Neurodynamics and dynamic muscle stretching

In the neurodynamic courses, it is often stated that nerves do not “like” stretching. Sustained stretching around a nerve has a negative effect on blood flow in/around the nervous system. Venous flow is interrupted when an axon is lengthened more than 7 – 8% of its length.

A question that often arises, is – how then do we deal with tight muscles? A good example would be a “tight” hamstring, which may have a sciatic nerve which is slightly sensitized/not moving well. A static stretch would lengthen the muscle, while it may irritate the nerve. On the flip side, if neural glides are performed (no sustained stretch), it does not adhere to the prolonged, slow (no bounce) stretches which is being taught to PT students.

The answer?

It seems there may be a shift. Some new research is showing that dynamic exercises, stretches and/or warm-up in sports are associated with muscle lengthening as well.

References: