

## **Musicians health problems and in their relation to musical education**

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Medical problems affecting musicians do not always capture public attention. Nevertheless, they represent an important issue for that profession. Medical problems affect very often the quality of life of the musician and also force him to limit or to stop their professional aspirations. Repetitive movements performed under low ergonomic standards, as well as under external or self imposed pressures, make the musician very prone to suffer from illnesses related to their profession. This unfavourable scenario very often appears to be aggravated because of the poor formation and musician's awareness of the physical work they use. That leads very often to negligence regarding basic principles of training, of regeneration, and learning added to a poor body work. The acquisition of basic knowledge about anatomy, physiology, ergonomics and postures appears to be essential in order to change the musicians' attitude. That kind of knowledge, together with the incorporation of programs of physical conditioning and body-work appear to be the proper tool in order to enhance musicians' quality of life. In our understanding, this knowledge should be transmitted at the beginning of the musicians' formation. In addition, the actualization of that knowledge should be carried out by means of preventive work oriented the teachers as well as to the musician himself.

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Based on reports made by musicians, medical problems in this collective appear to be highly infrequent, and may represent a kind of unlucky event affecting only a minority. Moreover, musicians would attempt to say that that kind of problems only affect those having a bad technique. These reports contradict the experience of those centers specialized in the treatment of musicians. There, a huge amount of musicians look for treatment options in order to resolve physical problems provoked as a consequence of playing a musical instrument. In these clinical centers, nobody would think of these musicians as being low-level performers.

In one study carried out in or clinic, among 1.613 musicians including all ages and professional levels, we found that 79 percent suffered from a physical problem related to their profession during their career. This proportion varies a bit according to the family of instruments being played. Among those reporting physical problems percussionists (87 %), wind players (85,5 %), string players (85,1 %), brass players (85,5 %), and those playing double reed instruments (84,6 %) appear to be the most affected. Moreover, even if the greater proportion of the affected musicians belonged to the 3rd decade of age (90 % of the musicians between 30 and 40 years old have problems), it is possible to find a high proportion of musicians suffering from physical problems at even the second decade of age (more than 55 percent). One

could believe that these physical problems are not serious, and that kind of problems are a routine in the musical profession (they will always happen and are essentially unavoidable). Nevertheless, our studies demonstrate that this is not the case. These kind of problems affecting the musicians' collective are serious enough to condition life decisions and also the musicians development. Indeed, 37,3 % of those musicians looking for help because of physical problems express that their problems affect their musical technique. Even if each musical instrument has its own characteristics, and because of that some body regions are more prone to be affected depending on the instrument being played, any instrument can cause any kind of physical problems. The most frequently affected body parts are the hands, the arms and specially the spinal cord at its cervical level.

Even though the causes of these afflictions can be multiple, there are some risk factors of greater weight. In principle, we could say, that: "...*there is no body gesture being so unimportant to be declared immune to lesions produced by means of its exaggerated repetition*". In this regard, the problem for the musicians is that the high-level of hand dexterity and its endurance are determined by a high amount of repetitions. At the same time, these repetition numbers are at the border to the lesion threshold. Moreover, repetitive movements are usually carried out with a determined tension using an instrument designed to allow highly demanding manoeuvres, and high amounts of force added to aesthetic aspects but not designed to adapt to the musicians' body. With that in mind it is easy to imagine that musicians are especially susceptible to suffer from some kind of body illness. Nevertheless, it is easy to speculate -based on scientific knowledge- that the number of lesions in musicians could be limited to a lower percentage if the musicians would pay more attention to the way they use their body while practising and playing. Most probably, the little importance musicians give to the proper use of the body can be attributed to a non-developed awareness about the activity they perform. In other words, musicians appear to miss precise knowledge about the specific regions of the body involved in the highly demanding physical effort. A very important factor may be that efforts and tensions related to musical performance do not generate immediate symptoms of body misuse. The repetitive activity generates, in most of the cases, only minimal changes which are imperceptible at the very first moment and only noticed on the long run.

Normally, there is a releasing factor which affects a body part previously overused. Most commonly, changes in working routine (as for example enhancing the amount of work before exams, auditions, concerts, etc.), changes in repertoire, technique, the instrument or the teacher added to personal factors (familiar or related to the work place). Usually, the musician tries to cope with the problems by himself avoiding asking for help teachers or colleagues. On the one hand, that appears to be the result of fear of losing the workplace, added to the fear of being misunderstood as having a bad technique. On the other hand, consulting medical practitioners does not

necessarily mean being understood, and almost always implies the recommendation to stop playing, a recommendation the musician fears.

In our opinion, a huge amount of these problems could be avoided if more importance were given to the physical and psychical aspects of the musical performance. A “manual of the physical functioning of the body” appears to be mandatory in the first stages of music education. The idea is not to offer a complicated knowledge of physiological as well as anatomical rules. Nevertheless, the musician should be aware of the basic physical limitations of the anatomical structures responsible of the musical performance. At the same time, it would be desirable that the musician knows under which conditions his body works with high amounts of efficacy, and most importantly, when he could be using the body at risk levels. Such kind of knowledge may lead to necessary changes associated with a healthy way of working, with better ergonomics, and also better physical and psychical conditioning. When the musician understands under which conditions muscular or mental fatigue are more intense, in which gestures of technique there is overload for the joints and more tension, he probably will introduce more breaks within a work session. In addition there would be a higher probability of progressive instead of sudden changes in practice intensity. Mental work during periods of physical rest may fill in the gap.

This kind of preventive knowledge could be transmitted to the students by the teachers who may receive a continuous education from health professionals. In this domain, a real problem is the teacher himself who usually refuses such an education interpreting such a process as an intrusion in the musical profession. This attitude, together with structural, as well as economic limitations of our country stops the development of such necessary preventive programs. Some other limitations are being imposed by the need of medical professionals to go into the musical academies for the transmission of the necessary knowledge, as well as the necessity for the adequate setting, like for example medical and physiotherapy rooms which are only available within dance academies.

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