

Exercise for musicians

– play fit, not flat!

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Musicians are regarded by some of us who specialise in the field of music medicine as elite athletes, with highly complex and skilled physical movements required to play an instrument well. However, a striking difference can be seen in the approach to looking after the physical body, which is after all an integral part of any music-making. Sports people spend much of their training time working on fitness regimes outside simply performing a given sport, which keeps their body in balance to support their athletic pursuits. In contrast, musicians often develop marked asymmetries as a result of playing their instrument, which if left unchecked can ultimately change the structure of the body and hence make it vulnerable to injury. Typically, body parts such as the hands and fingers are overworked with not enough attention paid to postural muscles such as between the shoulder blades or the abdominal muscles, and to overall cardiovascular fitness.

What are the advantages of exercise? Injury prevention is only the start of the benefits of exercising regularly. Cardiovascular exercise reduces the risk of many diseases such as heart disease and diabetes, which are becoming more prevalent now as we become more inactive as a society. Strengthening exercises work by increasing muscle fibre size and also the ability of these trained muscles to store products such as glycogen that are required fuels for our muscles. Regular endurance exercise increases the number of blood vessels in the forearms and hands which then enables better transport of fuels to these muscles when playing.

As part of my PhD studies, I ran exercise classes for university level music students. There were two groups of students, one doing training with higher weights and less repeats of each exercise, while the other group did lower weights and higher repeats of each exercise. Exercises were focused on 'core' strength muscles including spinal postural muscles, abdominal muscles, shoulder blade and specific shoulder muscles that are generally under-worked in the musician population. The exercise classes were

run twice weekly for 6 weeks, and even in this short time frame results showed clear reduction in injury severity and frequency, and reduced exertion in terms of how long they could play for. Many of these musicians felt that their playing performance also improved substantially as a result. I was invited to Berlin last year to spend time with one of the music medicine specialists there, and was interested to learn that the high school music students in some of their conservatories must complete at least two physical activity sessions a week as part of their musical training.

In recent research, there has been an attempt to find answers to how often and how much people should exercise. In general, exercise should reflect the kind of demands of your work. For example, a power weight lifter should work on developing very powerful support muscles for the sudden high loads placed on the system. In contrast, orchestral musicians are likely to benefit from lower loads, but longer periods of exercise so that their muscles are conditioned to support them throughout their relatively long playing days. It seems likely that you should try and exercise at least twice a week, and each of these sessions should last at least 45 minutes. If you are recovering from an injury, or working on a specific problem (such as muscle imbalances), you will usually need to increase the frequency of exercise, but may need to do shorter sessions.

The kind of exercise that you do is also important to consider. There are endless ways to work on your strength or endurance, so one of the most important considerations should be finding a way to exercise that is intrinsically appealing so that you can stick with the program and be motivated to continue. Of course, it is important for the musicians that the program mostly works on the under worked muscles and does not focus on the muscles that are already strong from playing. So, most musicians do not use the shoulder muscles that squeeze their shoulder blades together much, but in contrast use their arms in front of them for many hours, so eventually the shoulders can become

rounded forwards and risk pinching the rotator cuff tendons in the shoulder joint itself. An exercise program that focussed on more strengthening at the front of the chest and shoulders may therefore increase the injury risk rather than decrease it. Ideally, before commencing on a gym program, advice should be sought from someone like a physiotherapist on the most relevant exercises for the person. More generalised programs such as body balance, stretch and flex, Pilates, and some forms of yoga are often popular because they are designed to work a wide range of muscles, and therefore are unlikely to overwork already overloaded structures.

And finally, exercises should be built up gradually to give the system time to adapt. It is also important not to do a workout just prior to playing as this will deplete the energy stores for the actual performance and risk earlier fatigue-related muscle damage.

In summary, exercises for musicians should focus on some component of cardiovascular conditioning to improve transport of fuels to the working muscles and help in preventing fatigue which is a significant cause of injury to muscles. Exercises should be done regularly, at least twice a week, and should focus on muscles such as abdominals, shoulder stabilisers and spinal postural muscles. Even going for a good walk or bike ride a couple of times a week will give advantages to the way the body provides us with energy.

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