

Maladies of Brass Playing

INTERNATIONAL MUSICIAN MAY 1999

BY LUCINDA LEWIS

Stiff lips, swollen chops, lip pain, abrasions on the lip or in the mouth caused by a mouthpiece or a tooth, focal dystonias, stretches or tears of the lip muscle, yes, there are many maladies of brass playing, none of which has drawn much notice from the music medicine community. Of course, it's not difficult to understand why.

Performance injuries that have received the greatest attention from music medicine practitioners, such as carpal tunnel syndrome, tendonitis, back problems, or bursitis, are symptom-specific and, therefore, relatively easy to diagnose and treat. Such injuries are also very common in the general population and are usually a source of constant discomfort, regardless of occupation or activity.

Brass players, on the other hand, suffer with embouchure problems and lip injuries unique to their occupation and painful and troublesome only while playing. Injuries whose symptoms almost always include loss of technical control, lacking endurance, difficulty playing in the high range, hollow, airy sound, chronic lip swelling, lips that feel rubbery or numb, and localized lip pain. It is the presence of pain, swelling, and lacking endurance which usually sends a player on a lengthy and expensive odyssey in search of a medical explanation.

Unfortunately, most physicians are completely baffled by this litany of complaints and have no clue as to a cause. So, absent any discernable medical condition, a physician will often just try to treat the symptoms. After weeks or months of fruitless medical treatments, players are left trying to self-diagnose their own problems. It is not at all unusual for afflicted players to conclude, for example, that their loss of playing control and endurance has a neurological basis; that their recurring, painful lip or mouth abrasions are the result of their teeth having moved; or that their chronic lip swelling is an allergic

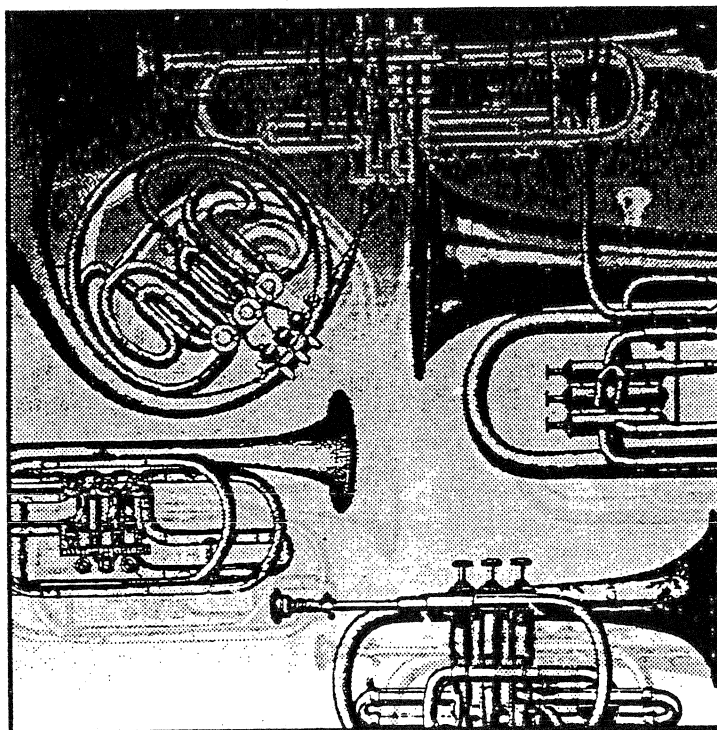
reaction to the metal of their mouthpieces or to food or environmental substances.

Lip Swelling

While every brass player experiences lip swelling from time to time, for the chronic sufferer swelling almost always appears very shortly after he begins to play and prevents him from feeling his lips or mouthpiece normally. Understandably, someone plagued by this sort of relentless, inexplicable swelling

in the form of contact dermatitis, the reaction usually presents itself as a crusty, painful rash on the skin and not as localized swelling.

In diagnosing the cause of persistent lip swelling in a brass player, it is essential to determine whether there is swelling elsewhere in the body besides the lips (ankles, hands, wrists, face, eyelids, etc.). Generalized swelling in the body would indicate the presence of a physical disorder. The second consideration is whether the swelling is



looks for a physical explanation, such as an allergy to the metal of his mouthpiece rim.

Tissue swelling can result from either physical trauma or a physical disorder. Obviously, a severe trauma like a blow to the lips would cause them to swell. Any physical disorder that causes edema (fluid in the tissues) can cause the extremities, including the lips, to swell. Certain medications can cause fluid retention and general swelling. Allergic reactions to ingested substances like foods, herbs, or vitamins, or to environmental or chemical exposure can also cause the extremities, and not just the lips, to swell. Although allergies to metal do exist, such as

only noticeable in the lips and occurs only during playing. If chronic swelling only affects the player's lips and only when he plays, more than likely, his problem is the result of minor, mechanically induced playing trauma.

