The physical benefits of singing relate to:

(1) Respiratory and cardiac function  Singing is aerobic in that it is a form of exercise that improves the efficiency of the body’s cardiovascular system, with related benefits to overall health. Aerobic activity increases the oxygenation of the blood, which also improves overall alertness. (A study in October 2007, for example, suggested that breathing pure oxygen was more beneficial than caffeine for increasing driver alertness.) Even when seated, singing involves dynamic thoracic activity, with benefits to the underlying structure and function of the breathing mechanism. Major muscle groups are exercised in the upper body. Furthermore, aerobic activity is linked to longevity, stress reduction and general health maintenance across the lifespan. Improving airflow in the upper respiratory tract is likely to lessen opportunities for bacteria to flourish by keeping the airways open (e.g., to counter the symptoms of colds and flu). Overall, there are whole body physical benefits from singing.

The lifelong impact of early singing experience: an example

Formative singing experiences in childhood can be very important because they often have long-term impacts (positive and/or negative) on developing musical identity and on how ‘musical’ we think we are. For example:

“...Then in Grade 6 [age 11]...I stood up to sing it and she told me to sit down, that I couldn’t sing. Well, I was devastated...I’m sure I wanted to cry. Of course you came home, it was no good of telling your parents at the time that something like this had happened to you...And she was such a powerful person in the community...It stayed with me for so long. It was so degrading at the time. Even in high school, if there was anything to do with music, I hated music...I didn’t learn it. I couldn’t learn it, as I thought...I’m sure that [incident] affected it, in a lot of ways...maybe she just didn’t have the knowledge and it didn’t come to her—'I am doing something that’s going to affect this child for most of her life.’ That’s probably the way it was.” (Laura, aged 43 - cited by Knight, 2010)
(2) The development of fine and gross motor control in the vocal system  The more that the vocal system is used appropriately, such as in healthy singing, the more that the underlying anatomy and physiology realise their potential in terms of growth and motor coordination. This is very important in childhood and into adolescence because it is a time when the underlying basis for lifelong vocal identity and effective communication are established.

(3) Neurological functioning  Singing behaviour is multi-sited neurologically, networked across many different brain areas. These include the development and interaction between parts of the brain dedicated to aspects of music (such as pitch, rhythm, timbre), language (lyrics), fine motor behaviour, visual imagery and emotion. New research also suggested that singing with someone else is not the same as singing alone or with an instrument because it involves neurological areas related to human social interaction and coordination.

The psychological benefits of singing relate to:

(1) Intra-personal communication and the development of individual identity, both in music and through music  Confident and healthy voice use links to a positive self-concept and an ability to communicate. Successful singing promotes self-esteem, general confidence and also self-efficacy. The voice is a key component of who we are; its use reflects our mood and general psychological wellbeing, communicated to ourselves as well as to others.

(2) Singing is a cathartic activity  Singing provides an outlet for our feelings. Through its physical activity and the related endocrine system triggering, singing can allow us to feel better about ourselves and about the world around us. From pre-birth, our earliest auditory experiences are vocal (from first hearing our mother’s voice inside the womb) and all voice use, including singing, is interwoven with core emotional states that are central to the human condition, such as joy and sadness.

(3) Inter-personal communication  Healthy singing enables us to maximise our potential to communicate with others. We learn to improve our underlying vocal coordination, to increase vocal colour and impact intentional variety into our vocal communication. Indeed, for 25% of the working population, voice is a critical tool-of-trade (e.g. teachers, lawyers, clergy, telephone salespeople, actors, singers, and business people). Singing exercises the basic voice mechanism and improves its functional capability.

The social benefits relate to:

An enhanced sense of social inclusion  Successful singing ability is strongly correlated with a positive sense of social inclusion, of a feeling of belonging to our community. Singing with others enhances the possibilities of empathic relationships with those around us. Collective singing, such as in a choir or small group, generates a positive group identity, as well as physical and psychological benefits.

The musical benefits relate to:

(1) The realisation of our musical potential  Singing activity fosters our intellectual engagement with music. This includes an understanding of musical structure, phrasing, the development of musical memory (including repetition and variation) and tone colouring, as well as other musical building blocks (such as pitch, rhythm, loudness).

(2) The creation of an individual musical repertoire (whether as a listener or performer or both)  There are concomitant social and personal benefits through increasing the likelihood of empathic understanding of others and ourselves by the kinds of songs (music and text) that we experience, whether alone or in groups.

The educational benefits relate to:

Increasing knowledge, understanding and skills about the world around us, both in music and through music  Singing will likely make you more competent in your own language, including an improvement in reading skills. Reading lyrics and reading music are processed in the same neurocortical regions for symbol decoding.

Overall... these combined benefits suggest that singing is one of the most positive forms of human activity, supporting physical, mental and social health, as well as individual development in the same areas.

Singing is important because it builds self-confidence, promotes self-esteem, always engages the emotions, promotes social inclusion, supports social skill development, and enables young people of different ages and abilities to come together successfully to create something special in the arts.
Singing competency develops in a nurturing environment: The evidence from *Sing Up*

The above figure illustrates how singing competency (left-hand scale) develops with age (horizontal scale) across childhood. During the first three years of the National Singing programme *Sing Up* (2007-2010), a research team from the Institute of Education, University of London assessed the individual singing abilities of $n=9,979$ children. Some children were assessed more than once across several years, generating $n=11,388$ singing assessments in total. Two singing development trend lines are evidenced in the figure:

- The lower line (red) indicates that older children tend to be more skilled at singing than younger children, i.e., it is normal for singing competency to develop with age;

- However, the upper line (blue) indicates that children with particular experience of the *Sing Up* programme not only developed singing competency with age, but that these children were - on average - two years in advance developmentally in their singing skills compared to their non-*Sing Up* peers.

- The youngest children were up to three years in advance, suggesting that positive, nurturing experience is likely to have an even greater impact if you provide appropriate singing activities in the first years of schooling.

**Useful websites:**

- International Music Education Research Centre [http://www.imerc.org](http://www.imerc.org)
- National Center for Voice and Speech [USA] [http://www.ncvs.org](http://www.ncvs.org)
- Voice Care Network UK [http://www.voicecare.org.uk](http://www.voicecare.org.uk)
- Sydney De Haan Research Centre for Music, Arts and Health [http://www.canterbury.ac.uk/Research/Centres/SDHR/Home.aspx](http://www.canterbury.ac.uk/Research/Centres/SDHR/Home.aspx)


