



Your Healing Voice - The benefits of singing for health and wellbeing

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Introduction and Context

The benefits of singing have long been documented - we know it feels good to sing, but what actually happens to our bodies when we sing?

In this paper, we will discover how and why singing can be so beneficial to our overall health and well-being. We will also discover the best music to sing along with and how long we need to sing for in order to feel the benefits. Research has shown that singing may actually help us ward off illness - a benefit that is not to be underestimated in this current pandemic situation.

In order to understand the therapeutic effect of singing and how our voices can help our overall wellbeing it helps to first explore the mechanisms underlying the relationship between singing and our body chemistry.

Hormones and Neurotransmitters

Adrenaline, Cortisol and Stress Hormones

Adrenaline (sometimes called the 'fight or flight hormone') is a hormone released by the adrenal glands and some neurons. Adrenaline is released in response to a stressful, exciting, dangerous, or threatening situation. It helps body and mind to react more quickly by raising heart rate, blood pressure and diverting blood flow from the digestive system to the muscles. If the system is stressed for a prolonged period of time the nervous system can get stuck in 'fight or flight mode' and in these cases there can be elevated levels of Adrenaline in the system. Research has shown that an increase in adrenaline has been linked to a whole host of health conditions such as heart disease, cancer, high blood pressure and mental health conditions. Therefore, reducing the amount of adrenaline in the system is important for overall health and wellbeing.

Cortisol is a hormone secreted by the adrenal glands and is also associated with heightened stress levels. Cortisol regulates a wide range of processes throughout the body, including metabolism and the immune system response. There have been numerous studies that have

shown that cortisol levels reduce when we sing for pleasure (as opposed to performing, which can be stressful), indicating that singing is a stress-reducing activity.^{1,2}

Dopamine

Dopamine is a neurotransmitter associated with reward and pleasure and therefore an increase in Dopamine can elevate our mood-state. Every time we experience chills or goose-bumps when listening to our favourite track we are giving ourselves a shot of this 'feel-good' neurotransmitter.³ When considering putting your favourite sing along playlist together, you may want to add in a few songs that give you goose-bumps.

Endorphins

Endorphins is a collective name given to groups of hormones secreted within the brain and nervous system that perform a variety of different physiological functions. When released, they have a pain reducing and mood lifting effect. It was found that singing, dancing and drumming all trigger endorphin release whereas just listening to music and low energy musical activities do not.⁴ Basically, if you dance around your bedroom singing into a hairbrush you are much more likely to lift your mood.

Immunoglobulin A

Immunoglobulin A (IgA) is an antibody blood protein that is an important part of the immune system. We make IgA and other types of antibodies to help fight off sickness. Stress lowers the production of IgA and therefore leaves the immune system vulnerable to attack. In the recent (and ongoing) COVID 19 pandemic, health advisors were advising people to reduce their stress levels to help build immunity.^{5,6,7}

There have been numerous studies that have explored the relationship between singing and IgA and have found that singing significantly improves IgA levels - one study recorded a 150% increase in IgA in 10 solo singers that were monitored over a 10-week period.⁸

It has also been found that people are much more likely to be positive and relaxed when they have elevated levels of IgA (remember the smiling exercises?).

Mind Body and Spirit

Singing for Better Mental Health

We've already explored the benefits of singing on stress hormones and neurotransmitters and have found evidence to show that singing helps you feel better. Regulation in the breath when you feel anxious also helps reduce stress and anxiety and happy music elevates your mood. As

well as solo singing, there a great social benefit to singing - especially if you get together with friends online or in person.

During the pandemic there has been an increase in Zoom choirs and group singing is a great way to connect over a distance if you can't get together in person. Stewart and Lonsdale collected data from 375 participants and found that choral singers reported significantly higher psychological wellbeing than solo singers.⁹

Physical Health

Singing increases heart and lung function. In her research paper Beri (2016) posits the benefits of Pranayama - the branch of yoga that includes specific breathwork exercises. Studies showed that practitioners of this form of breathing had increased antioxidant levels in their blood¹⁰. Antioxidants are known to combat the oxidation of the cells which has been associated with aging and disease. Singing songs enables a person to sustain their breath in a certain way. In order to sing long phrases, you need to take a deep breath and let it out more slowly. Songs that enhance sustained breathing tone the lungs, reduce stress and increasing oxygen flow to all parts of the body. There have been studies that have shown a link to stress and ageing - chronic stress can accelerate the ageing process.¹¹

