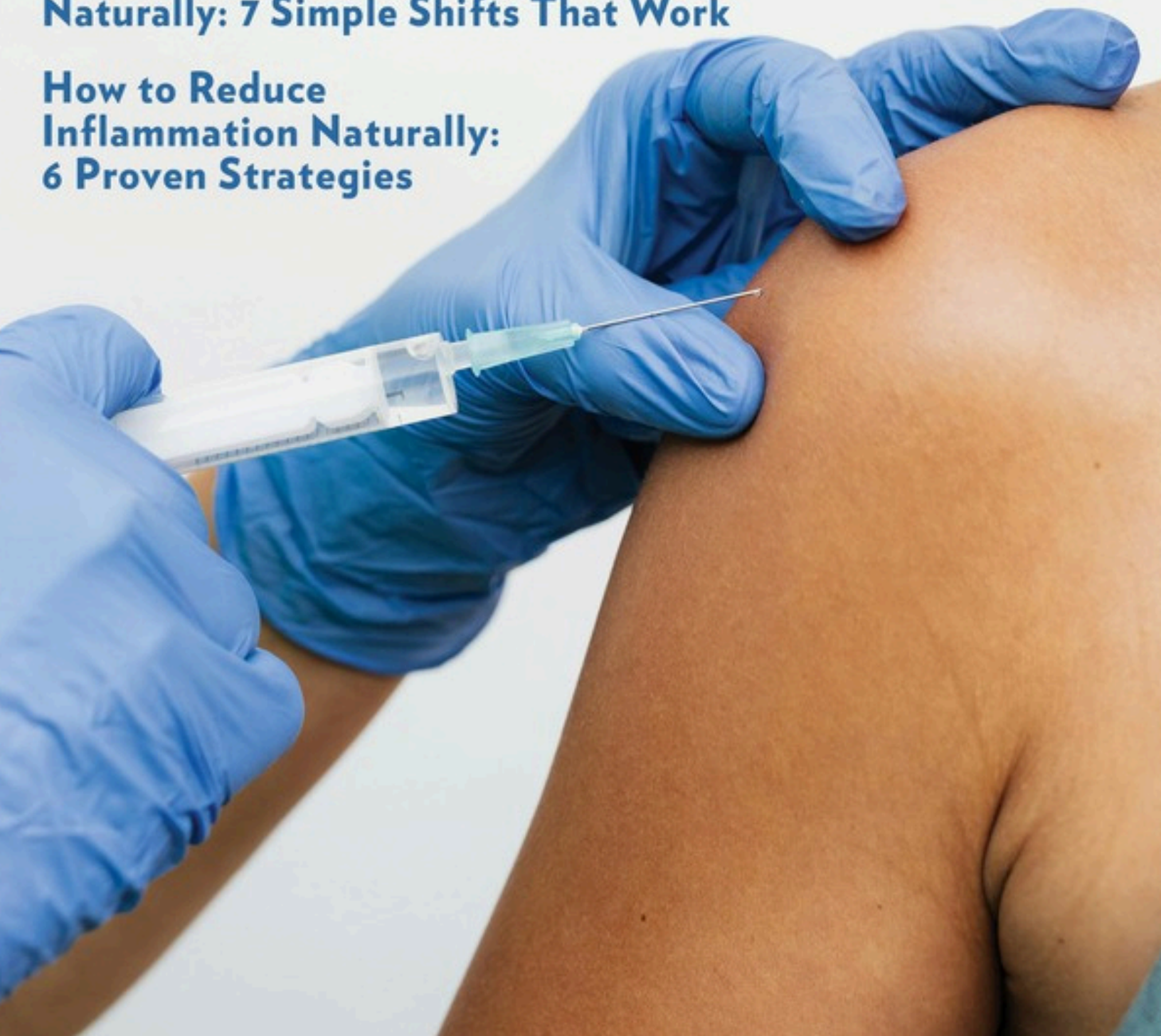


## Prolotherapy: A Natural Alternative to Joint Replacement

### 5 Best Natural Supplements for Stress Relief

### How to Improve Your Gut Health Naturally: 7 Simple Shifts That Work

### How to Reduce Inflammation Naturally: 6 Proven Strategies



**04**

**PROLOTHERAPY: AVOIDING  
JOINT REPLACEMENT**

Dr. Saunders reveals how a simple injection could rebuild your joints from the inside out — and why everything you've been told about treating arthritis may be wrong.

---

**17**

**5 BEST NATURAL SUPPLEMENTS  
FOR STRESS RELIEF**

Stress is quietly draining five critical nutrients from your body — here's how to fight back naturally and start feeling like yourself again.

