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INNOVATING WHOLE PERSON CARE

Women and Pain

TAKING CONTROL AND FINDING RELIEF

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Table of Contents

PAIN.....	1
Women and Cancer Pain.....	4
LIFE EXPERIENCES AND EMOTIONAL STATUS	6
Women and Opioids.....	6
FACING DISCRIMINATION.....	9
MANAGING	13
TIME TO JOURNAL.....	15
CONCLUSION	16
REFERENCES	17
CONTRIBUTORS.....	20



Pain

If you have chronic pain, you're not alone. An estimated 25.3 million adults in the United States report severe, daily pain, significantly more women than men, while 55 percent of U.S. adults report at least some pain in the past three months. Chronic pain is one of the most frequent reasons for physician visits and among the most common reasons for taking medication.

But there's a gender gap when it comes to pain. Women have more frequent, longer lasting, and severe pain than men. For instance, one national survey found that while about 16 percent of white men and 8 percent of black men reported severe pain, those numbers jumped to about 22 percent for white women and 11 percent for black women, respectively.

Women are also more likely to develop painful diseases, such as chronic fatigue syndrome, fibromyalgia, endometriosis, interstitial cystitis, vulvodynia, and temporomandibular disorders (TMJ) than men. They also report greater pain severity than men from certain conditions, such as cancer. And women simply pay attention to pain from physical conditions more than men. They recognize when something is wrong. Men, on the other hand, have a tendency to ignore pain when they *should* pay attention to it.

Women also differ in their response to pain medications. They tend to need higher amounts of pain medications immediately after surgery, while men tend to use more pain relievers later in the recovery period. Conversely, some medications (the partial kappa-opioid agonists, such as nalbuphine [Nubain] and pentazocine [Talwin]), can provide greater pain relief in women than men, although opioids such as morphine and codeine can lead to more nausea and vomiting in women than men.

The question that has plagued researchers for decades is: "Why?"

Part of it could be anatomy. Women have more nerve receptors than men, so they may be hard-wired to feel more pain. Even something as seemingly minor as the thickness of your skin or the size of your body can affect pain perception. Another reason may be that women are more likely to see a doctor than men, so maybe they're just getting diagnosed more often.

Genetics also plays a role, affecting how long neurons that transmit pain signals to the brain survive, the strength of pain response, and pain tolerance, perception, and response to pain relievers.

"Pain is "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage. Pain is always subjective. It is unquestionably a sensation in a part or parts of the body, but it is also always unpleasant and therefore also an emotional experience."

—International Association for the Study of Pain, 1994

But we also know that reproductive hormones—estrogen and progesterone in women, testosterone in men—play a role in these pain-related gender differences.

In women, the continual variation in hormone levels through puberty, menstruation, pregnancy, and the menopause transition contribute to these sex differences. For instance, before puberty, there are no significant differences in the development of painful conditions between boys and girls. Afterward, the differences are dramatic, with women two to six times more likely to develop chronic pain conditions such as headaches, irritable bowel syndrome, and fibromyalgia. There are also differences in pain levels and frequency after menopause.

Pain intensity tends to increase when estrogen levels are low and progesterone levels are high, as they are during the second half of the menstrual cycle. This may be because there are more naturally occurring “feel good” chemicals in the brain when estrogen levels are high.

You can imagine the natural benefit to this: estrogen levels are highest during pregnancy and childbirth, thus providing some natural pain relief. Studies show that during pregnancy, when estrogen levels are high and steady, many pain conditions improve and pain sensitivity is lower. There’s even a name for it: pregnancy-induced analgesia. One study found that women with TMJ reported less pain as pregnancy progressed (and estrogen levels rose) and had more pain after surgical menopause (when estrogen levels plummet).

Finally, reproductive hormones can also influence how well opioids and other pain relievers work.

But What About Men?

Although this resource speaks to specific issues facing women living with pain, men and women can visit the Resources section of www.HowWeHeal.com. Choose Pain Management for free, downloadable guides to nutrition and pain, chronic pain, and much more, plus helpful free articles.

The Menopausal Transition and Pain

Surprisingly, there is little research on the effects of the pre-menopause transition, called perimenopause, and menopause on pain severity and frequency. But we are beginning to learn.

One study of 101 women seen in a menopause clinic in Italy, all of whom had some form of chronic pain (headaches, fibromyalgia, arthritis, back, or abdominal pain), found that about 18 percent said their pain started after menopause; about 17 percent said it stopped after menopause; and the rest said their pain that had begun prior to menopause continued after the transition. As might be expected with age, arthritic pain started or got worse after menopause in half the women.