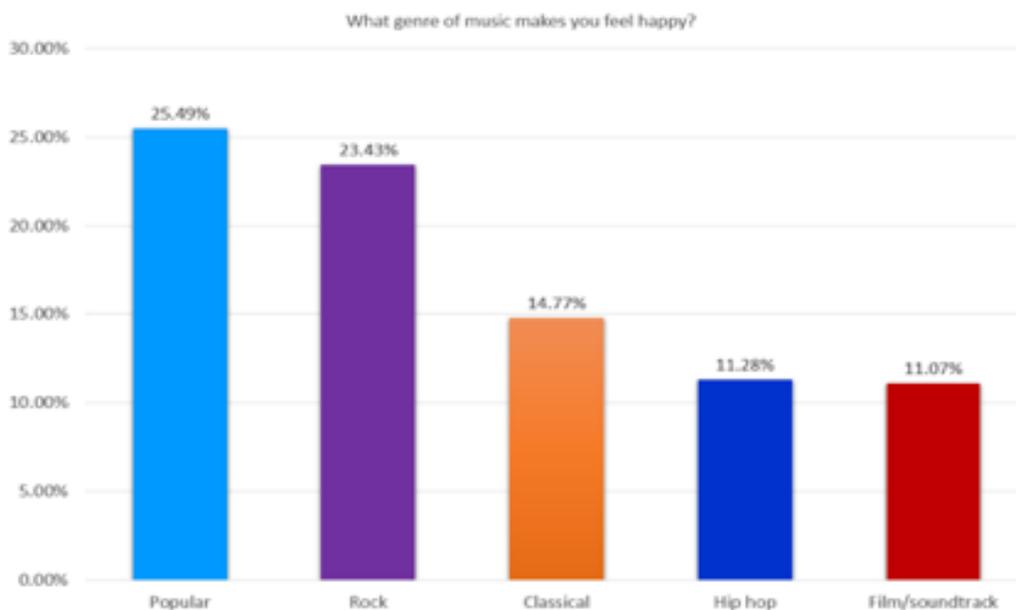
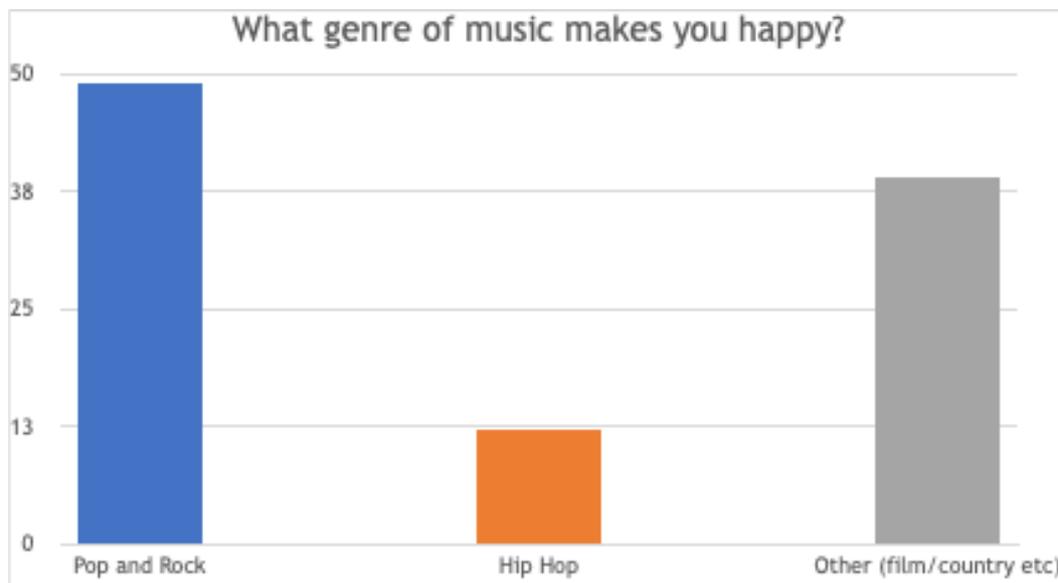
Spiritual Health

The growing trend in practices like mindfulness, sound therapy, sound-baths and yoga, is evidence that many people are taking more care of their spiritual health. Spiritual health is not just about being bendy, navel gazing or finding god it is about finding something that connects you to something greater than you.¹² What makes you in awe of your place in the world and your connectedness to others? This could be an activity in your local community or visiting your mosque, synagogue, church or temple. It could be regular meditation, a walk in the forest or a swim in the sea.

