



# PIN AND STRETCH TECHNIQUE



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## USE THIS POWERFUL SKILL TO FOCUS ON PROBLEM AREAS

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**A**lthough there are many “techniques” in the world of massage and manual therapies, the actual number of fundamental hands-on skill sets that underlie these techniques are few. This is especially true in the world of clinical orthopedic manual therapy (COMT), which is oriented at remedying specific musculoskeletal conditions with which clients present.

Essentially, the fundamental hands-on skill sets of COMT might be listed as soft-tissue manipulation, stretching, and joint mobilization. Most every massage therapist utilizes soft-tissue manipulation; indeed, that is what most people associate with the profession of massage. But when working to remedy a client’s musculoskeletal condition, the effectiveness of a massage therapist’s care is greatly enhanced when stretching is added to the client’s treatment plan.

## STRETCHING

Although there is a lot of debate about stretching, the concept of stretching is actually quite simple and straightforward. Stretching is a mechanical process of lengthening soft tissue. All soft tissues have certain fundamental properties, including the property of *creep*. Creep describes the gradual change in shape (deformation) of a tissue that occurs when it is subjected to a force that is applied in a slow and sustained manner. Applying the principle of creep to stretching, stretching is simply a tensile force that gradually deforms the soft tissue by lengthening it. So, for all the controversy that surrounds stretching, the essential principle of stretching is valid. If performed well and regularly, stretching succeeds at lengthening tight, taut, and shortened myofascial tissue.

## LOGISTICAL CHALLENGES TO STRETCHING

As wonderful as stretching can be, however, there are often logistical challenges when applying stretching to the client. For example, if a stretch is applied to a muscle, it is applied to the entire length of the muscle, pulling one or both attachments of the muscle away from the other. This effectively dilutes the effectiveness of the stretching force by spreading it across the entire length of the muscle. But a client's muscle is not always uniformly tight from one attachment to the other. Sometimes only a small region of the muscle is tight; or perhaps there is a tight myofascial trigger point in one region of the muscle. If the stretch is applied to the entire muscle, it might be so diluted as to not be sufficiently strong enough to stretch the target region or trigger point that is tight. Even more problematic, looser areas of the muscle might compensate for the tighter region, in effect absorbing the stretch

and effectively dismissing the tight region from having any stretch force placed on it, as the hypermobile tissue compensates for the hypomobile tissue. In these cases, the application of the stretch force must be modified so as to be focused on the tight region. This can be done by performing the pin and stretch technique.

## PIN AND STRETCH TECHNIQUE

The pin and stretch technique focuses the force of a stretch to a specific region of the muscle. The therapist uses their hand (or other body part such as an elbow or forearm) to manually place a “pin” into the belly of the muscle and then moves one of the muscle's attachments away from that pinned point. The pin acts to stop the stretch force from spreading to the rest of the muscle beyond the pin point. *Therefore, with the pin and stretch technique, the force of the stretch will be concentrated to the region of the muscle that is between the pinned point and the attachment that is moved.*

Image 1A–1C demonstrate the pin and stretch technique using the right upper trapezius as the target muscle and the head and neck (cervicocranial) attachment as the attachment that is moved away from the shoulder girdle (scapuloclavicular) attachment. In Image 1A, the therapist has placed the pin somewhat close to the scapuloclavicular attachment of the muscle; this results in the stretch being focused on the region of the muscle that is indicated by the red Xs. When the pin is moved closer to the cervicocranial attachment, as seen in Image 1B, the focus is narrowed to a more concentrated region of the upper trapezius near the cervicocranial attachment. If the pin is moved even closer to the cervicocranial attachment, as seen in Image 1C, the stretch is even more strongly focused on a narrow region of the muscle closer to the head and neck. In each case, as the pin moves closer to the attachment

### CREEP: A DEFINITION

All soft tissues have what is termed an *elastic* range and a *plastic* range. A tissue's elasticity describes its ability to return to its normal length after being stretched. If the elastic range of a tissue is exceeded, its plasticity describes the degree to which the tissue will remain altered or deformed.<sup>1</sup> Therefore, creep describes when a soft tissue's elastic ability is exceeded and the tissue enters its plastic range. Differing soft tissues will have differing resistances to being stretched and lengthened. Indeed, fibrous fascial tissue is remarkable for its tensile strength, which is its ability to resist lengthening. But fundamental to all soft tissues is their ability to change their shape and lengthen. Also, the effect of plasticity/creep is not necessarily permanent, so whatever positive effects are gained by stretching must be repeated or the soft tissues will gradually shorten and tighten again. Of course, stretching is not something one can do once or only for a short period of time and then expect to remain loose for the rest of their life. Stretching must be an ongoing part of one's lifestyle.

#### Note

1. The term *deform* usually has a negative connotation, but when a myofascial tissue has become “locked short” (tight), *deforming* it by lengthening it would be considered a positive change, as it would potentially increase flexibility in the body.

that is moved, the focus of the stretch narrows to a smaller region of the muscle, and because the stretch force is concentrated over a smaller region, it becomes more powerful. *Therefore, the entire reason for the pin and stretch technique is to focus a powerful stretch to a specific region of the target muscle.*

### Location of the Pin

The pin and stretch technique is often performed similar to how it is shown in Images 1A–1C, with the therapist starting the position of the pin far away from the attachment that is moved, often at or near the other attachment of the muscle, and then gradually and successively moving the position of the pin to be closer to the attachment that is moved. However, if we critically think through the underlying mechanism of this technique, we will see that not only is it not necessary to carry out the pin and stretch technique in this manner, it does not necessarily make sense. If the point of pin and stretch is to focus the stretch force on a specific taut region of a muscle, say a myofascial trigger point, then it would make sense that the most efficient method to employ this technique would be to place the pin directly next to the trigger point (or other taut tissue), on the “other side” of the trigger point that is “away” from the attachment that will be moved, then perform the stretch.

Again, using the upper trapezius as our example, if the trigger point is located in the upper trapezius, as indicated in Image 2, then the best place to position the pin is as close to the trigger point as possible, but on the “other side”—in this case the scapuloclavicular side of the trigger point, as shown in the image. In this example, if the pin were to be placed anywhere between the trigger point and the cervicocranial attachment, it would be ineffective because the pin would block the stretch force from even making it to

1A



1B



1C



Pin and stretch of the right upper trapezius. The head/neck (cervicocranial) attachment is the attachment that is moved. For each position of the pin, the red Xs indicate the focus of the stretch.

2



Pin and stretch to the right upper trapezius with the head/neck (cervicocranial) attachment moved. Given the location of the trigger point (indicated by the yellow X), the best location for the pin is shown.

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