---

**11**

**HOW TO IMPROVE YOUR GUT  
HEALTH NATURALLY: 7 SIMPLE  
SHIFTS THAT WORK**

New research reveals why fiber, probiotics, and a few simple daily habits may be the most powerful medicine your gut has been waiting for.

---

**21**

**HOW TO REDUCE  
INFLAMMATION NATURALLY: 6  
PROVEN STRATEGIES**

Chronic inflammation is silently fueling nearly every major disease — these six natural strategies can help you fight back before symptoms ever appear.

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# Table of Contents

# FROM THE EDITOR

There's one idea connecting every article in this month's issue: your body was built to repair itself. The question is whether we're giving it what it needs to do the job.

That idea takes center stage in our feature from Dr. Scott Saunders, M.D., who introduces prolotherapy — a regenerative injection therapy that stimulates your body's own healing response to rebuild damaged cartilage and strengthen connective tissue. Instead of masking joint pain with drugs that actually accelerate cartilage breakdown, or waiting until surgery becomes the only option, prolotherapy works with your body's natural repair mechanisms. It's a fundamentally different approach to joint health, and Dr. Saunders lays out a complete plan to make it work.

That plan connects directly to the rest of this issue. In our inflammation article, you'll learn why chronic, low-grade inflammation — the kind that fuels heart disease, diabetes, and arthritis — is one of the most treatable conditions in medicine, and six natural ways to reduce it. Our gut health piece reveals that the digestive tract is where most chronic inflammation begins, and gives you seven practical strategies to restore balance. And our stress article shows how cortisol quietly depletes the nutrients your body needs for all of it — healing, gut repair, and inflammation control — along with five supplements to replenish what stress takes away.

Joint health, inflammation, gut health, stress. They aren't four separate problems — they're four chapters of the same story. And the ending is up to you.

Start reading, start healing, and as always — trust your body. It knows the way.

*Cheryl Ravey*

EDITOR-IN-CHIEF



# Prolotherapy: Avoiding Joint Replacement

*Exploring the Benefits and Potential of Regenerative Injection Therapy.*

Prolotherapy (short for “proliferation therapy”) refers to the injection of a small amount of an irritant—most commonly hypertonic dextrose—into painful or unstable areas such as injured ligaments, tendons, or joint spaces.

The basic principle is to deliberately trigger a mild, localized inflammatory response that recruits the body’s normal healing cascade, with the goal of promoting tissue repair and strengthening connective tissue over time.

Treatments are typically delivered in a series of sessions and paired with appropriate activity modification and rehabilitation, aiming to reduce pain and improve function by addressing underlying soft-tissue laxity rather than only masking symptoms.

## **What is Prolotherapy for?**

Osteoarthritis (OA) or degenerative joint diseases (DJD) is the most common form of arthritis characterized by the gradual breakdown of articular cartilage along with changes in the underlying bone and surrounding soft tissues. OA/DJD most commonly affects weight-bearing and frequently used joints such as the knees, hips, spine, and hands, and risk increases with age, prior injury, repetitive mechanical stress, obesity, and certain anatomic or genetic factors.



Symptoms are progressive and vary from mild discomfort to significant disability:

- Pain with activity
- Stiffness (often worse after rest)
- Reduced range of motion
- Swelling
- Functional limitations
- Joint-space narrowing
- Bone spurs (osteophytes)

### **Growing interest in regenerative medicine:**

Physicians often wait until something gets intolerable before doing anything, due to their education. For example, if someone has mild cataracts, instead of prescribing treatment, they tell the person to wait until they are almost blind to have surgery. Or, if there are arteries in the heart with mild blockages, the surgeon will say to wait until the arteries are 80% blocked to do a bypass or stents, instead of reversing it with lifestyle changes. The same is true with OA. It is better to rebuild the joints, rather than “waiting it out” until symptoms become severe enough to require joint replacement surgery.



Prolotherapy treatments are less invasive, have shorter recovery times, and preserve the native joint. Prolotherapy is part of a broader, stepwise plan that includes lifestyle changes, physical therapy, and pain management, with the goal of improving function and quality of life before end-stage degeneration develops.

### **How Prolotherapy Works**

Mechanism: stimulating the body’s natural healing response.

When a person has pain in joints, tendons, or ligaments, they are told they have inflammation and are then prescribed anti-inflammatory medications. One large issue is that these medications slow healing and can cause scar tissue instead of natural collagen. Some use steroid injections, different types of cortisone, which cause breakdown of the cartilage and weakening of tissues in the joint.[i] Some use injections of numbing medications such as lidocaine, bupivacaine, or other nerve blocking agent. These also cause joint degeneration and shrinkage of cartilage.[ii]

Prolotherapy, on the other hand, is designed to stimulate natural healing. The solution is a hypertonic (concentrated) glucose solution that causes dehydration in the cells of the injured joint, increasing local blood flow and prompting the release of growth factors and other mediators involved in tissue repair. It encourages fibroblast activity and collagen production, supporting gradual remodeling and strengthening of connective tissue and improving joint stability over time. Rather than acting as a numbing agent, prolotherapy’s intent is to promote rebuilding and repair of tissues.

