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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:

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

Successful Treatments for **CARPAL TUNNEL SYMPTOMS**

The prevalence of carpal tunnel *symptoms* may be understated in most literature. Even though researchers categorize carpal tunnel *syndrome* as the most common peripheral neuropathy affecting 3% of adults¹, many cases of paresthesias do not meet the clinical criteria. In one study, 30% of frequent computer users complained of hand paresthesias, 10% met clinical criteria, and only 3.5% had abnormal nerve conduction.² Whether technically categorized as carpal tunnel syndrome or not, research based physical therapy from *Physical Therapy Associates of Wilkes* can provide positive, low-risk, long lasting results.

Ultrasound Found Highly Effective: The British Medical Journal published a study wherein **74% of patients treated with ultrasound therapy reported satisfactory improvement or complete remission** of carpal tunnel syndrome at six-month follow-ups.³ This compared favorably to the 20% reporting success from the sham treatment group. In the ultrasound group, improvements were also noted in motor distal latency and velocity of sensory nerve conduction while these measures remained unchanged in the sham group. Ultrasound was administered daily for 10 days and then twice-weekly for five weeks. An older study, which failed to show positive results, ended the ultrasound therapy in two weeks.⁴ This may indicate that the length of ultrasound therapy is important for success.



The hand therapy station at PTAW

Bracing & Splinting: A review of 21 trials involving 884 people concluded that a hand brace significantly improved symptoms and function after four weeks.⁵ Splinting has also been shown effective when applied within three months of the onset of symptoms.⁶ Physical Therapy Associates of Wilkes can create custom-made braces and/or select and fit splints for your patients.

Exercise & Stretching: The Journal of the American Medical Association published a study showing the positive effects of exercises and stretches that emphasized function of the spine and shoulder, stretching the wrists, and posture correction.⁷ The movements used in this study were drawn from yoga. Among 42 participants, the active rehabilitation appeared even more effective than splinting alone in terms of improving grip strength, reducing pain, and improvement in Phalen sign. Another study showed positive results from digital flexor tendon mobilizing exercises.⁸ Patients performing these exercises opted for surgery 39% less often. When you refer to **PTAW**, each patient receives an individual evaluation. According to each patient's presentation, therapists may select exercises to improve bone-muscle-tendon alignment, reduce inflammation, improve flexibility, and facilitate relevant posture improvement. When approached correctly, exercises for carpal tunnel syndrome do have justification in the research.

Carpal Bone Mobilization: Mobilization of the carpal bone may improve short-term symptom relief.⁹ Physical Therapy Associates of Wilkes practices a hands-on approach to therapy, and every patient who could benefit from manual therapy receives manual therapy.

Anodyne Therapy®: *Physical Therapy Associates of Wilkes* has experienced success with Anodyne Therapy for pain relief. Anodyne Therapy involves the use of specialized equipment to deliver near infrared emissions to targeted areas. The therapy heats lower structures,¹⁰ but the primary mechanism of action is stimulating the release of endogenous nitric oxide. Nitric oxide mediates helpful biologic functions such as improved neurotransmission, vasodilation, and anti-inflammation.¹¹ Research suggests that Anodyne Therapy improves conduction of the median nerve.¹⁰

Ergonomic Teaching: *Physical Therapy Associates of Wilkes* makes ergonomic teaching a part of all carpal tunnel treatment plans. Simple measures such as increasing the size of a grip on equipment, rotating tasks to create breaks for the wrists, and changing the height of equipment to improve arm and wrist position may reduce severity and exacerbations.

Physical Therapy Associates of Wilkes can serve as a useful ally to your practice in the conservative treatment of carpal tunnel symptoms. Each treatment plan can include a combination of bracing/splinting, modalities, exercises, stretching, carpal bone mobilization, and ergonomic teaching. The individualized, one-on-one, **PTAW** approach will help ensure positive outcomes and a satisfied patient.

References

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