

RECOVER
PERFORM
RECHARGE
BY YOUR BEST



AWAKEN

— RED LIGHT —

WELLNESS. ILLUMINATED.

CLIENT RESEARCH GUIDE

Post-surgery recovery

RED LIGHT THERAPY / PHOTOBIOMODULATION

Selected published research, clinical findings & practical insights



FASTER
RECOVERY



IMPROVED
PERFORMANCE



LESS
SORENESS



OPTIMAL
WELLNESS



AWAKEN RED LIGHT | CLIENT RESEARCH GUIDE

Red light therapy for post-surgery recovery

Wound healing, scar reduction & a more comfortable recovery

Positive human studies report less postoperative discomfort, improved wound repair and better surgical-scar appearance with selected red and near-infrared light protocols. Known as photobiomodulation (PBM), this approach has been studied alongside surgical aftercare, rehabilitation and clinical wound management. [1, 4-9]

AREA OF INTEREST	POSITIVE RESEARCH HIGHLIGHTS
 Post-surgery comfort	Trials report improved pain ratings during recovery after selected surgical procedures. [1, 3, 7, 9, 10]
 Wound healing	Clinical studies found improved incision repair and faster reduction in skin-graft donor-wound size. [4-6]
 Swelling & bruising	Positive findings include less swelling, redness or bruising in specific postoperative settings. [1, 2, 5, 11]
 Scar appearance	Early treatment of new surgical scars produced better later scar ratings, thickness or flexibility. [7-9]
 Movement & recovery	Knee-replacement studies recorded better early movement, walking performance or function. [10, 11]

Encouraging research. Thoughtful recovery.

Explore 12 selected human research publications, each with a plain-language positive finding and a source link. These results describe the devices, procedures and care plans studied.

For postoperative visits, begin with your surgeon's clearance and continue prescribed wound care and follow-up. Individual results vary.

Encouraging results after surgery

01 Less swelling and discomfort after eyelid surgery

Ye & Xiang | Aesthetic Plastic Surgery, 2025

145 patients; randomized comparison; 830 nm LED postoperative care

Patients receiving a postoperative care program that included near-infrared LED therapy had better swelling, pain and wound-healing scores than those receiving traditional care. Anxiety scores also improved. The study compared two care approaches, so its findings describe the LED-based care program used after incisional eyelid surgery.

Positive finding: An LED-based postoperative care program supported a more comfortable early recovery and better wound-healing assessments.

[Read the research ↗](#)

02 Faster healing after combined cosmetic procedures

Trelles & Allones | Journal of Cosmetic and Laser Therapy, 2006

10 patients; treated-versus-untreated facial halves; 633 nm red LED

After eyelid surgery combined with laser resurfacing around the eyes, researchers treated one side of each person's face with red LEDs. The treated side healed sooner and showed faster resolution of redness, swelling and bruising, with better reported pain outcomes. Each patient's untreated side served as the comparison in this small controlled study.

Positive finding: Local red LED treatment improved healing and the resolution of visible postoperative effects in this specific procedure combination.

[Read the research ↗](#)

03 Greater comfort after cesarean delivery

de Holanda Araujo et al. | Lasers in Medical Science, 2020

88 women; randomized trial with control and placebo groups; local laser

Two low-level laser sessions were studied during the first day after cesarean delivery, with assessments through approximately 48 hours. The treatment groups had favorable pain-rating and pressure-pain findings, together with better perceived change. These results concern early postoperative comfort rather than long-term scar appearance.

Positive finding: Targeted light therapy provided encouraging short-term pain-relief results during recovery after cesarean delivery.

[Read the research ↗](#)

Supporting repair, one study at a time

04 Better early healing of a chest incision

Fernandes et al. | Lasers in Medical Science, 2016
90 patients; randomized, double-blind study; 660 nm red laser

Following coronary bypass surgery, patients received control care, placebo treatment or local red laser therapy. At the eighth postoperative day, blinded photo assessments found less redness, incisional bleeding and separation of the wound edges in the laser group. Treatment was delivered on four postoperative days within a surgical-care setting.