A study was done among a group of nurses that experienced stress and depression in their workplace. It was concluded that taking spiritual health into consideration helped people to 'manage their stress, to reduce depressive symptoms and to enhance health-promoting behaviours'.¹³ Studies have shown that we are much happier when we connect and reach out to others⁶. Singing in groups is a great way to do this. Make it a personal mission to create a choir - remember it has to be a 'no pressure' choir or stress hormones will kick in. Singing for the heaven of it is perfect!

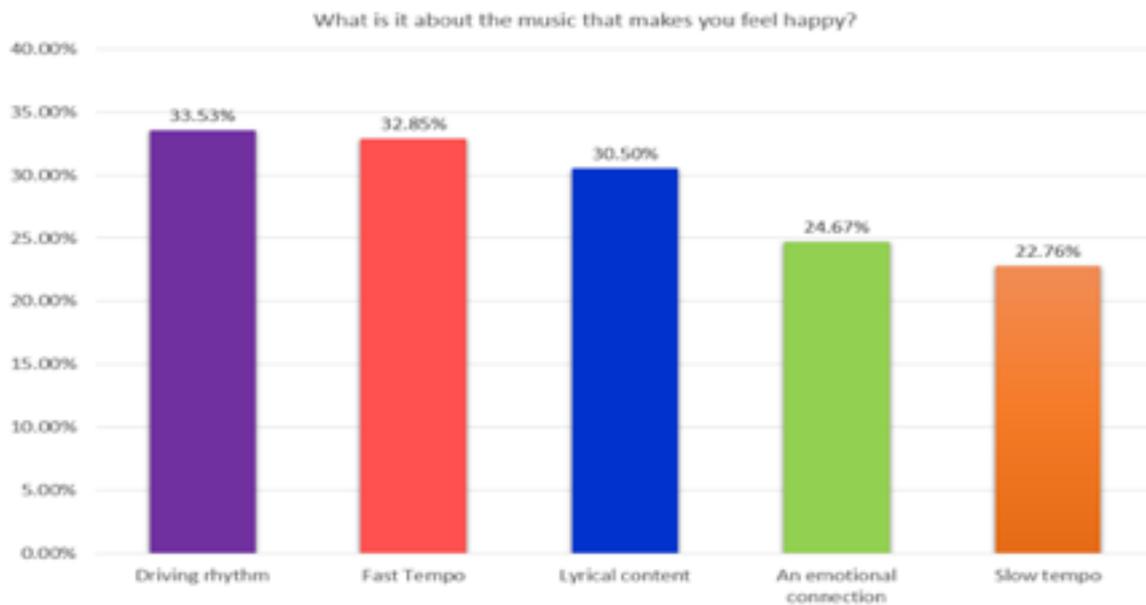
Which Music to Choose

Music improves health and wellbeing by affecting our neurochemical systems for reward and pleasure; stress and arousal; immunity; and social affiliation Chanda & Levitin (2013).¹⁴ A study was undertaken by The British Academy of Sound Therapy which explored the use of music as medicine.¹⁵ Over 7500 people took part in the study to find out what kind of music people used to improve their health and wellbeing, how long it took people to feel the effects of the music and what was it about the music that made it so effective. Although this study focussed on listening to music rather than singing, the study on p.3 (see Endorphins) found that more endorphins were released when engaging in music rather than just listening to it.⁴



Participants were asked what genre of music made them feel happy. Above are the top 5 out of 24 genres plus 'other'. It was not surprising to see pop and rock music at the top of the list because this genre is generally considered to be a 'lighter' and happier form of music. Film music also scored highly. Movies such as 'Frozen' have really good sing along anthems that are perfect for lifting the spirits.

Participants were also asked what they felt were the magic ingredients in the music that made them happy - the 'sonic vitamins' as we like call them.



