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**A facility dedicated to  
rehabilitation**

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Refer to PTAW for:

- Back Pain
- Work Injuries
- Hand Therapy
- Advanced Gait Training
- FCE
- Work Conditioning
- Work Site Analysis
- Wound Care
- Anodyne® Therapy
- Whirlpool Therapy
- Sport Specific Rehabilitation
- Nerve Conduction & EMG Studies
- Isokinetic Testing & Exercise
- Manual Therapy
- And other physical therapy services*

Effective Treatment for:

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- Rheumatoid Arthritis
- Carpal Tunnel
- Osteoporosis
- Fibromyalgia
- Acute & Chronic Biomechanical Disorders

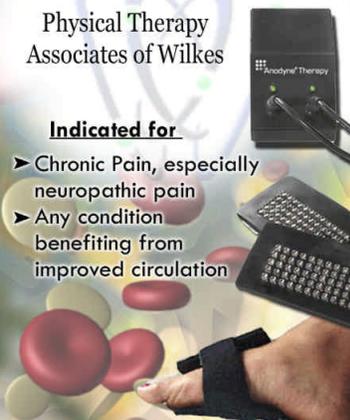
## Addressing Circulation to Improve PERIPHERAL NEUROPATHY

A 2004 study examining 799 elderly patients concluded that at least 26% of Americans age 65 to 74 live with peripheral sensory deficits.<sup>1</sup> The percentage increases to 54% or more for those 85 years and older. Forty-eight percent of those patients reported **pain or discomfort**. Twenty-eight percent reported numbness, and forty-four percent reported trouble with walking. Peripheral neuropathy is connected with the development of non-healing lesions of the feet and with a much higher incidence of fall injuries.<sup>14</sup> Problems with circulation have been cited as a contributing factor to peripheral neuropathy.<sup>2,3</sup>

**Physical Therapy Associates of Wilkes** now uses Anodyne® Therapy to improve circulation and reduce chronic pain. Anodyne Therapy involves the use of pads placed over a patient's skin to direct monochromatic, near-infrared energy up to 5cm beneath the skin. The FDA has approved Anodyne Therapy for use in improving circulation, chronic pain, stiffness, and muscle spasm. The FDA has not approved Anodyne for treatment of any specific diagnosis, but Anodyne may be used to improve circulation in a localized area when circulation problems seem to be a contributing factor to patient complaints. Anodyne has been deemed safe to use over wounds, the spine, metal implants, pins, screws, pacemakers, and defibrillators.

**Anodyne Therapy from**

Physical Therapy  
Associates of Wilkes



**Indicated for**

- ▶ Chronic Pain, especially neuropathic pain
- ▶ Any condition benefiting from improved circulation

**Does Improving Circulation Improve Peripheral Neuropathy?** The vast majority of research on the subject says yes. One study found that a vasodilating drug, trandolapril, improved symptoms among patients with mild neuropathy.<sup>4</sup> Anodyne Therapy available through PTAW gives practitioners the opportunity to address areas of circulatory compromise directly without causing systemic effects. **Evidence supporting the use of Anodyne Therapy for the relief of pain, especially neuropathic, pain is conclusive. Multiple, peer-reviewed, studies have found Anodyne Therapy to be effective in reversing diabetic peripheral neuropathy as well as sensory impairment from six other causes.<sup>5-11</sup>** One study was a **double-blind, placebo controlled** study with twenty-seven patients.<sup>5</sup> Two of those studies were medical record reviews covering **1,047 patients<sup>11</sup> and 2,239 patients respectively.<sup>10</sup>** Of the eight peer-reviewed studies we found on the subject, we were only able to find one study that failed to show increases in sensation from this sort of monochromatic, infrared therapy. This was a double-blind, placebo controlled study with 39 participants.<sup>12</sup> The therapy sessions in this study were ten minutes shorter than therapy sessions used in other studies, and some authors have suggested that this discrepancy merits further investigation.<sup>13</sup> We could find no evidence that refuted Anodyne's positive results with pain. Of the studies with positive findings, results included:

- **Patients realized significant decreases in the number of insensate sites after both six and 12 treatments at three treatments per week.<sup>5</sup> Improvement in 71% of insensate sites has been observed.<sup>11</sup> Fifty-three percent of patients deemed to have loss of protective sensation improved enough to no longer meet Medicare criteria after treatment.<sup>10</sup>**
- **Pain expressed on a visual analog scale reduced 67%.<sup>10</sup> This was accomplished despite the fact that several cases previously had proved refractory to a variety of pain-relieving agents.**
- **Patient reports of balance impairment improved by 86% after 12 treatments. At entry 90% of subjects reported balance impairment. After treatment, only 17% reported balance problems.<sup>5</sup>**

Leonard et al used heat pads without light therapy as the sham treatment.<sup>5</sup> Their study failed to show any results from the sham heat treatment, suggesting that the effects achieved were the result of factors other than a response to heat. Various authors suggest that red blood cells absorb the photo emissions and release nitric oxide. The nitric oxide stimulates the cGMP cycle and yields peripheral morphine analgesia.<sup>15</sup> Normal nerve conduction is restored as cGMP-phosphorylation of potassium gated ion channels normalizes membrane potential.<sup>16</sup> Also, nitric oxide establishes better blood flow providing oxygen and nutrients for ATP. The improved circulation, anti-inflammatory effects, analgesia, and restoration of normal nerve conduction combined may help reverse the damage that causes peripheral neuropathy.

Please tell your patients about the **efficient** and **effective** therapies available at  
**Physical Therapy Associates of Wilkes**



### References

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