Positive finding: Red-light treatment improved several visible signs of early incision repair after major surgery.

[Read the research](#) ➤

05 Improved leg-incision repair with red LEDs

de Barros Araujo Junior et al. | Lasers in Medical Science, 2018
40 patients; randomized, double-blind study; 640 +/- 20 nm LED

Researchers studied the leg incision used to harvest a vein for coronary bypass surgery. By the fifth postoperative day, the LED group had fewer bleeding points and smaller areas of bruising and redness than the placebo group. The authors also reported that the treated group's incisions remained closed without wound-edge separation.

Positive finding: Local red LED therapy supported better early wound appearance and incision closure in this controlled study.

[Read the research](#) ➤

06 Faster repair where skin was taken for a graft

Vaghardoost et al. | Lasers in Medical Science, 2018
11 patients; 18 donor sites; randomized split-site comparison; 655 nm laser

In burn patients receiving skin grafts, donor sites were divided into treated and control areas. Both received the same dressings and other care. Over seven days, wound size decreased more in the red-laser-treated areas. Patients and the person evaluating the results were blinded to treatment allocation.

Positive finding: Targeted red light accelerated reduction in donor-wound size when added to the same wound-care routine.

[Read the research](#) ➤

A closer look at surgical scars

07 Better-looking scars after thyroid surgery

Kim et al. | Lasers in Medical Science, 2022

43 completers; randomized, double-blind, sham-controlled trial; 830 nm LED

A four-week LED course began one week after thyroid surgery. At six months, treated patients had better Vancouver Scar Scale and global-assessment scores, higher satisfaction and lower scar-related pain ratings than the sham-device group. The positive findings concern early treatment of a new surgical scar and its later appearance.

Positive finding: Early near-infrared LED treatment improved clinical scar ratings, comfort and satisfaction at later follow-up.

[Read the research ↗](#)

08 Encouraging scar-prevention findings with LEDs

Park et al. | Dermatologic Surgery, 2016

35 treated patients and 15 controls; prospective study; 830/590 nm LED

Patients receiving an early four-week LED course after thyroid surgery had more favorable scar-color measurements at three months than untreated controls. Average clinical scar and global-assessment scores were also better in the treated group. This study used a device combining near-infrared and amber wavelengths.

Positive finding: A postoperative LED program produced favorable scar assessments as new incisions matured.

[Read the research ↗](#)

09 Thinner, more flexible scars after hernia repair

Carvalho et al. | Photomedicine and Laser Surgery, 2010

28 patients; randomized, single-blind study; 830 nm laser

Four local laser treatments were given during the first postoperative week after inguinal hernia surgery. At six months, treated patients had better scar-scale scores, thinner scars and greater scar flexibility than controls. Reported scar thickness was 1.1 mm in the treated group versus 1.9 mm in controls; pain ratings were also more favorable.

Positive finding: Early targeted light treatment was associated with better scar appearance and quality six months after surgery.

[Read the research ↗](#)

Movement, comfort and wound repair

10 Improved recovery after knee replacement

Bahrami et al. | Arthroplasty Today, 2023

45 patients; randomized three-group trial; 804 nm laser arm

The local laser group showed better early pain and movement outcomes after knee replacement. At three months, knee range of motion was greater than in the comparison groups, and functional scores were favorable. The researchers also reported lower opioid use during the first month. These findings describe laser treatment added to postoperative care.

Positive finding: Targeted photobiomodulation supported comfort and functional recovery during the early rehabilitation period.

[Read the research ↗](#)

11 Less swelling and better early walking performance

Chia et al. | Photobiomodulation, Photomedicine, and Laser Surgery, 2025

30 patients; randomized, nonblinded trial; local postoperative PBM

After knee replacement, 15 patients received additional light therapy during postoperative days one through five, while 15 received standard care. By day six, electrical measurements of tissue fluid favored the treatment group, consistent with less swelling. The treated group also walked farther during a two-minute walking test.

Positive finding: This small trial reported encouraging swelling and early mobility results when PBM was added to usual care.

[Read the research ↗](#)

12 Positive healing findings in chronic leg wounds

Minatel et al. | Lasers in Surgery and Medicine, 2009

14 patients; 23 diabetic ulcers; randomized, double-blind study; 660/890 nm LED

Alongside the same cleansing and dressing care, combined red and near-infrared LEDs produced better repair-tissue growth and ulcer-healing rates than a low-dose light comparison. At day 90, 58.3% of treated ulcers were fully healed. This small study concerned chronic diabetic wounds, a separate setting from surgical recovery, under clinical wound care.

Positive finding: Red-plus-near-infrared LED treatment supported healing of difficult chronic wounds in a controlled clinical setting.

[Read the research ↗](#)

What the positive results can mean

Recovery has several parts. The studies measured comfort, wound repair, movement and scar quality separately, giving a clearer picture of where positive changes were recorded.

THE RECOVERY GOAL

WHAT RESEARCH MEASURED

A more comfortable recovery

Lower pain ratings or better pressure-pain measurements after selected operations. [1, 3, 7, 9, 10]

Improved early wound repair

Better incision assessments, closer wound edges or a greater decrease in donor-wound area. [4-6]

Less visible postoperative swelling

Better swelling scores, smaller bruised areas or tissue-fluid measurements suggesting less swelling. [1, 2, 5, 11]

Better-looking surgical scars

More favorable clinical scar ratings, reduced thickness or better flexibility at later follow-up. [7-9]

Progress with movement

Greater knee range of motion, better functional scores or longer walking distance in knee-replacement trials. [10, 11]

Early comfort. Later scar follow-up.

Different outcomes were assessed at different stages. Examples from the selected studies include:

Days 5-8

Early incision or donor-wound assessments favored the targeted light protocols. [4-6]

3 months

Studies recorded favorable thyroid-scar assessments or knee-recovery outcomes. [8, 10]

6 months

Scar appearance and comfort were assessed after early treatment of new surgical scars. [7, 9]

Make the plan personal: These are research assessment times, not instructions for when to start treatment or promises of healing speed. Your surgeon should guide timing, wound care and recovery restrictions.

A guided full-body light experience

Awaken's bed brings red and near-infrared LEDs into a surrounding full-body chamber, with integrated cooling and guided session controls.

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 connection to the red-light research

The bed includes 633 nm and 660 nm, wavelengths used in selected positive studies in this guide. Those studies delivered light directly to specific treatment areas. [2, 4, 12]

Comfort and control during your visit

Integrated cooling, a dedicated body fan and Bluetooth audio support a comfortable experience. Staff can manage sessions through tablet controls, and the bed includes a built-in emergency stop.

Connecting the technology to the studies: These papers used targeted LEDs or low-level lasers at specific doses; several used 830 nm, which differs from the bed's listed wavelengths. Shared red wavelengths provide a research connection, but the exact Awaken bed and its presets were not tested in these studies.

Manufacturer-reported details: 129 mW/cm² irradiance at zero distance and 6,000 W rated machine power. Equipment ratings alone do not establish a clinical treatment dose or healing result.

[Manufacturer specifications](#) ↗

The people behind the positive findings

These examples come from the studies already featured in this guide. They describe published clinical research, with outcomes belonging to the treatment protocols studied.

I45 patients after incisional eyelid surgery

830 NM LED CARE PROGRAM

The LED-based postoperative care group had better swelling, pain and wound-healing scores than the traditional-care group. This study provides a positive example of light incorporated into a defined surgical aftercare program. [1]

[Read the clinical study ↗](#)

II patients with skin-graft donor wounds

655 NM LASER / SPLIT-SITE STUDY

Across 18 donor sites, the treated areas showed a greater decrease in wound size over seven days than matched control areas receiving the same dressings. The benefit was recorded alongside ongoing clinical wound care. [6]

[Read the clinical study ↗](#)

43 participants completing a scar trial

830 NM LED / SHAM COMPARISON

After thyroid surgery, a four-week early LED course was followed by better clinical scar ratings, higher satisfaction and lower scar-related pain at six months compared with a sham device. [7]

[Read the clinical study ↗](#)

The shared theme: Selected light protocols have produced positive findings in comfort, wound repair and the appearance of new surgical scars. These results support a thoughtful conversation with your treating clinician about recovery options.

Make space for a thoughtful recovery

Explore the positive findings

Postoperative comfort & healing

Studies 1-3

Incision repair & donor wounds

Studies 4-6

Surgical-scar appearance & quality

Studies 7-9

Rehabilitation & chronic wound care

Studies 10-12

About this research selection

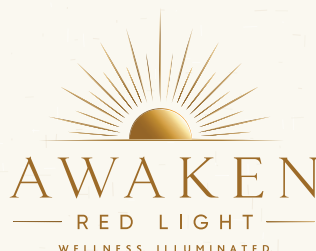
This guide highlights positive findings from 12 human research publications. It is a selected collection rather than a comprehensive review. Summaries focus on the outcomes that improved; they do not imply that every outcome improved in every study.

Studies include randomized trials and small clinical comparisons. Some share research teams. Links lead to the original papers or indexed abstracts for methods and disclosures.

Keep your care connected

- ★ **Start with your surgeon.** Ask whether light therapy fits your recovery and when your incision, dressings and positioning allow it.
- ★ **Continue your care plan.** Keep prescribed wound care, medications, rehabilitation and surgical follow-up in place.
- ★ **Share the details.** Tell our team your procedure date, your clinician's instructions and any recovery restrictions before scheduling.
- ★ **Follow your progress.** Track comfort and scar appearance with consistent photographs and your clinician's assessments.

Open wounds and healing complications need clinical assessment. Research findings are not a guarantee of results from Awaken visits.



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A moment for you.

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



RESTORE



RECHARGE



RENEW

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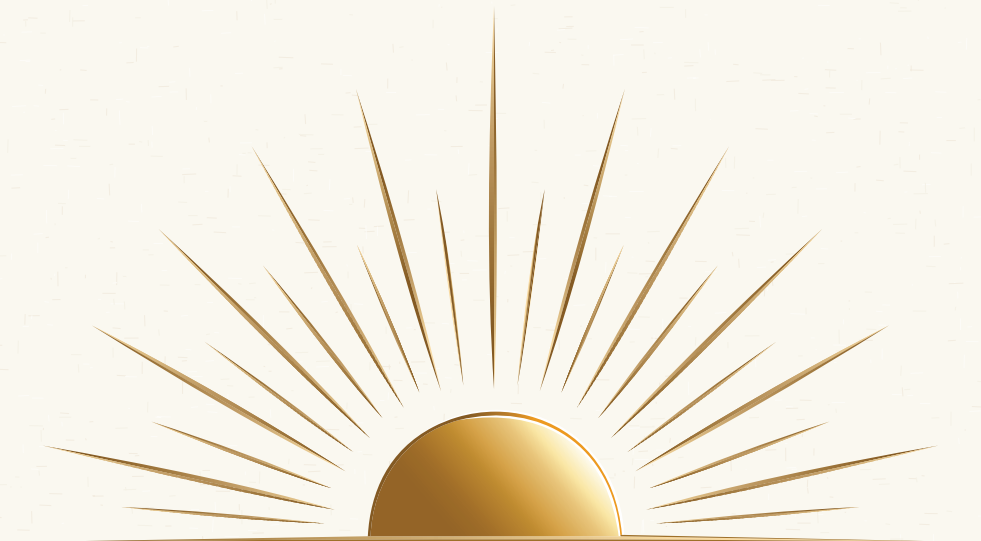
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