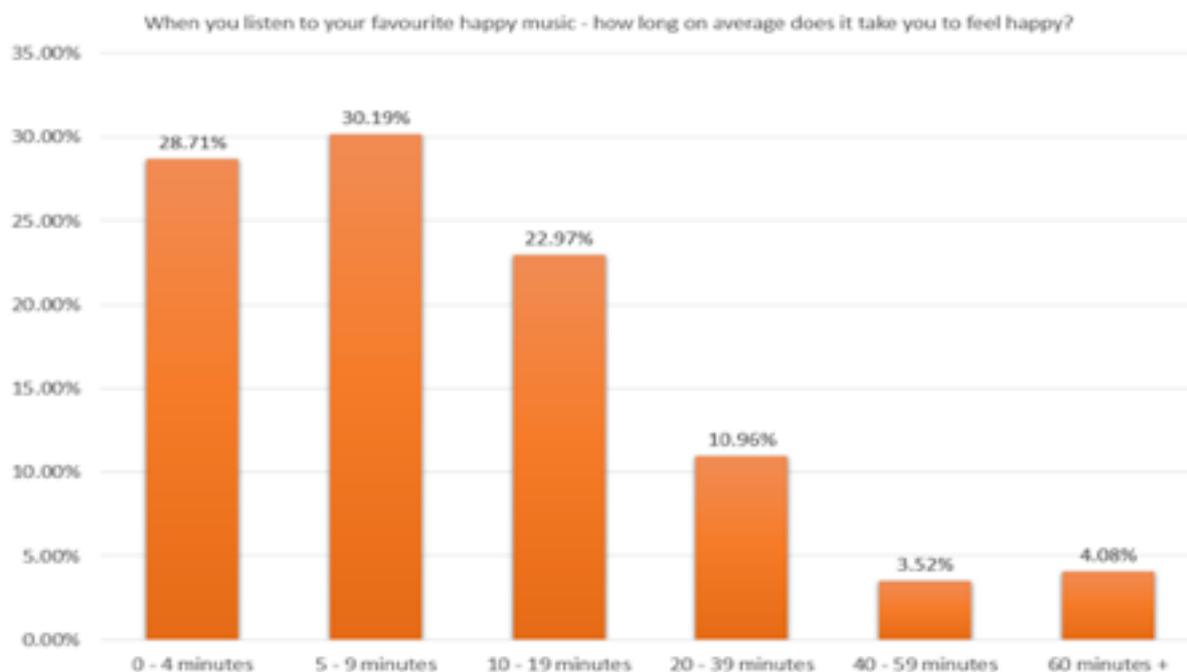
It was found that music with a fast tempo and a driving rhythm and happy or meaningful lyrics are most the effective in improving mood-state.

Duration

It is important that you sing for a certain length of time for optimum effect. When it comes to boosting mood 7500 participants were then asked how long it took them to feel good after listening to positive music.¹⁵

Common Dosage for Happy Music - 5 minutes

Average Dosage for Happy Music - 14 minutes



Make sure you sing for at least 5 minutes to feel the uplifting benefits of singing. If you are feeling particularly down, then choose a few of your favourite tracks that add up to around 14 minutes to get the maximum sonic vitamin boost!

Therapeutic Effects

A questionnaire was used to determine how happy people felt following listening to upbeat music and to which degree the music affected them. Elements of the Oxford Happiness questionnaire¹⁶ was used to analyse the extent of happiness experienced.

32.07% of people felt that they strongly agreed to being happier after listening to the music.

64.97% became happier

89.14% agreed to having more energy

64.97% said they laughed a lot more

86.31% agreed to being more satisfied with life

84.67% felt they had a more cheerful effect on others

82.35% agreed that they felt they were able to take anything on

82.4% of people felt more in control of life

80.06% felt that being happier helped them to make decisions.

The top 100 most popular karaoke songs of 2019 were analysed¹⁷, findings from previous research and 26 - years' experience of how music can be used for therapeutic purposes was drawn on to inform the choice of music for the playlist.

Lyrical Content

Songs with positive or meaningful lyrics are really effective at boosting mood-state.

Driving Rhythms and Fast Tempo

Songs with a driving rhythm are particularly good because they have that irresistible toe tapping ability! This driving rhythm not only improves mood-state but increases oxygen flow. Make sure you dance around at the same time for maximum effect!

Breathing

As well as being energizing, singing can help reduce stress because it regulates breathing. Choose tracks which help you take deeper breaths and control them for longer, reducing stress and increasing oxygen as well as feeling good.

Conclusion

In this study we discovered that singing alters the hormones and neurotransmitters that boost mood-state and the immune system. We have also found that singing reduce stress, which is linked to so many health conditions. We have explored the research that shows that listening to positive music for more than 5 minutes a day can improve mood state and that engaging in music by singing or playing instruments is more effective than listening alone.

We have also found that singing can be good for mental well-being, and that through group singing we can nurture our spiritual health and sense of belonging. Singing also boosts the immune system which may help reduce frequency of illness.

We have identified the 3 most important ingredients in music that may help improve health and wellbeing which are lyrics (to boost mood, increase Dopamine, reduce stress), driving rhythm (to boost mood and increase oxygen flow) and breathing (to reduce stress and increase oxygen). We have also identified a duration of time to sing to increase mood-state.

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