Mechanical Flaws

Mechanical flaws in a player's embouchure system masquerade as a variety of nasty physical and playing symptoms. Often they will develop after a very heavy period of intense, physically demanding playing, where the muscles have become so taxed that the player's normal embouchure system is unable to configure properly. Although there are many things which can effect a

player's mechanics, chronic lip fatigue is frequently a key factor in causing one's natural, healthy embouchure mechanics to change into an unproductive, injury-prone system.

Playing several hours a day, day after day, saps the muscles of their strength, especially if the player is not used to such heavy playing. It doesn't take many days of this abuse for the lip muscles to succumb. With each successive day, the lips fatigue more quickly. Soon, there is a loss of control and flexibility. The lips feel stiff, rubbery, and unresponsive and are usually bruised and swollen. For the player who is preparing for an important performance or audition, panic sets in. His first reaction is to practice harder. The harder he works, the more fatigued his muscles become. As his playing suffers, the more panicked he becomes, and, of course, the more adrenaline his body generates, the weaker his chop muscles will feel.

Muscle Fatigue

Unfortunately, few players understand the cumulative effect heavy playing has on their chop health and on their playing mechanics. Mechanical changes in a player's physical approach unconsciously occur to accommodate playing problems presented by muscle fatigue. When a player is routinely compelled to substitute his natural playing system with a more forced, effort-filled version, it won't take long for his mechanics to change. The older a player becomes, the longer it takes for his embouchure to recover from the ever-increasing professional stresses expected of it.

A typical embouchure problem is usually the incarnation of the untoward physical effects of too much playing and not enough recovery. There is a pattern of events, which leads from chronic fatigue into an embouchure malaise. A player first struggles with his mechanics, causing him unconsciously to employ more lip compression, mouthpiece pressure, and general playing exertion. Even though he has noticed that his

chops have been chronically stiff and tired, he has no idea anything is amiss until his technique begins to suffer. Finally, fully aware of his problem, he desperately tries to right the ship, but nothing works, and everything feels wrong.

His lips become so stressed and weary that they are always sore, and his embouchure muscles constantly feel heavy and dead, even when he is not playing. Playing loud dynamics is difficult and twice as tiring. Eventually, his mechanics are so weak and out of sync that they can no longer provide the level of playing resistance he needs for controlled playing.

As his embouchure system totally collapses, his sound becomes hollow and airy, he can no longer control the instrument technically, and he struggles mightily with his high range. Bruising, swelling, stiffness, and fatigue become constant, unwanted companions. The more his chops hurt, the more his mechanics defer to the discomfort. Is it any wonder that playing becomes a painful daily battle?

Chop Injuries

Recurring localized injuries to the surface of the lips or to the inner lining of the mouth are sure signs of mechanically induced playing problems. Once a player has developed a flaw in his playing mechanics, his chances for developing a lip injury of one degree or another increases dramatically. The erroneous assumption is that damage to a player's lip muscle occurs suddenly as a result of extremely stressful playing. That does happen, but only very rarely. In fact, most of the time, serious injuries to the lip muscle develop slowly from a painless embouchure malaise. The upper lip is injured more often than the lower; however, recurring pain in either lip is an important symptom, which should not be ignored.

Brass players have a wonderful built-in alarm system which can alert them to mechanical problems and chop injuries: chronic lip fatigue, stiffness, swelling, and pain—and in that order. The first

three are early warning signs. The fourth should be considered a wake-up call. A player suffering from all four symptoms at the same time and for an extended period of time probably has a playing injury. There are three degrees of injuries which can occur to a player's lip muscle, hot spots, stretches, and tears. (Tears are also sometimes referred to as Satchmo's Syndrome.) A player can tell the extent of his injury largely from the physical and playing symptoms he has been experiencing.

Chronic hot spots are an early sign of recurring damage to the lip. They are first felt only periodically, but as a small, localized area of sharp or burning pain on either the upper or lower lip and on a spot directly under the rim of the mouthpiece. The tender area does not begin to hurt until after the player has played for a while and ceases to hurt when he stops. Sporadic loss of technical control, occasional bouts of localized lip pain, accompanied by lacking endurance, and difficulty playing in the high range are the most common playing symptoms. A hot spot is a major red flag because it is a significant indicator of developing mechanical problems within a player's embouchure system.

A stretched lip muscle is an advanced form of a hot spot and is accompanied by constant playing discomfort, loss of technical control, lacking endurance, general chop weakness, difficulty playing in the high range, and a lack of seal when playing (air escaping from the lip in the area of the injury). A player can usually feel a thinning of the lip tissue where the muscle is stretched.

A tear in the lip muscle occurs when the muscle actually ruptures and a discontinuity of the muscle fibers develops. A tear has the identical symptoms of a stretched muscle, but the overall impact on playing is much more dramatic. A player will often experience lip discomfort even when he is not playing and may feel a "balling up" in the area around the injury from fat herniating through the tear. There are reported cases of sudden tears to the lip muscle, which occur during strenuous playing or using a very thin, sharp-rimmed mouthpiece one is not used to.

