Introduction
Myofascial pain syndrome (MPS) is a musculoskeletal disorder that can be acute or chronic. It is precisely defined [1••], and its consequences in terms of dysfunction, disability, and financial loss are great. Lack of a pathoanatomic basis for the formation of trigger points (TrPs) has led to a questioning of its existence [2], although an equal lack of a proven basis for migraine headaches for many years did not keep people from suffering from migraine. The pathophysiologic basis for the formation and persistence of the myofascial TrP is under vigorous investigation in a number of countries today. MPS is often compared with, contrasted to, and mistaken for fibromyalgia. In the International Association for the Study of Pain publication, Classification of Chronic Pain [3], MPS is mentioned only in connection with fibromyalgia: "We consider myofascial pain syndrome (diffuse or not) to have a somewhat different meaning and think it adds confusion to use the term when discussing fibromyalgia." Nowhere else in this classification is MPS mentioned. This article discusses the classification of MPS in relationship to other pain disorders. The term prevalence will be used in its accepted meaning of a percentage of a population that has a given condition during a defined period of time. The incidence is the number of persons who develop the condition or who develop new symptoms during a specified time period.

Classification
Definition
Myofascial pain syndrome is defined as pain of muscular origin that originates in a painful site in muscle. This site is characterized by a motor abnormality (a taut or hard band within the muscle) and by sensory abnormalities (tenderness and referred pain). It is classified as a musculoskeletal pain syndrome that can be acute or chronic, regional or generalized. It can be a primary disorder causing local or regional pain syndromes, or a secondary disorder that occurs as a consequence of some other condition. When it becomes chronic, it tends to generalize, but it does not change to fibromyalgia. It is a treatable condition that can respond well to manual and injection techniques, but requires attention to postural, ergonomic, and structural factors, and toxic or metabolic factors that impair muscle function.
relationship to the development of the taut band is presently being investigated. Nevertheless, the argument for the spontaneous electrical activity originating in a dysfunctional motor end plate is compelling.

A second pathophysiologic abnormality uniquely associated with the myofascial TrP is the local twitch response. This is a sharp contraction of the taut band (and of closely related taut bands, but not of the entire muscle in contrast to a tendon reflex) that is a spinal cord reflex, which is initiated by a sharp physical stimulus such as plucking of the taut band by hand or by the insertion of a needle into the trigger zone of the taut band [6].

The sensory manifestation of the TrP is tenderness. Tenderness at the TrP zone is either an increased pain response in relation to the stimulus (hypersensitivity) or a pain response to normally nonpainful stimulation (allodynia). Both phenomena involve central sensitization at the dorsal horn level and higher [7••]. Referred pain is not necessary for the identification of a TrP, but is intrinsic to the reproduction of a subject’s pain by stimulating the TrP, because most often perceived pain in the MPS is referred pain as well as local pain.

A muscle with a TrP does not work effectively. The taut band restricts the stretch of the muscle, thereby limiting associated range of motion. Weakness is produced by pain-induced muscle inhibition as well as by muscle shortening. Coordination is affected as reflex inhibition of antagonistic muscle activity is impaired.

**Differentiation from fibromyalgia**

Fibromyalgia is a condition of diffuse muscle tenderness without taut bands [8••,9]. It is defined as a chronic form of myalgia of at least 3 months duration and widespread muscle tenderness. The distinguishing presence of tender points (TPs) in at least three of the four quadrants of the body (right, left, upper, and lower) are reflected in the research criteria of 11 positive out of a possible 18 predetermined TP sites [8•]. The research criteria have slipped into common usage as the clinical criteria for the diagnosis of fibromyalgia. It is important to realize, however, that TPs are not TrPs. They do not have taut bands and they do not refer pain to distant sites (pain referral zones) as TrPs do [10]. The distinction requires careful attention during physical examination, because all TrPs are themselves tender. The distinction between the two physical features requires the search for taut bands with the examining hand. Identification of referred pain, by definition not a feature of the TP, requires the application of pressure on the tender/trigger point for up to 5 to 10 seconds, because referred pain is a delayed response, not an instantaneous development. Therefore, the examiner cannot sweep over the region to be examined simply to determine if the muscle is tender or not. The most important differential diagnosis for fibromyalgia is, in fact, MPS. The distinction can be made only on the basis of careful physical examination, especially when MPS is widespread.

**Regional versus generalized pain syndrome**

In contrast to the generalized nature of fibromyalgia, MPS has been characterized as a regional pain syndrome [10]. This usage has been adopted from the early teaching of MPS as single muscle syndromes, and numerous descriptions of new presentations of single muscle or regional MPS [11–13]. Shoulder pain could stem from TrPs in the subscapularis muscle and its functional group. Thus, frozen shoulder is a regional MPS, in addition to any other structural involvement such as a rotator cuff tear. Once both shoulders and a hip are involved, however, the possibility that this could still be the result of TrP-related pain seems to be overlooked because the condition is now generalized.

This distinction between regional and generalized pain, the former being MPS, the latter being fibromyalgia, has persisted in the literature, nonetheless [14]. However, MPS can occur as a generalized condition involving three or four quadrants of the body [15,16]. The spread of TrPs occurs 1) through the axial kinetic chain as a result of postural dysfunction and mechanical stress on muscle, and 2) through activation of TrPs in functional muscle groups, where muscles that act as agonists or antagonists become overloaded or mechanically stressed compensating for the dysfunction of other muscles in the functional muscle unit.

**Central sensitization**

Somatic pain can cause rapid changes in the central nervous system, a phenomenon known as central sensitization, which is a manifestation of neuroplasticity, or the remodeling of central processes in response to peripheral stimulation. Central sensitization is important in the development of both tenderness and referred pain, and in the conversion of an acute syndrome to a chronic one, and may be an important factor in the genesis of both fibromyalgia and MPS [17,18]. Central sensitization could explain both the physical findings of widespread tenderness and the generalized hypersensitivity that is seen in fibromyalgia [19], as well as some of the biochemical changes that have been documented in fibromyalgia, such as the elevation of substance P in the spinal fluid [20].

**Primary versus secondary myofascial pain syndrome**

Myofascial pain secondary syndrome can also be classified as primary syndromes (Table 1) that are not related to other medical conditions, and secondary syndromes (Table 2) that occur in conjunction with other medical conditions. Primary myofascial syndromes are often the typical overuse syndromes that are named for the structures involved or for common conditions that produce them. Thus, primary myofascial syndromes in the upper part of the body include tennis elbow or lateral epicondyritis, a condition involving the forearm extensor muscles, the extensor carpi radialis, and the supinator muscle. Another upper body primary myofascial syndrome is frozen shoulder, involving the subscapularis muscle, and usually the infraspinatus,