 1) The article says music is groovy. T / F
- 2) Researchers say children can dance better than their parents. T / F
- 3) Researchers say humans can move to 69 different rhythms. T / F
- 4) Researchers said the rhythm of breathing is the same as dancing. T / F
- 5) More than 600,000 people were part of this research. T / F
- 6) Good rhythm can help people leap farther. T / F
- 7) A researcher said hundreds of genes affect rhythm. T / F
- 8) Music and rhythm could be used in future as a form of healthcare. T / F

### Synonym Match

(The words in **bold** are from the news article.)

- |                    |                |
|--------------------|----------------|
| 1. <b>resist</b>   | a. jump        |
| 2. <b>suggests</b> | b. research    |
| 3. <b>sense</b>    | c. methods     |
| 4. <b>affect</b>   | d. special     |
| 5. <b>ways</b>     | e. connections |
| 6. <b>study</b>    | f. shows       |
| 7. <b>unique</b>   | g. influence   |
| 8. <b>leap</b>     | h. stop        |
| 9. <b>links</b>    | i. centre      |
| 10. <b>core</b>    | j. feeling     |

### Discussion – Student A

- a) What do you think about rhythm?
- b) How often do you move to music?
- c) What do you think of tapping your foot to music?
- d) Did you get any musical genes from your parents?
- e) How good are you at dancing?
- f) What's your favourite music to dance to?
- g) How important is rhythm in your life?
- h) What are your walking, breathing and sleeping rhythms?

## Phrase Match

- |                                     |                        |
|-------------------------------------|------------------------|
| 1. We all love to move (or groove)  | a. over 600,000 people |
| 2. moving our body to musical beats | b. in synchrony        |
| 3. sense of                         | c. similar ways        |
| 4. move in sync                     | d. core of             |
| 5. They said the genes work in      | e. is genetic          |
| 6. bio-data from                    | f. forward             |
| 7. This research represents a leap  | g. to music            |
| 8. influenced by a single           | h. with music beats    |
| 9. Tapping, clapping and dancing    | i. gene                |
| 10. at the                          | j. rhythm              |

## Discussion – Student B

- What do you think about what you read?
- Why is music so important to us?
- Is it important to listen to music before we sleep?
- Is there any music that is bad for us?
- Should scientists change genes to make people more musical?
- Do you prefer fast or slow rhythms in life?
- How can music and rhythm make us healthier?
- What questions would you like to ask the researchers?

## Spelling

- we cannot isrets tapping our foot
- Our dancing ilaytb is in our genes
- Parents pass their seens of rhythm down
- how people react to cmlsau rhythms
- other liaiolbogc rhythms
- trahneibg, walking and sleeping
- The large number of study prsiapitactn
- a queni opportunity
- actepu even small genetic signals
- a leap forward for sciiifcten understanding
- Rhythm is not just nlcfeinued by a single gene
- Tapping, pgiplacn and dancing

### Answers – Synonym Match

1. h	2. f	3. j	4. g	5. c
6. b	7. d	8. a	9. e	10. i

## Role Play

### Role A – Jazz

You think jazz is the best music. Tell the others three reasons why. Tell them what is wrong with their kinds of music. Also, tell the others which is the worst of these (and why): hip-hop, techno or heavy metal.

### Role B – Hip-hop

You think hip-hop is the best music. Tell the others three reasons why. Tell them what is wrong with their kinds of music. Also, tell the others which is the worst of these (and why): jazz, techno or heavy metal.

### Role C – Techno

You think techno is the best music. Tell the others three reasons why. Tell them what is wrong with their kinds of music. Also, tell the others which is the worst of these (and why): hip-hop, jazz or heavy metal.

### Role D – Heavy Metal

You think heavy metal is the best music. Tell the others three reasons why. Tell them what is wrong with their kinds of music. Also, tell the others which is the worst of these (and why): hip-hop, techno or jazz.

## Speaking – Music

Rank these with your partner. Put the best music at the top. Change partners often and share your rankings.

- |           |               |
|-----------|---------------|
| • Jazz    | • Folk        |
| • Opera   | • Techno      |
| • Hip-hop | • Heavy metal |
| • Reggae  | • Country     |

### Answers – True False

1	F	2	F	3	F	4	F	5	T	6	F	7	T	8	T
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Answers to Phrase Match and Spelling are in the text.