

1 PLAYING POSTURE AND USE OF MUSCLES

1.1 POSITIONING THE INSTRUMENT

The instrument should be positioned so that:

- 1: the bow can easily be moved over the strings right down by the bridge (i.e. without having to bend the torso very much),
- 2: the torso is not prevented from moving in any direction,
- 3: the left hand can easily reach 3 inches (7-8cm) below the end of the finger-board.

1.2 SITTING POSTURE

When sitting, one most easily fulfils the three conditions mentioned above by turning the instrument slightly to the right and supporting it on the inside of the left thigh. The left foot can be placed on the floor, or on a footrest (stool rung) up to about 8-10 inches (20-25cm) high. The right foot should be **on the floor**, where it can best support the whole



Fig. 1.2(i): Correct sitting posture.

body. The seat of the chair or stool should be about 27-28 inches (70cm) from the floor. There is no reason for having **both feet and** the instrument raised above the floor.

It is important to sit well in on the seat, to avoid a bad position for the hip joint and an uneven distribution of the weight of the upper part of the body. A round seat makes it easier to vary one's position, in order not to get tired so quickly. Some stools and chairs have seats shaped like a bicycle saddle, but these are not to be recommended, as they severely restrict choice of posture. *It is easier to obtain a correct spine balance if the seat is tilted about 5 degrees forward.*

The photographs, fig.1.2(i)a and b, show a correct playing posture. Notice that the lower part of the back is kept straight and not allowed to collapse outwards. When playing, the whole torso has to give support to the bow, which means that the torso is in constant movement. This movement also helps to counteract fatigue and stiffness in the back but presupposes that the back is in balance.

If the bow touches the right thigh when playing in the upper half on the E string, it can be given more clearance by moving the **left knee** (and thus the instrument, too) a little further to the left, whenever necessary.

The left knee often has a damping effect on the sound because it is in contact with the back of the instrument very near the soundpost. One solution is to use an inflatable cushion (in the photograph, fig.1.2(ii)a, a viola shoulder-rest - "Play-on-air") - or a special knee-rest made of thin laminated wood or other suitable material, which does not touch the instrument except at the edges of the back fig.1.2(ii)b. The difference is often very noticeable.

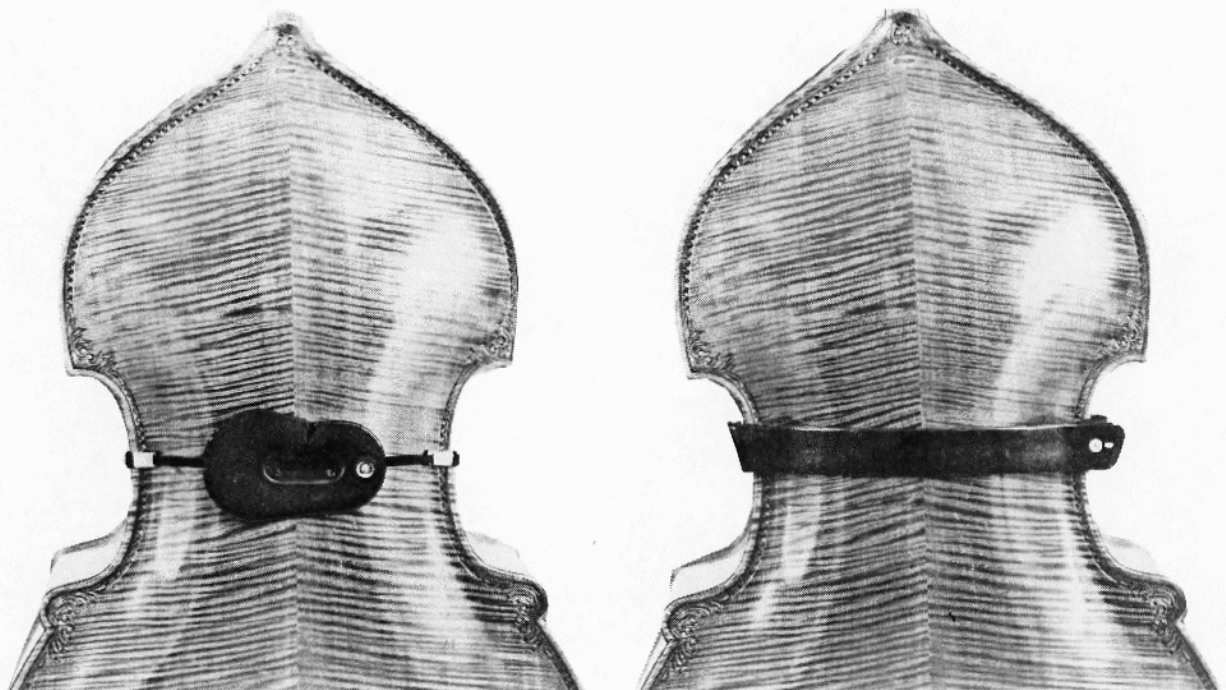


Fig. 1.2(ii): Accessories to minimize damping effect of the knee.

