

## **NEUROPATHIC PRURITUS (NERVE ITCH)**

Neuropathic or neurologic pruritus is an itch due to damage or dysfunction of the nervous system. In this condition, nerves become hypersensitive and send signals to the brain that are interpreted as itch, burning, tingling, or irritation. The skin over the area may show signs of scratching like thickening, discoloration, or scarring, but often there is no visible inflammation. While this can occur anywhere on the body and sometimes involves multiple areas, it is most common on the shoulder blade, the mid arm, and the scalp. When it affects the shoulder blade, it's called notalgia paresthetica. When it affects the mid-arm, it's known as brachioradial pruritus.

Nerves start within the spinal cord, pass through the spine (the vertebral column), and move through the soft tissue until reaching their end point. If the nerve is disrupted along its path, neuropathic pruritus can occur. Most commonly, the problem arises near the spine, where changes in the vertebral bones such as thickening or shifting can lead to nerves being "pushed," "pulled," or "tickled," which, in turn, create hypersensitivity within the nerves. However, this can also happen at other points in the long path of a nerve. Conditions such as arthritis, compression fractures, scoliosis, prior spinal surgery, spinal stenosis, and prior trauma contribute.

Additionally, sometimes nerves can have damage or dysfunction that does not involve a disruption of its path. Physical nerve injury, diabetes, multiple sclerosis, and certain inflammatory conditions can cause direct nerve damage.

The itch tends to come in waves of varying intensity, sometimes multiple times a day. Usually, it is most problematic right before bedtime because the brain is less distracted at rest and becomes more aware of the itching sensation.

Neuropathic pruritus is more common with age, and is very common in the elderly. Unfortunately, traditional anti-itch treatments like steroid creams or antihistamines usually don't help much, since the problem lies in the nerves, not the skin.

Instead, for most cases, nerve distraction can be quite helpful. Administration of a "stronger" signal to the area using pressure, heat, or cold can "distract" the nerve to give temporary relief. As a first step, products with menthol like Sarna lotion or Bengay provide a cooling sensation to the skin, providing immediate relief for up to a couple of hours.