## Prolotherapy Formulas:

- Hypertonic dextrose[iii] (sometimes with a local anesthetic) is by far the most common prolotherapy injection.
- P2G (phenol–glycerin–glucose)[iv] Local irritant that stimulates fibroblasts.
- Morrhuate sodium[v] is cod liver oil salts
- Platelet-rich plasma (PRP)[vi], which uses the patient’s own concentrated platelets to deliver growth factors
- Bone marrow aspirate concentrate (BMAC) or other cell-based preparations
- Ozone[vii] – one unusual injection is a gas that is pure oxygen as  $O_2 + O_3$ . [viii] Supplies both oxygen and an irritant (ozone is a pro-oxidant). If you can find it, since very few practitioners have the machines needed, this is probably the best option.

Each of these causes inflammation, instead of reducing it. The inflammation starts the healing process. Ozone also adds the benefits of oxygen to turn on the mitochondria to increase energy.

## Procedure and safety considerations:

A prolotherapy visit typically begins with a focused history and examination to confirm the pain source (for example, a ligament/tendon attachment or an intra-articular source), followed by a discussion of alternatives, expected course, and informed consent. The skin is cleaned using sterile technique, and a small needle is used to inject the selected solution into targeted points.

Depending on the joint and clinician preference, sometimes ultrasound guidance may be used to improve accuracy and avoid sensitive structures.

After the injection, patients commonly experience temporary soreness or a “flare” for a day or two, and are usually given guidance on activity modification and a rehabilitation plan.

The full treatment is a series of sessions spaced weeks apart rather than a single injection.

Key safety considerations include screening for bleeding risk (especially blood thinners), allergies to anesthetics or components, active infection, poorly controlled medical conditions, and (for dextrose solutions) diabetes management considerations. As with any injection, risks can include bruising, bleeding, infection, increased pain, and rare injury to nerves or blood vessels; patients are typically advised to seek prompt care for fever, worsening redness/swelling, drainage, progressive numbness/weakness, or severe unrelenting pain.



**What to expect** (timeline, number of sessions, and recovery):

Most prolotherapy appointments are outpatient visits and typically take about 20–45 minutes, depending on how many areas are treated and whether imaging guidance is used. After marking tender points and cleaning the skin, the clinician usually delivers several small injections around the painful ligament/tendon attachments or into/around the joint; the exact number of needle passes varies by body region and clinical findings. Many treatment plans involve a series of sessions—commonly about 3–6 visits—spaced roughly 3–6 weeks apart, although some people need fewer (milder cases) and others may need additional sessions for long-standing or multi-joint problems.

It is common to feel increased soreness, stiffness, or a temporary “flare” for 24–72 hours (sometimes up to a week), followed by gradual improvement; because the goal is tissue remodeling rather than immediate numbing, benefits often build over weeks to months. Patients are usually advised to keep the area moving but avoid heavy loading for several days, follow a guided strengthening/physical therapy plan, and return for reassessment to adjust targets and spacing based on response.



## Benefits for Osteoarthritis and Degenerative Joints

**Reduction in pain and inflammation:** Over time, as the joint heals, there is less pain and inflammation. This allows for more exercise and physical therapy, which improves circulation to the joint inciting more improvement.

**Improved joint function and mobility:** As the cartilage repairs, the swelling decreases allowing better mobility. It is important to do range-of-motion exercises prescribed by your PT to maintain function because the ligaments will heal stronger and unless you exercise, they will get stiffer.

**Reverse degenerative changes:** Prolotherapy has the unique ability to stimulate repair mechanisms that don't just stop inflammation, but actually repair the damage and increase cartilage in joints.



