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CLIENT RESEARCH GUIDE

Chronic Pain & Pain Relief

RED LIGHT THERAPY / PHOTOBIOMODULATION

Selected published research, clinical findings & practical insights



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AWAKEN RED LIGHT | CLIENT RESEARCH GUIDE

Red light therapy for chronic pain & pain relief

Encouraging science for comfort, movement and daily life

Published research has found meaningful improvements in pain, stiffness and daily function with red and near-infrared light therapy. Known as photobiomodulation (PBM), this noninvasive approach is being studied as a complement to care for a range of persistent pain conditions. [1, 4, 7, 10, 15]

AREA OF INTEREST	POSITIVE RESEARCH HIGHLIGHTS
 Whole-body comfort	Fibromyalgia studies report less pain and better quality of life with whole-body light. [1-3]
 Knee osteoarthritis	Targeted-treatment reviews found improvements in pain and everyday function. [7, 8]
 Neck & muscle pain	Research reports less pain and tenderness, with benefits extending beyond treatment in some studies. [10-12]
 Tendon & heel pain	Specific targeted protocols improved comfort and function in tendon and plantar-heel conditions. [9, 13]
 More than a pain score	Fibromyalgia research also reports improvements in stiffness, fatigue and sleep. [3, 4, 15]

A hopeful, informed place to begin

This guide brings together 15 selected research publications with encouraging findings, including studies of whole-body light. Explore the results, learn about Awaken's five-wavelength bed, and consider what greater comfort could mean in your own daily routine.

Research includes different devices, doses and conditions. The findings describe the treatments studied, and individual results vary. Study links and a brief evidence note are included for easy reference.

Whole-body light, everyday comfort

01 Whole-body light: less pain, better quality of life

Navarro-Ledesma et al. | *Pain and Therapy*, 2023; online 2022
42 participants; randomized, placebo-controlled trial; NovoTHOR bed

After 12 sessions over four weeks, people with fibromyalgia receiving whole-body light therapy had greater improvements in pain and quality of life than the placebo group. Benefits were also recorded two weeks after the course ended. This was a small, triple-blinded trial.

Positive finding: A whole-body light approach showed encouraging benefits for widespread pain and how participants felt in daily life.

[Read the research](#) ↗

02 Benefits observed beyond the treatment course

Navarro-Ledesma et al. | *Frontiers in Neuroscience*, 2024
Six-month follow-up of the same 42-person trial in study 1

The follow-up report found better quality-of-life scores through six months, with improvements in leisure activity and confidence around movement at several assessments. A pain difference favored treatment at six months, although pain benefits were not significant at every follow-up.

Positive finding: Some improvements continued after the initial course, offering a promising longer-term signal from this same group of participants.

[Read the research](#) ↗

03 Whole-body care: comfort, sleep and less stiffness

Fitzmaurice et al. | *Behavioral Sciences*, 2023
NHS feasibility study; 21 enrolled, 19 completed; NovoTHOR bed

During an 18-session course over approximately six weeks, participants with fibromyalgia reported improvements in pain, stiffness, fatigue, sleep and quality of life. Treatment was generally acceptable to participants. This early study tracked changes over time without a comparison group.

Positive finding: Participants described improvements across several connected aspects of daily comfort, supporting further whole-body research.

[Read the research](#) ↗

More comfort. More possibilities.

04

Fibromyalgia: improvements across daily symptoms

Yeh et al. | Pain Physician, 2019

Review of 9 randomized trials; 325 participants; mainly localized treatment

Compared with placebo, pooled findings favored low-level laser therapy for pain, tender points, fatigue, stiffness and fibromyalgia-impact scores. These results bring attention to the combination of symptoms that can make daily life difficult. Study quality ranged from low to moderate.

Positive finding: Research reported benefits beyond pain alone, including less stiffness and fatigue in people with fibromyalgia.

[Read the research ↗](#)

05

Light therapy alongside an active care plan

da Silva et al. | Lasers in Medical Science, 2018

160 women enrolled across acute and 10-week study phases; targeted light

Researchers evaluated light therapy, exercise and their combination in women with fibromyalgia. Light applied at 11 body locations improved pain-pressure thresholds. The combined light-and-exercise approach produced broader improvements in pain, symptom impact and quality of life.

Positive finding: This trial offers an encouraging example of light therapy used alongside movement and rehabilitation.