A sudden tear is usually felt as a painful "snap" or "pop" in the muscle. Highly motivated young students can fall victim to sudden tears of the lip muscle when they over practice or try to master their high ranges too quickly. Players with injuries to their lip muscles

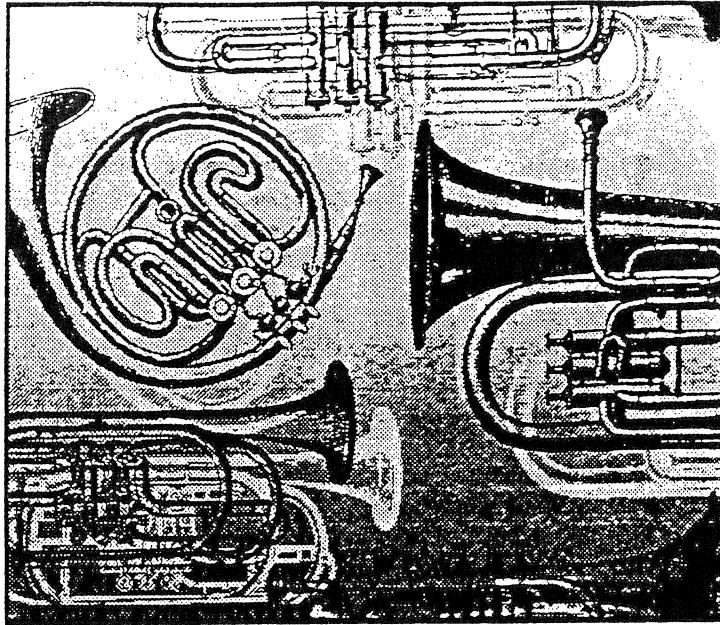
dystonia is an overuse syndrome that causes a kind of short circuit of motor signals in the sufferer's brain and completely inhibits his physical ability to perform. In a string player or pianist, a finger is often affected. In a brass player, a dystonia can appear in the lip (usually the upper)

Avoiding injury can be as simple as applying a little common sense. Overcoming an injury requires massive doses of it.

Every brass player suffering with an embouchure malaise or lip injury believes that he is forever doomed to performing on painful or uncooperative chops and will never be able to repair his playing back to the level he once enjoyed. The good news is, every one of these problems can be repaired and by the player himself. While it is neither a quick nor simple task, it must begin with retraining basic embouchure mechanics.

To that end, it is useful for a player to compare how his buzzing embouchure differs from his playing embouchure. There's a novel little oddity about embouchures. A player's healthy chop mechanics always seem to be present in his buzzing (sans mouthpiece) embouchure. If an afflicted player watches himself in a mirror and analyzes how his muscles configure when he just buzzes as opposed to how they configure when he actually plays, he will likely see for himself where the weakness is. Although buzzing and playing do have certain minor differences, the configuration of the muscles should be comparable in both. In other words, even in the throes of the worst embouchure problem or lip injury, a player's healthy chop mechanics are still there just waiting to be rediscovered. ◊

This article was adapted from the forthcoming book by Lucinda Lewis, The Embouchure Handbook. She has been the principal horn of the New Jersey Symphony Orchestra since 1977 and Secretary of the International Conference of Symphony and Opera Musicians since 1990.



may need to consult a physician; however, finding one who knows how to treat such an injury is not that easy. One of the few physicians who has great experience and success in treating lip injuries is Dr. Simon McGrail of Toronto, Canada.

Whether a player is suffering with a stretch or tear of the muscle, Dr. McGrail tells him, "It's not how long you play, it's how you play. If your technique is not good, problems will begin." So he advises his brass-playing patients to return to the basics of playing and even to go back to their teachers to work on embouchure fundamentals if need be. Interestingly enough, Dr. McGrail, who has surgically repaired the torn lip muscles of approximately thirty players, does not recommend that injured players stop playing. Economics is one reason. Most players simply can't afford to stop. But he also recognizes the enormous emotional and psychological impact lip injuries have on players and says that continuing to play on an injured lip will not cause further damage.

Focal Dystonia

One of the most frustrating and debilitating problems any musician can develop is a focal dystonia. A

as an uncontrollable spasm or sneer; or it can present itself as quivering lips in the middle aspect of a player's range; or it can show up in the jaw, causing the teeth to become uncontrollably clenched as a player begins to play. While some drugs are prescribed for focal dystonias, no cure exists. There are a few physicians who have worked with musicians in retraining the afflicted muscles but with limited success. Since a dystonia is a neurological problem, a player suffering with any sort of uncontrollable spasm or quiver should seek the advice of a good neurologist.

Back to Basics

It's only natural to believe that once we have mastered the technical difficulties of a musical instrument, the physical mechanisms we perfected for playing are somehow permanently encoded on our mental hard drives. Unfortunately, the stresses of life and the physical demands of a professional career can have a deleterious impact on our overall capacity to play. While our performance experience provides us with the aptitude for overcoming playing problems, sometimes that ability causes us to lose sight of our physical limitations.