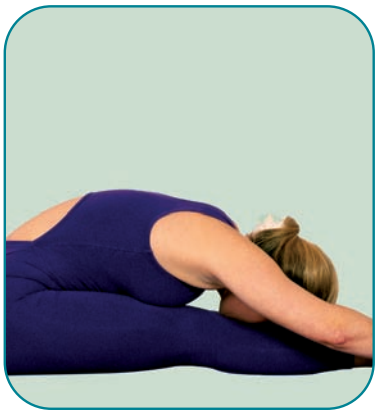

Stretching the Truth

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Annadelle is a 52-year-old mom, who comes to you having recently read an article in a local pharmacy magazine where the author claimed that stretching is of no benefit in trying to avoid injuries. Your patient has always been taught to stretch to help prevent a muscle strain. She is confused and she comes to you for your expert medical opinion.

How much the physician knows about stretching is usually dependent on how active the doctor is him/herself. You begin by asking the patient what their routine is and what it includes when it comes to stretching.

Annadelle tells you that she stretches prior to her regular aerobic activity of running outside. She briefly stretches her calf muscles, her quadriceps muscles and her hamstring muscle. She then goes running and she stretches again afterwards. Annadelle tells you that she has never suffered from any significant muscle injuries. She attributes this to the fact that she stretches before and after her run, but she still comes to you to confirm her feelings and thoughts on the matter.

You begin your discussion about stretching by telling Annadelle that most of what you will tell her is anecdotal, as there is not any strong evidence that pre-exercise stretching (PES) helps to prevent musculoskeletal injuries. However, from an intuitive point of view, a cold muscle is less elastic and, like a cold rubber band, is more vulnerable to snap/tear if the demands put on the muscle outstrip its natural supply of strength. On the contrary, a warm muscle is much more elastic and forgiving, which allows for greater stretch and recoil, which can help avoid tearing.

Having said this, there are many more factors that can lead to muscle strains, other than PES. These factors include:

- the size of the patient,
- their anatomical structure,
- the inherent flexibility of his/her tissue,
- the strength of the individual,
- equipment type,
- general nutrition/hydration and
- the activities that the patient partakes in.

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After your discussion, Annadelle feels that stretching is a waste of time. She goes on to indicate that her friend whom she runs with never stretches and she has also avoided any injuries over the years. She tries to understand why her routine, which involves more effort, yields the same end result as her friend's routine.

You try to explain to her, as you indicated previously, that the end result is a by-product of many factors. Overall fitness is measured by:

- aerobic capacity,
- strength,
- endurance and
- general flexibility.

How an individual achieves overall fitness varies greatly from individual to individual. Clearly though, flexibility, which arises from diligent and consistent stretching, will offer greater flexibility for an individual. As well, there is great variation in the techniques of stretching. In general, a stretch is meant to:

- be held for 20 seconds to 30 seconds at a time,
- be repeated two times for a total of three times at any given time and
- achieve more stretch than the time before it was completed.

Stretching is meant to be done on a daily basis, irrespective of the activities to be done that day, but also before and after activities in a given day. Muscles are more effectively stretched from within, than externally. That is, riding a bike without resistance for a few minutes is better than putting a heat pack on a muscle from the outside.

The patient is impressed with your knowledge and she is convinced by your answer. Even though the research doesn't fully support the evidence, stretching is important and she believes in it. She has another question though and she asks you if strengthening the muscle compensates for stretching?

You credit her with an excellent question and proceed to make one further point. It is critical to have strong muscles for every day functioning, but the stronger the muscle, the tighter it gets and the more vulnerable it becomes to being strained. Surely it is important to strengthen the muscle, but you must balance this with time spent trying to improve the muscle's flexibility. This will prevent it from tearing. It is a common event to see a tight muscle tear. Strengthening is an important feature of a person's fitness, but don't forget to complement it with a series of stretches.

Anadelle is grateful for the explanation and she leaves with a new vigor towards stretching. Although she understands everything you have told her, she still wonders why research studies have not supported what is felt anecdotally.

You leave her with one last thought. Sometimes it is not that research does not support what we see anecdotally, it is just that the right study has not been designed to conclude the correct outcome, or that there are some confounding variables that cloud the picture.

In any case, sometimes in medicine, in order to try and make a positive, healthful point, we may tend to "stretch the truth." Instead, we should be "stretching" our bodies!

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