1.3 STANDING POSTURE

Personally, I nearly always play sitting down, but many prefer to stand, especially when appearing as soloists. When standing, the instrument should be rather more upright, so as to be as well balanced as possible. One thus avoids having to use the left thumb to support the instrument when playing in the lower (normal) positions. Changing from normal to thumb position is also made easier. The instrument can be steadied a little by the left knee, so that it doesn't turn, but **the weight of the body must be evenly distributed on both feet, and also with even distribution between toe and heel.** (See photograph, fig.1.3. Note the height of the instrument compared with the body.) Take advantage of the freedom of movement that this position allows.

If one has difficulty in reaching the highest harmonics, one can move the right leg a little more to the right - i.e. away from the instrument, which will then assume a slightly sloping position, thus enabling the left arm to reach further down towards the bridge. In this case the instrument will be supported by the body.

Be careful not to move the left shoulder forward to support the instrument when playing in thumb position. Lean the instrument a very little forward instead. Only when the left hand is at work in the very highest thumb positions may the shoulder be permitted to come in contact with the neck of the instrument.



Fig. 1.3: Correct standing posture.

1.4 A LITTLE PHYSIOLOGY

When playing an instrument as physically demanding as the double bass, it is important to have some knowledge of the way the body functions, if one is to avoid overloading certain groups of muscles. Strained muscles can develop into the more serious condition, tendonitis, which usually takes a long time to cure.

Muscles need oxygen; this is carried by the blood, which also takes away waste products caused by muscular activity. It is important to ensure good circulation in muscles which are at work. When a muscle is extended and then contracts, the blood is first absorbed and then squeezed out, as if by a sponge. The larger the muscle, the more blood it can absorb. Muscular activity increases the diameter of the surrounding blood vessels, improving the blood supply. Oxygen-rich blood is carried by arteries to the muscles, but the pump-like muscular activity is indispensable if there is to be a really effective distribution. If you were freezing, you would automatically begin to move your limbs in order to increase the blood circulation.

Many players think they are saving energy by making the smallest possible movements of the left hand fingers when releasing and pressing down the strings, and keeping the rest of the left arm still. The opposite is true: in the first place, the pressing down of the strings is left to relatively small muscles; second, the fingers get little or no support from the rest of the arm; third, the distribution of oxygen is impaired, because most of the larger arm muscles are at rest, not pumping blood. Free movement of the whole arm leads to increased stamina.

A 'harmonious movement' can be regarded as a **chain reaction** by the muscles involved: **the largest and strongest start the movement, the smallest complete it.** Imagine the sequence of movements in the body when throwing a ball. Here it is important that in the chain there is no link too weak to transfer the support given by the largest muscles. It is, for example, not unusual for a player's left hand little finger to collapse at the innermost joint, because the muscle involved, situated within the hand, is not strong enough to prevent the joint from collapsing. This results in unsatisfactory weight transfer and increased demands on the smallest finger muscles and tendons. In such a case the muscles within the hand must be developed; one can do this by kneading a lump of modelling wax the size of a tennis ball, so that the inside of the hand is activated as much as possible.

As regards stamina, healthy muscles can increase their powers of endurance by repeating a movement until fatigue (stiffness) appears.

At this moment, it is vital to stop, because the exercise will no longer be beneficial. Tired muscles should be contracted and stretched several times to return the limb to normal, waste products being removed by the blood and the oxygen returning. **If one has recently had problems such as tendonitis one should always stop well before stiffness occurs.**

There are two places where double bass players very easily get stiff after playing for a while; these are the muscles in the nape of the neck and those lying between (and connecting) the shoulder-blades.

Tension occurs in the muscles of the nape of the neck if the shoulders are raised or pushed forward for any considerable length of time. There is an exercise which will help the blood circulation: raise the shoulders as far as possible, close the shoulder-blades, and then relax the shoulders. Repeat this a few times, and then let the shoulders fall forward and hang heavily with the arms straight downwards.

Tiredness and pain in the muscles between the shoulder-blades occur when these muscles are too weak to keep the shoulder-blades sufficiently together, and thus get stretched to an extreme length. These muscles can be strengthened by lying face downwards with arms stretched straight out one each side. Raise and lower the arms (like a bird flapping its wings) by drawing the shoulder-blades together. (This can also be done with a small weight in each hand.)

