



Pain & Numbness

in your feet, legs or hands?

Afraid of losing your balance?



Peripheral Neuropathy Treatment
Program With Monochromatic-Infrared Light

What Is
Peripheral Neuropathy?

How Infrared
(MIR) Therapy Works

Research Highlights
And MIR Studies

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What Is Peripheral Neuropathy?

Peripheral neuropathy (PN) describes damage to motor and sensory nerves that transmit messages to and from the brain and spinal cord to the rest of the body. PN is most commonly found in persons suffering with diabetes, but can also be caused by other factors including: trauma, HIV, infection, auto-immune disorders (eg. Charcot-Marie-Tooth), alcohol abuse, certain drugs (eg. statins), chemotherapy and vitamin deficiency.

Most often the hands and feet are affected first leading to symptoms such as:

- **Tingling**
- **Numbness**
- **Burning**
- **Difficulty walking and impaired balance**
- **Altered sensitivity to touch or to hot/cold**
- **Leg and foot pain at night**



Treatment of the underlying condition may relieve some cases of PN, however, until recently there have been very few effective treatment options available. Recent advances in medicine, and our understanding of how these sensory nerves are able to heal and regenerate, has led to the development of a new treatment involving the use of monochromatic infrared light (MIR). Multiple studies using MIR therapy have shown improvement in balance and sensation alongside significant reduction in pain, numbness, burning and pain.

This guide explains more about this new treatment.

How Monochromatic-Infrared Therapy Works

- **Safe, Monochromatic-infrared photo energy is emitted to the treatment area for 20-30 minutes while you sit and relax.**
- **Painless**
- **Non-invasive**
- **Drug free**



Monochromatic-Infrared Photo Energy May Promote Nerve Regeneration By...

- **Increasing** blood flow through vasodilation and formation of new capillaries.
- **Stimulating** collagen production. Collagen is a protein that helps repair damaged tissue.
- **Promoting** the release of adenosine triphosphate (ATP). ATP allows cells to take in and digest nutrients.
- **Stimulating** the release of Nitric Oxide which causes a substantial increase in blood flow.

Do YOU Have Peripheral Neuropathy?

Please take a few minutes to answer the following questions about the feeling in your legs and feet. Check yes or no based on how you usually feel. On the numbered pain scales, please indicate the degree to which you feel that sensation (0 = not at all; 10 = greatest degree imaginable).

1. Do you ever have legs and/or feet that feel numb?

Yes

No



2. Do you ever have any burning pain in your legs and/or feet?

Yes

No



3. Are your feet too sensitive to touch?

Yes

No

4. Do you get muscle cramps in your legs and/or feet?

Yes

No

5. Do you ever have any prickling or tingling feelings in your legs or feet?

Yes

No

6. Does it hurt at night or when the covers touch your skin?

Yes

No

7. When you get into the tub or shower, are you unable to tell the hot water from the cold water with your feet?

Yes

No

8. Do you ever have any sharp, stabbing, shooting pain in your feet or legs?

Yes

No

9. Have you experienced an asleep feeling or loss of sensation in your legs or feet?

Yes

No

10. Do you feel weak when you walk?

Yes

No

11. Are your symptoms worse at night?

Yes

No

12. Do your legs and/or feet hurt when you walk?

Yes

No

13. Are you unable to sense your feet when you walk?

Yes

No

14. Is the skin on your feet so dry that it cracks open?

Yes

No

15. Have you ever had electric shock-like pain in your feet or legs?

Yes

No

16. What is the overall level of pain that you feel?



NOTE If you checked YES for 3 or more of these questions, you may have Peripheral Neuropathy. Please speak with us about a FREE consultation to determine if we can provide TREATMENT to help relieve your symptoms.