# Comparing Prolotherapy to Other Treatments

Therapy	Benefits	Risks
Exercise, Weight loss, PT/strengthening	Improve mechanics, reduce load on the joint, build capacity.	Requires consistency; benefits can be gradual, does not rebuild cartilage.
Topicals and oral meds (e.g., NSAIDs, acetaminophen)	Symptom control	GI/kidney/cardiovascular risks, prevents repair of joint tissues
Intra-articular corticosteroid injection	Reduce inflammation and pain, short-term relief	Causes tissue breakdown; lasts weeks to months
Hyaluronic acid injections	Improve lubrication and symptoms, works in days	Requires repeated injections, lasts months
PRP (platelet-rich plasma) injections	Causes inflammation to rebuild cartilage. One injection can help	Protocols vary; cost/coverage issues; evidence and guideline support vary, lasts months to years
Prolotherapy (commonly hypertonic dextrose) injections	Stimulate healing; Improves connective tissue/joint stability over time, increases cartilage	Usually requires a series of visits; post-injection soreness common
Nerve procedures (e.g., radiofrequency ablation)	Reduce pain signaling	Does not address cartilage loss; numbness/neuritis risk; technique-dependent
Joint replacement surgery	Replace damaged joint surfaces; restore function in end-stage disease	Operative risks, recovery time, rehab commitment
Joint replacement surgery	Replace damaged joint surfaces; restore function in end-stage disease	Operative risks, recovery time, rehab commitment

Overall, most DJD treatment plans begin with lifestyle and rehabilitation strategies, then add medications or targeted procedures based on symptom pattern, severity, and goals. Injections such as corticosteroids, nerve blockers, or anti-inflammatories worsen the problem, while options like prolotherapy or PRP actually repair the joint. Hyaluronic acid is in the middle with some improvement, but injections are needed periodically for life. All treatments should be paired with strengthening and movement retraining.

## How To Benefit from Prolotherapy

Just about anyone with osteoarthritis can benefit from prolotherapy, including people with DJD at any stage from just pain to bone-on-bone cartilage loss. Risks are minimal, and benefits include repair of joints.

It is important to note that prolotherapy injections should NOT include:

- Steroids (cortisone, or any of its derivatives)
- Nerve blockers (Lidocaine, or anything like it)
- Anti-inflammatory medications (NSAID)

These medications cause the catabolic breakdown of cartilage.

Also, to derive the greatest benefit from any therapy it is important for you to have an “anabolic metabolism.” The term “anabolic” refers to building up or repairing. Studies done with injections of PRP or stem cells found that if the injections are done when a person is “catabolic” (breaking down) they don’t work.[x] However, being anabolic allows the injections to grow the normal tissue in and around a joint. Becoming anabolic requires two things: an empty stomach to produce a hormone called GHRELIN, the hunger hormone, which produces growth hormone (HGH) that repairs tissues, and to be asleep by 10:00 PM so your body switches to anabolic mode.[xi]

The best way to get benefit is to fast two days before the injection and one day after for optimal anabolic rebuilding and repairing. This stimulates “autophagy” which takes out all the old, damaged tissue and replaces it with new, youthful cartilage.

### Joint Repair Plan

Prolotherapy stimulates the body’s natural repair response and offers meaningful improvements in pain, stability, and day-to-day function when used as part of a comprehensive plan. When combined with core DJD strategies—such as strength training, mobility work, weight management, and activity modification—you can restore the youth of your joints.

#### SIMPLE PLAN:

- Weight loss – Find your ideal body weight.
- Exercise – strength training, especially the muscles around the affected joint.

- Prolotherapy injections – (Hypertonic Glucose, P2G, Morrhuate sodium, PRP, or Ozone) 4-6 treatments about 1 month apart. Fast 2 days before and 1 day after each injection.
- Fasting: No food after 6:00 PM
- Sleep by 10:00 PM nightly, get up at 6:00 AM

#### Supplements:

- **MSM** 500mg three times per day
- **Glucosamine** 500mg three times per day
- **Vitamin C** 500mg three times per day
- **Chondroitin** 500mg three times per day
- **Collagen Peptides** 10 grams daily (with high-protein meal in the morning)

Working on this plan will change your life in many other ways besides avoiding joint replacement surgery. You will have more energy. You will have less pain. Your hair and nails will get stronger. And, we will get world peace! (Just kidding about that last one). But, you will definitely have a longer “healthspan” or healthy amount of life.



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# How to Improve Your *Gut Health* Naturally: 7 Simple Shifts That Work

Something remarkable is happening in the world of health research — and it's centered on a part of your body you probably don't think much about: your gut.

Over the past several years, scientists have uncovered that your digestive system does far more than break down your lunch. It influences your mood, your immune defenses, your energy levels, even how clearly you think. Some researchers now call the gut the body's "second brain," and the science behind that nickname is getting stronger every year.

The good news? You don't need expensive treatments or complicated protocols to start supporting your gut. A few deliberate changes — most of which you can start this week — can set your digestive system on a healthier path.

Here's what the latest research says works.



## 1. Feed Your Good Bacteria with Fiber (Most of Us Aren't Getting Enough)

If there's one thing nearly every gut health expert agrees on, it's this: fiber is the single most important nutrient for your microbiome. The beneficial bacteria that line your intestines literally eat fiber — fermenting it into short-chain fatty acids like butyrate and propionate that reduce inflammation, strengthen your gut lining, and support your immune system.