[Read the research ↗](#)

06

A recent review reinforces the positive direction

Swathi G A et al. | Lasers in Medical Science, 2026

Review of 7 randomized trials; varied laser and LED treatments

Reviewers found a pattern of short-term improvements in fibromyalgia pain and quality of life. Six of seven trials reported pain improvements compared with baseline or control groups; some also reported better sleep or psychological well-being. Protocols varied and included one high-intensity laser trial.

Positive finding: Recent evidence adds to interest in PBM as a complementary option for fibromyalgia symptoms and daily well-being.

[Read the research ↗](#)

Support for everyday movement

07

Knee osteoarthritis: less pain and disability

Stausholm et al. | BMJ Open, 2019

Review of 22 placebo-controlled trials; 1,063 participants; targeted laser

At the end of treatment, knee pain improved by an average of 14.23 points more than placebo on a 100-point scale. Disability also improved. Trials using the review's recommended doses showed greater benefits, with positive follow-up findings extending to 12 weeks.

Positive finding: A substantial group of trials supports targeted light therapy for knee comfort and everyday function.

[Read the research](#) ↗

08

Knee comfort: another encouraging review

Oliveira et al. | Physical Therapy, 2024

Review of 10 studies; 542 participants; targeted PBM

This review found less knee osteoarthritis pain at rest with PBM than with placebo. The authors described light therapy as a possible addition to established care. The positive result concerned pain at rest; timed walking did not significantly improve, and certainty was very low.

Positive finding: Relief of resting knee pain is a promising outcome for people seeking greater day-to-day comfort.

[Read the research](#) ↗

09

Tendon and heel pain: comfort and function

Naterstad et al. | BMJ Open, 2022

Review of 18 randomized trials; lower-limb tendinopathy or plantar fasciitis

Targeted low-level laser treatment reduced pain and disability at treatment completion and later assessments. Studies using recommended doses also found benefit when laser was added to exercise. The findings cover selected tendon and plantar-heel conditions, with long-term outcomes still to be established.

Positive finding: Light therapy may complement rehabilitation for painful tendons and plantar-heel symptoms.

[Read the research](#) ↗

Encouraging results for neck pain

10

Neck pain: relief that can extend beyond treatment

Chow et al. | The Lancet, 2009

Review of 16 randomized trials; 820 participants; targeted laser

This review found lower pain scores with low-level laser therapy. Trials reporting continuous pain scores showed an average advantage of about 20 points on a 100-point scale. Follow-up studies of chronic neck pain reported benefits across periods ranging from one to 22 weeks after treatment.

Positive finding: Targeted light therapy has an established research history in neck pain, including relief observed after treatment ended.

[Read the research ↗](#)

11

Chronic neck pain: a meaningful patient result

Chow, Heller & Barnsley | Pain, 2006

90 participants; double-blind, placebo-controlled trial; 830 nm laser

After a course of 14 targeted sessions over seven weeks, the active group had 3.0 points greater pain improvement than placebo on a 0-10 scale. Several neck-disability and physical quality-of-life measures also improved. Follow-up extended to 12 weeks from baseline.

Positive finding: This controlled trial connects pain relief with improvements in function and physical well-being.

[Read the research ↗](#)

12

Neck-muscle pain: less pain and tenderness

Tehrani et al. | Lasers in Medical Science, 2022

Review of 13 randomized trials; 556 participants; localized laser

For myofascial neck pain, pooled findings showed less pain, better tolerance to pressure and improvement in one measure of neck movement. The positive findings centered on pain and tenderness; overall disability scores did not significantly improve.

Positive finding: Localized light treatment may help ease pain and sensitivity associated with neck-muscle trigger points.

[Read the research ↗](#)

Pain relief, function and well-being

13

Tennis elbow: less pain, more comfortable grip

Bjordal et al. | BMC Musculoskeletal Disorders, 2008

13 trials pooled; 730 participants; targeted laser

The clearest positive findings came from protocols using 904 nm, and possibly 632 nm, light directly over the tendon attachment. These approaches improved pain, pain-free grip and short-term disability. Results depended on the wavelength and treatment technique used.

Positive finding: Specific targeted protocols helped people use a painful elbow more comfortably.

[Read the research](#) ↗

14

Chronic pain: positive findings across conditions

Ferreira et al. | Frontiers in Integrative Neuroscience, 2026

Review of 14 randomized trials; multiple chronic-pain conditions

Most included trials reported pain reduction, particularly in fibromyalgia and some peripheral neuropathy populations. Some also found improvements in function or quality of life. The studies used different devices and settings, so benefits remain specific to the condition and protocol studied.

Positive finding: Pain relief, function and quality of life are recurring areas of promise in contemporary PBM research.

[Read the research](#) ↗

15

The wider picture: daily function and less fatigue

Son et al. | Systematic Reviews, 2025

Umbrella review of 15 meta-analyses across multiple health conditions

This broad review found moderate-certainty evidence for selected outcomes, including reduced osteoarthritis-related disability and reduced fibromyalgia fatigue. These were among the better-supported findings; certainty for other outcomes was lower and the underlying studies overlap.

Positive finding: The benefits under study include daily function and fatigue, alongside pain relief.

[Read the research](#) ↗

Five wavelengths. Whole-body light.

Awaken's full-body bed combines red and near-infrared LEDs in a surrounding chamber, bringing light to multiple areas during a single, comfortable session.

RED LIGHT

633 nm | 660 nm

NEAR-INFRARED LIGHT

810 nm | 850 nm | 940 nm

43,200

LED LIGHT SOURCES

360°

CHAMBER COVERAGE

32 + 1

COOLING FANS

A comfortable place to pause

Integrated cooling, a dedicated body fan and Bluetooth audio support a relaxed visit. A built-in emergency stop keeps an immediate stop control within reach.

Flexible session controls

Tablet controls offer preset and manual settings, including a manufacturer-labeled Pain Relief program. Staff can explain the session format and controls before you begin.

A connection to the research: The bed includes 660 nm and 850 nm, the wavelengths used in the whole-body fibromyalgia trial featured in studies 1 and 2. Those studies used a NovoTHOR bed. Shared wavelengths are a relevant connection; outcomes also depend on the device, dose and protocol.

Manufacturer-reported technical details: 129 mW/cm² irradiance at zero distance; 6,000 W rated machine power. Irradiance changes with measurement position and settings; machine power is not the light dose absorbed by the body.

[Manufacturer specifications ↗](#)

Encouraging results, real participants

These snapshots bring the research into focus: the people studied, the treatment course and the positive changes reported. They describe published research, not Awaken client testimonials.

42 participants in a whole-body trial

PLACEBO-CONTROLLED

In a Spanish fibromyalgia trial, 12 sessions over four weeks improved pain and quality of life compared with placebo. Follow-up of the same participants found encouraging longer-term results. The device was a NovoTHOR bed. [1, 2]

[Read the patient study ↗](#)

90 adults with chronic neck pain

PLACEBO-CONTROLLED

A course of 14 targeted laser sessions produced a 3.0-point greater improvement in pain than placebo on a 0-10 scale. Several measures of neck function and physical well-being also improved. This was a localized 830 nm laser treatment. [11]

[Read the patient study ↗](#)

19 completers in an NHS feasibility study

EARLY WHOLE-BODY STUDY

After a whole-body course, participants reported improvements in pain, stiffness, fatigue, sleep and quality of life. Conducted at Sandwell and West Birmingham NHS Trust, this exploratory NovoTHOR study followed participants without a control group. [3]

[Read the patient study ↗](#)

What matters in daily life: Feeling more comfortable, moving with greater ease and having less symptom burden are meaningful goals. These studies offer encouraging reasons to keep exploring light therapy as part of a thoughtful care plan.

Make room for everyday comfort

Explore the positive findings

Whole-body light & fibromyalgia

Studies 1-6

Knee, tendon & heel comfort

Studies 7-9

Neck pain & muscle tenderness

Studies 10-12

Elbow comfort & the wider evidence

Studies 13-15

About this research selection

This guide intentionally highlights positive findings from 15 publications; it is not a comprehensive review. Evidence strength varies by condition and outcome. Most studies used targeted devices, while whole-body evidence is emerging.

Studies 1 and 2 follow the same participants and report manufacturer-affiliated authors. Reviews also share underlying trials. Each research link opens the source for details and disclosures.

Your comfort, your priorities

- ★ **Tell us what matters.** Is your goal more comfortable walking, less stiffness or an easier daily routine? Start with the activities that matter to you.
- ★ **Get to know the experience.** Our team can walk you through the bed, session controls and what to expect during your visit.
- ★ **Follow your progress.** Notice changes in comfort, movement, sleep and daily activities. A simple record helps you see what is changing over time.
- ★ **Build on your existing care.** Discuss persistent pain with your clinician and use light therapy alongside appropriate movement, rehabilitation and prescribed care.

Educational information. Individual results vary; the studies do not establish outcomes for Awaken's exact bed or presets.



📍 3350 NW 2nd Avenue, Suite A44
Boca Raton, FL 33431

📞 (561) 961-0020

✉ hello@awakenredlight.com

🌐 AwakenRedLight.com



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A moment for you.

*Make wellness a ritual.
Make time for yourself.*



RESTORE



RECHARGE



RENEW

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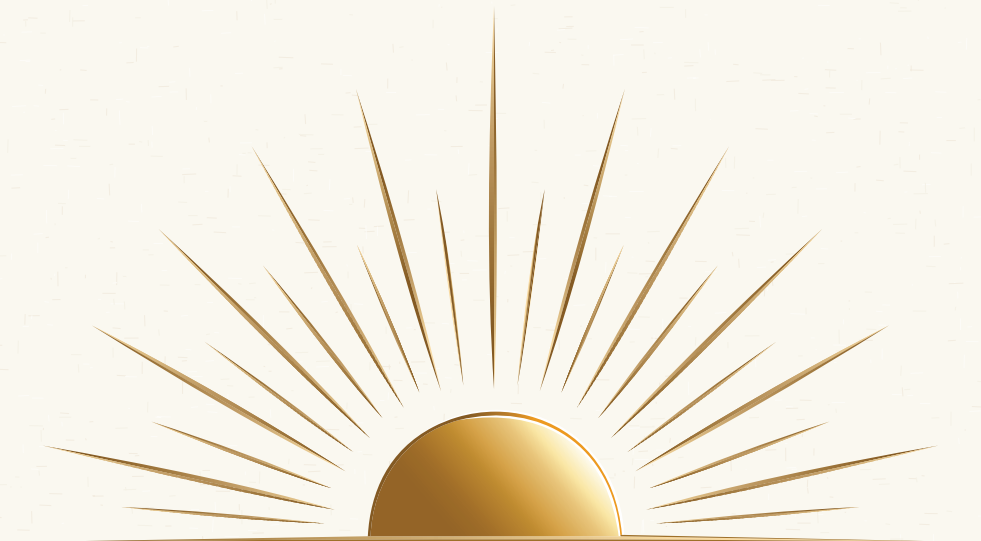
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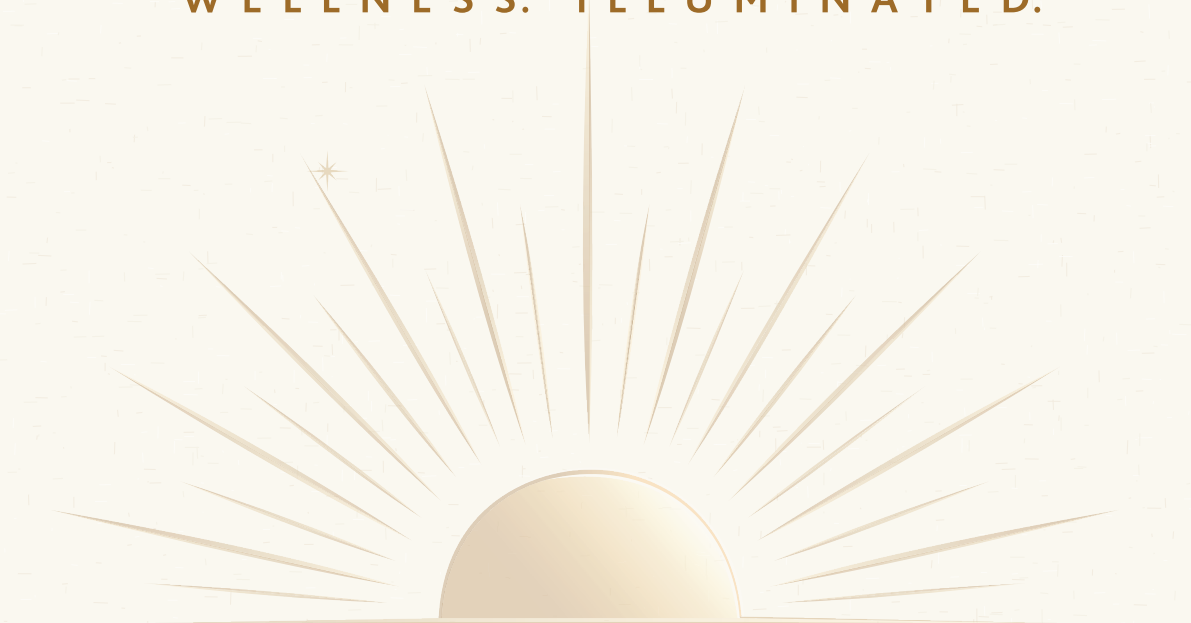
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