A Clinically Proven Protocol Published In The Journal Of The Podiatric Medical Association

In 2005, the **Journal of the Podiatric Medical Association**⁸ published a study involving 1033 patients with peripheral neuropathy who showed a significant and dangerous loss of sensation in their feet. The majority of those treated with MIR therapy **regained protective sensation in their feet making them less prone to falls, less likely to lose their mobility, and greatly reducing the risk for developing ulcers and the need for lower extremity amputations.**

Since that important study in 2005, several other studies have confirmed these remarkable benefits of MIR therapy (see research on the last page).

While drugs are sometimes effective for reducing pain associated with PN, until now, no drug or medical device has been shown to increase sensation once it has been lost or diminished due to PN. Therefore, the results of this study are welcome news to the healthcare system where in the U.S. it costs in excess of 37 billion dollars annually to treat the complications of this condition.

Our Diagnosis And Treatment: What To Expect

How Do I Know If You Can Help ME?

We believe successful treatment is only possible if an accurate diagnosis is made first. At our clinic, we have specialized training and expertise to evaluate the extent of the nerve damage and determine if your condition is treatable with our research based treatment protocol.

Will My Pain Be Reduced?

Pain, numbness, tingling and burning are all symptoms that are reduced with our treatment program. This leads to better sleep, improved balance, and decreased dependency on harmful medications.

Several studies support the outcomes patients enjoy from treatment at our clinic.

“A comprehensive therapy intervention that includes infrared photo energy has the potential to improve sensation and balance and to reduce fall frequency. These results should be of great interest to patients with peripheral neuropathy, health care providers who treat these patients, and the payor community that incurs the cost of treatment.”⁶

While not every patient experiences pain relief, the vast majority do.

What’s Involved And How Long Will Treatment Take?

Treatment includes MIR Therapy along with several adjunctive therapies that help improve circulation and balance, and help normalize nerve sensitivity.

Research suggests 3 treatment sessions per week for 4 weeks. Some patients require fewer while others require more. A treatment session lasts 45 minutes to an hour.

“...the tingling sensation is gone, the numbness in my toes has decreased. I am able to sleep better at night.” --M.O.

“...so much better, it’s hard to believe. I can pick up small things easier and hold my paint brush longer.” --G.G.



“infrared photo energy has the potential to improve sensation and balance and to reduce fall frequency.”

Research Highlights And MIR Studies

The Joslin Report & Many Others

In January, 2004, one of the first reports on the effects of near-infrared treatment in patients with Diabetic Peripheral Neuropathy (DPN), by the Joslin Center for Diabetes was published in Diabetic Care, Volume 27, January 2004. This study concluded that, “[monochromatic-infrared] treatments improve sensation in the feet of subjects with DPN, improve balance, and reduce pain.”

Since that time, numerous other articles have been published reporting similar findings in publications such as Diabetes Self Management, Diabetes Health, Voice of the Diabetic, and Diabetes Wellness News.

TV and consumer magazines have also done stories about the benefits of monochromatic-infrared therapy for relief of the pain associated with Diabetic Peripheral Neuropathy as well as other non-diabetic related aches and pains.

For Example:

- Newsweek, April 14, 2003, Shining A Light On Pain.
- USA Weekend (USA Today), January 11, 2002, Diabetics: Heal Faster With Light
- CBS News, Los Angeles, Special Report, October 14, 2003, The Power Of Light.
- CBS News, Las Vegas, December 5, 2003, Anodyne Therapy For Neuropathy.

MIR Peer Reviewed Published Clinical Data

1. Horwitz L, Burke TJ, Carnegie DE. Augmentation of Wound Healing Using Monochromatic Infrared Energy. *Advances in Wound Care*. 1999;12:35-40.
2. Noble JG, Lowe AS, Baxter GD. Monochromatic Infrared Irradiation (890): Effect of a Multisource Array upon Conduction in the Human Median Nerve. *Journal of Clinical Laser Medicine and Surgery*. 2001;19:291-295.
3. Kochman AB, Carnegie DE, Burke TJ. Symptomatic Reversal of Peripheral Neuropathy in Patients with Diabetes. *Journal of the American Podiatric Medical Association*. 2002;92:125-130.
4. Prendergast JJ, Miranda G, Sanchez M. Improvement of Sensory Impairment in Patients with Peripheral Neuropathy. *Endocrine Practice*. 2004;10:24-30.
5. Leonard DR, Farooqi MH, Myers S. Restoration of Sensation, Reduced Pain, and Improved Balance in Subjects with Diabetic Peripheral Neuropathy; A Randomized, Double Blind, Placebo Controlled Study. *Diabetes Care*. 2004;27:168-172.
6. Kochman AB. Monochromatic Infrared Photo Energy and Physical Therapy for Peripheral Neuropathy: Influence on Sensation, Balance and Falls. *Journal of Geriatric Physical Therapy*. 2004;27:16-19.
7. Powell MW, Carnegie DE, Burke TJ. Reversal of Diabetic Peripheral Neuropathy and New Wound Incidence: The Role of MIRE. *Advances in Skin & Wound Care*. 2004;17(6):295-300.
8. DeLellis S, Carnegie DE, Burke TJ. Improved Sensitivity in Patients with Peripheral Neuropathy: Effects of Monochromatic Infrared Photo Energy. *Journal of the American Podiatric Medical Association*. 2005; 95(2):143-147.
9. Harkless L, DeLellis S, Burke TJ. Improved Foot Sensitivity and Pain Reduction in Patients with Peripheral Neuropathy after Treatment with Monochromatic Infrared Photo Energy-MIRETM. *Journal of Diabetes and Its Complications*. 2006;20(2):81-87.
10. Volkert W, Hassan A, Hassan M, et al. Effectiveness of Monochromatic Infrared Photo Energy and Physical Therapy for Peripheral Neuropathy: Changes in Sensation, Pain and Balance – A Multi-Center Chart Review. *Physical and Occupational Therapy in Geriatrics*. 2006;24(2):7-18.
11. Powell MW, Carnegie DH, Burke TJ. Reversal of Diabetic Peripheral Neuropathy with Photo Therapy (MIRETM) Decreases Falls and the Fear of Falling, and Improves Activities of Daily Living in Seniors. *Age and Ageing*. 2006;35(1):11-16.
12. Burke TJ. Infrared Photo Energy May Reduce Neuropathic Pain. *Practical Pain Management*. 2007;7(6):57-63.
13. Nather A, Sim YE, Chew LL, Neo SH. Anodyne Therapy for Recalcitrant Diabetic Foot Ulcers: A Report of Four Cases. *Journal of Orthopaedic Surgery*. 2007; 15(3):361-4.
14. Mitchell, U. Use of Near Infrared Light to Reduce Symptoms Associated with Restless Leg Syndrome in a Woman: a Case Report. *J Med Case Reports*. 2010; 4:286.
15. Mitchell, U, Myrer JW, Johnson AW, Hilton SC. Restless Legs Syndrome and Near Infrared Light: An Alternative Treatment Option. *Physiotherapy Theory and Practice*. 2010, Oct 26.
16. Mak, M, Cheing, G. Immediate Effects of Monochromatic Infrared Energy on Microcirculation in Healthy Subjects. *Photomedicine and Laser Surgery*. 2012;30(2):1-8.
17. Ammar, T. Monochromatic Infrared Photo Energy in Diabetic Peripheral Neuropathy. *International Scholarly Research Network (ISRN) Rehabilitation*. 2012; Article ID 484307.

“...my balance and walking has improved so much I have cancelled my request to the Red Cross for a walker” --B.B.

For Your Doctor

Neuropathy Treatment Rx

Name : _____

Diagnosis: _____

Precautions: _____

Physiotherapy orders:

Evaluate and treat for small fiber peripheral neuropathy.

Treatment to include:

Balance training

Stretching/Range of motion

Monochromatic Near Infrared Light Therapy

Neurological Resensitization

Frequency and Duration:

_____ per therapist discretion or _____ times per week for _____ weeks

Physician signature: _____ Date: _____

Not Sure if Neuropathy Treatment Will Work For You?

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**"...We Make People
BETTER..."**