And yet, most Americans are falling dramatically short. Research published in *Comprehensive Reviews in Food Science and Food Safety* found that the average American consumes only about 58% of the recommended daily fiber intake. That's a problem, because low fiber intake doesn't just cause occasional constipation — it starves the very microbes your body depends on.

The fix sounds simple: eat more fruits, vegetables, legumes, and whole grains. But modern life makes that harder than it sounds. Between busy schedules, processed convenience foods, and the declining nutrient density of mass-produced crops, many people struggle to hit their daily target of 25–38 grams through food alone.

This is exactly why fiber-rich greens supplements have surged in popularity. A well-formulated greens powder — one that combines prebiotic fibers like psyllium husk and Jerusalem artichoke with nutrient-dense superfoods — can help close the gap between what you're eating and what your gut actually needs. It's not a replacement for whole foods, but it's a practical insurance policy for days when your plate doesn't quite measure up.



## 2. Bring in the Reinforcements: Probiotics and Fermented Foods

While fiber feeds the good bacteria you already have, probiotics introduce new beneficial strains into your system. Think of it as both tending the garden and planting new seeds.

Fermented foods like yogurt, kefir, kimchi, sauerkraut, and miso are excellent natural sources of probiotics. A landmark Stanford study found that people who ate fermented foods daily for just ten weeks showed significantly greater microbial diversity — a key marker of gut health — compared to those who simply ate a high-fiber diet alone.

The takeaway? Both approaches matter. Fiber nourishes your existing microbes; probiotics expand the community. For those who don't regularly eat fermented foods (and let's be honest, how many of us have kimchi with every meal?), a quality probiotic supplement that pairs live cultures with digestive enzymes and prebiotics can offer meaningful support. Look for formulas that address the full digestive process — not just one piece of the puzzle.



### 3. Manage Stress Before It Manages Your Stomach

Here's something that surprises many people: your gut and your brain are in constant communication through what scientists call the gut-brain axis. When you're stressed, your brain sends signals that can slow digestion, alter the composition of your gut bacteria, and increase intestinal permeability — commonly known as “leaky gut.”

Chronic stress doesn't just give you butterflies. Over time, elevated cortisol can erode the protective mucus lining of your intestines, allowing toxins to slip through and trigger systemic inflammation. The result? Bloating, irregular bowel habits, fatigue, and sometimes even skin issues like acne or eczema.



Mind-body practices like meditation, deep breathing, gentle yoga, or even a daily 20-minute walk in nature can meaningfully reduce the stress hormones that wreak havoc on your digestive system. The key is consistency. A few minutes every day does more good than an hour-long session once a month.

### 4. Move Your Body to Move Your Microbiome

Exercise does more than build muscle and burn calories — it also diversifies your gut bacteria. Multiple studies have shown that physically active people harbor a wider variety of beneficial microbes than their sedentary counterparts, regardless of diet.

You don't need to train like an athlete to see benefits. Moderate, regular movement — a brisk walk, a swim, a bike ride, or a dance class — appears to be enough to shift the microbiome in a favorable direction. Researchers believe exercise may increase blood flow to the intestines and stimulate the production of those all-important short-chain fatty acids.

The best exercise for your gut is the one you'll actually do. Pick something enjoyable, make it a habit, and your microbes will thank you.





## 5. Prioritize Sleep — Your Gut Repairs Itself at Night

Sleep isn't just rest for your brain — it's repair time for your gut. During deep sleep, your body ramps up cellular regeneration, reduces inflammation, and rebalances the microbial populations in your intestines. When you short-change sleep, these processes suffer.

Research has consistently linked poor sleep quality to reduced microbial diversity, increased gut permeability, and higher levels of inflammatory markers. In practical terms, that means even a few nights of bad sleep can leave you feeling bloated, sluggish, and more susceptible to illness.

Aim for 7–9 hours of quality sleep. Create a cool, dark environment. Limit screens before bed. And if you're struggling with sleep despite good habits, consider whether digestive discomfort might be part of the problem — sometimes improving gut health and improving sleep become a virtuous cycle.

## 6. Hydrate — The Overlooked Gut Health Essential

Water may be the most underrated gut health tool. It helps maintain the mucosal lining of your intestines, supports the transport of nutrients, and keeps things moving through your digestive tract at a healthy pace.

Dehydration, on the other hand, slows transit time and can lead to constipation, which allows toxins to linger longer in your colon. This creates an environment where harmful bacteria can proliferate at the expense of beneficial strains.

A simple rule of thumb: drink enough water so that your urine is pale yellow throughout the day. If you're adding more fiber to your diet — whether through food or a greens supplement — increasing your water intake becomes even more important, since fiber absorbs water as it moves through your system.

## 7. Consider a Targeted Supplement Strategy

Even with the best intentions, modern life makes it challenging to get everything your gut needs from diet alone. Depleted soils, processed foods, environmental toxins, and the everyday stresses of life all take their toll on your digestive system.

That's where a thoughtful supplement approach can fill the gaps. Rather than grabbing the first bottle off the shelf, look for formulas that address gut health from multiple angles:

- **Prebiotic fiber** (like psyllium husk and Jerusalem artichoke root) to nourish your existing beneficial bacteria and promote regularity
- **Probiotics and digestive enzymes** to restore microbial balance and support efficient nutrient absorption
- **Superfoods and greens blends** rich in antioxidants and phytonutrients that combat inflammation and support detoxification
- **Doctor-formulated combinations** that address the entire digestive process — not just one isolated symptom

The most effective supplements tend to be those developed with clinical input, combining complementary ingredients that work together rather than in isolation. When a formula pairs prebiotics with probiotics, adds digestive enzymes for better breakdown, and includes naturally-sourced fiber to keep everything moving — that's a comprehensive approach worth considering.



## The Bottom Line: Small Steps, Big Impact

Improving your gut health isn't about overhauling your entire life overnight. It's about making deliberate, sustainable shifts — adding more fiber-rich foods to your plate, managing stress, moving your body, sleeping well, staying hydrated, and filling nutritional gaps with quality supplements when needed.

The research is clear: a healthy gut underpins nearly every aspect of your well-being, from your digestion and immunity to your mood and mental clarity. And the best time to start supporting it is right now.

Your gut has been talking to you all along. It's time to start listening — and giving it what it needs to thrive.



# 5 Best *Natural* Supplements for Stress Relief

The Nutrients Your Body Burns Through When Stress Won't Let Up.

Chronic stress doesn't just make you feel frazzled — it quietly reshapes your body's chemistry, depleting critical nutrients and creating deficiencies that make everything worse.

Nearly half of American adults report significant daily stress, according to the American Psychological Association. And while coping strategies like exercise and meditation are excellent, we rarely think about what stress is doing at the nutritional level. Cortisol — the primary stress hormone — burns through certain nutrients faster than your diet can replace them, leading to cravings that won't quit, sleep that doesn't restore, and that persistent “wired and tired” feeling.



Targeted nutritional support can help break this cycle. Here are five nutrients your stressed body needs most.

## **1. Magnesium — The Stress Mineral You're Almost Certainly Missing**

If you could take only one supplement during a stressful season of life, many integrative practitioners would say magnesium. It's involved in over 400 enzymatic reactions — from muscle relaxation and blood sugar regulation to nerve function and sleep. A 2025 review in *Nutrients* called it a critical cofactor for energy metabolism, cardiovascular health, and psychological well-being.

Yet up to half of American adults don't get enough. Worse, stress itself depletes magnesium through the kidneys, creating what researchers describe as a vicious circle: low magnesium increases stress susceptibility, which burns through even more magnesium. Clinical trials show that supplementing for just four weeks can measurably reduce cortisol levels and ease symptoms like fatigue and irritability.

## Why How You Take Magnesium Matters

Oral magnesium can be hard on digestion — magnesium salts are natural laxatives, and if they move through your gut too quickly, absorption suffers. For people whose digestion is already compromised by stress, this is a frustrating catch-22.

That's why transdermal magnesium spray has gained attention. Applied through the skin, it bypasses the digestive tract entirely. Research from the University of Cardiff showed that skin absorption begins immediately, and a Mayo Clinic study found that fibromyalgia patients using topical magnesium spray for four weeks experienced significant symptom improvement across the board.



For stress support, look for a transdermal magnesium spray sourced from mineral-rich natural waters, formulated without oily residues or synthetic additives — just a few sprays before bed can support deeper sleep and lower cortisol without any digestive side effects.

## 2. Protein — The Stress Buffer for Blood Sugar and Muscle

Chronic stress is catabolic — it breaks down lean muscle tissue for energy. Over time, this disrupts your metabolic rate and makes weight management harder. Protein also stabilizes blood sugar, which is critical when cortisol is triggering glucose spikes and the inevitable crashes that drive sugar cravings.

Aim for protein at every meal and consider a clean protein powder to fill gaps on busy days. Skip formulas with artificial sweeteners or excessive fillers — your stressed body doesn't need more things to process.



### 3. Antioxidant-Rich Greens — Cellular Defense Against Stress Damage

Elevated cortisol increases free radical production, causing oxidative stress that accelerates aging and inflammation at the cellular level. Your best defense? Antioxidant-rich plants like spirulina, green tea, broccoli, and berries.

The problem is that stress sabotages your diet — when you're overwhelmed, balanced meals are the first thing to go. A daily greens powder can close that gap, combining dozens of superfood greens with prebiotic fiber for gut support and digestive enzymes for better absorption. Look for doctor-formulated blends with whole-food ingredients like psyllium husk, Jerusalem artichoke, pomegranate, and green tea extract. Bonus points if it tastes good enough to drink every day.



### 4. B Vitamins — Mood and Energy Support for Your Nervous System

B vitamins are essential for producing serotonin, dopamine, and GABA — the neurotransmitters that regulate mood, motivation, and calm. Stress burns through them fast, leaving you foggy and emotionally flat.

B6 is especially critical for serotonin production, and research shows that magnesium combined with B6 has an enhanced stress-reducing effect compared to magnesium alone. B12 and folate support nervous system function and energy metabolism, with deficiencies common among older adults and those with digestive issues. Look for activated forms like methylfolate and methylcobalamin for better absorption.



## 5. L-Theanine — Calm Without the Drowsiness

Ever felt oddly relaxed after green tea despite the caffeine? That's L-theanine — an amino acid that promotes alpha brain wave activity, the same state associated with meditation and calm alertness. It supports GABA, serotonin, and dopamine production without causing grogginess or dependency.

L-theanine is especially helpful for the “wired but tired” feeling at night when your body is exhausted but your mind won't stop. Some formulas combine it with GABA, 5-HTP, and vitamin B6 for a more comprehensive calming effect. Green tea provides 25–50 mg per cup, but supplemental doses of 100–400 mg are typically used in studies showing meaningful stress relief.



## Putting It All Together

Managing stress isn't just about what you do — it's about what you give your body to work with. Start with a whole-foods diet, then fill the gaps: a transdermal magnesium spray before bed for sleep and cortisol support, a fiber-rich greens powder each morning for antioxidant protection and gut health, and targeted B vitamins and L-theanine to address the neurochemical imbalances that chronic stress creates.

Your body is remarkably resilient — but resilience requires resources. Give it what it needs, and you may be surprised how much better you feel in just weeks.

**Disclaimer:** This article is for informational purposes only and is not intended as medical advice. Always consult your healthcare professional before making changes to your diet or supplement regimen. These statements have not been evaluated by the Food and Drug Administration. Products mentioned are not intended to diagnose, treat, cure, or prevent any disease.

# How to *Reduce* Inflammation Naturally: 6 Proven Strategies

*The Silent Fire Behind Nearly Every Chronic Disease — And What You Can Do to Put It Out.*

Inflammation is supposed to protect you. When you cut your finger or catch a cold, your immune system dispatches white blood cells to the affected area, creating redness, warmth, and swelling — signs that healing is underway. This acute inflammation is essential. Without it, even a minor wound could become life-threatening.

But there's another kind of inflammation that doesn't protect you at all. Chronic, low-grade inflammation smolders quietly inside your body for months or years, often without obvious symptoms. The World Health Organization has described chronic inflammatory diseases as a leading cause of mortality worldwide, linking them to heart disease, diabetes, arthritis, Alzheimer's, and even cancer.

The encouraging news? Unlike many health conditions, chronic inflammation responds remarkably well to natural interventions. Here are six evidence-based strategies to help cool the fire from within.



## 1. Turmeric and Curcumin — Nature’s Most Studied Anti-Inflammatory

No conversation about natural inflammation support is complete without turmeric. Its active compound, curcumin, has been the subject of nearly 20,000 published scientific papers and over 120 clinical trials examining its anti-inflammatory properties.

A 2025 umbrella review published in *Frontiers in Pharmacology* confirmed what decades of research have suggested: curcumin is a safe medicinal agent with demonstrated anti-inflammatory, antioxidant, and immune-modulating effects. It works by inhibiting NF- $\kappa$ B, a molecule that activates inflammatory genes, and by reducing key inflammatory markers like C-reactive protein, TNF- $\alpha$ , and IL-6.



Here’s the catch: curcumin is notoriously difficult for your body to absorb on its own. Most of what you eat passes right through without reaching your bloodstream. That’s why the best turmeric supplements pair curcumin with black pepper extract (BioPerine®), which research shows can increase absorption by up to 2,000%. When choosing a turmeric supplement, look for a doctor-formulated option with concentrated curcuminoids and enhanced bioavailability — the difference in effectiveness is dramatic.



## 2. Heal Your Gut — Where Most Chronic Inflammation Begins

If you've been reading this issue, you already know that gut health affects nearly every system in your body. But here's the inflammation connection that ties it all together: when your intestinal lining is compromised — by stress, poor diet, or microbial imbalance — toxins and partially digested food particles can leak into your bloodstream. Your immune system treats these as foreign invaders, triggering an inflammatory response that can become chronic.

This is why so many integrative practitioners consider the gut to be ground zero for inflammation. Restoring gut health through prebiotic fiber, probiotics, and digestive enzymes can help seal the intestinal lining and calm the immune overreaction at its source. A comprehensive gut-support formula that addresses the entire digestive process — from microbial balance to toxin removal — can be a powerful first step. And a daily fiber-rich greens powder provides the prebiotic fuel your beneficial bacteria need to maintain a strong, intact gut barrier.



## 3. Omega-3 Fatty Acids — The Anti-Inflammatory Fat Your Body Craves

Omega-3 fatty acids — particularly EPA and DHA from fish oil — are among the most well-established natural anti-inflammatories. They work by producing specialized pro-resolving mediators (SPMs), molecules that actively signal your body to stop the inflammatory process and begin repair.

The typical Western diet is heavily skewed toward omega-6 fatty acids (found in vegetable oils, processed foods, and grain-fed meats), which tend to promote inflammation. Increasing your omega-3 intake helps rebalance this ratio. Studies have shown that omega-3 supplementation can reduce inflammatory markers and may be a viable alternative to NSAIDs for certain types of chronic pain. Look for a high-quality fish oil supplement with meaningful doses of both EPA and DHA for the best anti-inflammatory effect.



## 4. Magnesium — The Mineral That Keeps Inflammation in Check

Magnesium plays a quieter but critically important role in inflammation. Research has consistently shown that low magnesium levels are associated with elevated inflammatory markers, including C-reactive protein and IL-6. A 2025 review in *Nutrients* described magnesium as essential for immune defense and psychological well-being, noting that deficiency can amplify both stress and inflammatory responses.

The challenge is that most adults don't get enough magnesium, and oral supplements can cause digestive discomfort. A transdermal magnesium spray — applied directly to the skin for better absorption without gut side effects — offers a practical alternative. It's especially useful at night, when magnesium's calming properties can support the restorative sleep that your body needs to resolve inflammation.



## 5. Eat to Cool the Fire — Anti-Inflammatory Foods That Work

No supplement can fully compensate for a pro-inflammatory diet. The foundation of any inflammation-reduction strategy is what you put on your plate every day.

Research consistently identifies several food categories as powerful anti-inflammatory tools: deeply colored berries rich in anthocyanins, leafy greens containing sulforaphane, fatty fish packed with omega-3s, ginger and its active compound 6-gingerol, garlic and onions with their sulfur-containing compounds, and nuts — especially walnuts — loaded with anti-inflammatory fats and polyphenols. A recent Tokyo University of Science study even found that combining certain plant compounds can amplify their anti-inflammatory effects by up to 100 times compared to using them individually.

The flip side matters too: processed foods, refined sugars, industrial seed oils, and excess alcohol all fuel inflammation. Reducing these while increasing whole, plant-rich foods creates a dietary environment where inflammation has far less fuel to burn.



## 6. Move, Sleep, and De-Stress — The Lifestyle Trifecta

Supplements and diet are powerful, but they work best alongside three lifestyle habits that directly modulate inflammation:

Regular moderate exercise reduces levels of inflammatory markers and increases anti-inflammatory compounds. You don't need intense workouts — even a daily 30-minute walk has measurable effects. Quality sleep is when your body performs its deepest anti-inflammatory repair work; chronic sleep deprivation is reliably linked to elevated inflammatory markers. And stress management matters because cortisol, when chronically elevated, drives the very inflammation you're trying to reduce.

These three habits form the foundation. Layer in targeted nutrition — curcumin for direct anti-inflammatory action, gut support to address inflammation at its source, omega-3s to rebalance inflammatory signaling, and magnesium to calm both the nervous system and the immune response — and you've built a comprehensive, natural strategy for keeping chronic inflammation in check.



### The Bottom Line

Chronic inflammation doesn't announce itself with a fever or a swollen joint. It works silently, gradually increasing your risk for the diseases that affect millions. But it's also one of the most modifiable risk factors in medicine. The right foods, the right supplements, and the right daily habits can meaningfully reduce inflammatory markers and help protect your long-term health.

You don't need to do everything at once. Start with one change this week — add a turmeric supplement, clean up your diet, take a daily walk, or support your gut — and build from there. Your body knows how to heal. It just needs the right tools.



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## OUR MISSION

**We help people experience vibrant, amazing health through natural healing remedies.**