Indeed, musculoskeletal pain, such as arthritis and back pain, have some connection to hormonal levels, with evidence that estrogen can affect the cartilage and fluid around the joints. This could explain why women tend to have more severe knee arthritis after menopause than men of a similar age. An analysis of seven studies also found a much greater prevalence of back pain during the perimenopausal period than either before or after menopause.

Another interesting finding is that women with high-intensity, high-frequency pain reported that their pain improved or remained stable after menopause, while those with low-intensity and less-extended pain said it got worse. The authors of this study concluded that “menopause can act as a determinant in the evolution of painful conditions.” Translation: your pain may get better or worse after menopause, depending on its cause and severity.

One area where it might get worse is migraines. A recent study found that women were 60 percent more likely to experience 10 or more migraines a month during the perimenopausal period than before. It didn't get any better after menopause; women reported their headaches' frequency increased 76 percent.

Finally, a study presented at the North American Menopause Society annual meeting found that female veterans in perimenopause were 85 percent more likely to be diagnosed with chronic pain than younger women. They were also more likely to be taking opioids. As the author concluded: “[These findings] support the idea that menopause transition may be an under-recognized period of risk for chronic pain, as well as for high-risk opioid use. We may be able to think of menopause as kind of a sentinel event in some way for more difficulty with experiencing these symptoms, or for management of these symptoms, or kind of just additional needs.” Those considerations, she said, should impact how clinicians deliver care to these women, “thinking about what it is that we're really treating and how these treatment decisions affect health in the menopause transition and as women age.

WOMEN AND CANCER PAIN

Women with cancer face unique challenges when it comes to pain management. They report greater pain severity than men from cancer conditions, and this disparity needs to be addressed in their treatment plans. At least 20 to 50 percent of people with cancer report having pain, making it one of the most common side effects of both the disease and its treatment.

Cancer pain can have several sources:

- Direct injury to nerves from the cancer itself
- Cancer spreading to bones or other structures in the body
- Inflammation from the disease or treatments
- Side effects from cancer treatments, such as chemotherapy-induced peripheral neuropathy

While medications—particularly opioids—are commonly prescribed for cancer pain, it's important to know that they aren't your only option. Many women benefit from a whole health approach that combines traditional pain management with complementary therapies. Some effective non-medication approaches include:

- Massage therapy
- Guided imagery and meditation
- Breathwork techniques
- Music therapy
- Exercise (when appropriate and approved by your healthcare team)
- Acupuncture

If you're concerned about using opioids for cancer pain, discuss this with your healthcare team. While the risk of addiction is often lower when opioids are used appropriately for cancer pain, your doctors should know about any personal or family history of substance use disorders to help create the safest pain management plan for you.

Taking Control of Your Cancer Pain

One way to help manage pain is to keep a diary of your symptoms. You can track:

- Pain levels through the day
- What makes pain better or worse
- How different treatments affect your pain
- How it affects your daily activities and quality of life

Working with a health care provider called a palliative care specialist is another option. He or she can help you manage symptoms, including pain, at any time during cancer and treatment, including after treatment ends. Palliative care is not the same as hospice care, although they can be confused because people on hospice often use palliative care.



When managing cancer pain, communicate openly with your healthcare team about:

- Your pain levels and how they affect your daily life
- Any concerns about pain medications
- Interest in complementary therapies, such as massage or cannabis products
- Exercise and physical activity
- How the pain affects you emotionally

Remember that almost all cancer pain can be controlled through proper management. Don't hesitate to speak up and get second opinions if you feel your pain isn't being adequately treated. The goal is to find the combination of treatments—both medical and complementary—that works best for you while maintaining the highest possible quality of life during your cancer journey.



Life Experiences and Emotional Status

A woman's past experiences, particularly those involving trauma and abuse, as well as her current emotional state and life stresses, have an enormous impact on her level of pain and even the development of painful conditions. Your history may increase your body's response to pain or make you more susceptible.

One study of 380 women found that those who reported they had been victims of bullying or abuse were more likely to experience painful genital or urinary conditions. What happens is that their body remains on high alert. In most people, the normal response to pain is that the body adjusts and the pain diminishes. But in people with a history of trauma, the body exists in constant "alert" mode, leading to a hyperawareness of external and internal stressors.

Even socioeconomic status and work environment can impact the perception of pain.

This is why it is so important that you work with your health care team to identify issues beyond the physical—including the emotional, social, mental, and spiritual—to help you.

WOMEN AND OPIOIDS

Oxycodone and the Ongoing Opioid Crisis


Oxycodone, a semi-synthetic opioid, continues to play a significant role in the opioid epidemic, though its impact has evolved over time. First marketed as a long-acting pain reliever under the brand name OxyContin, it became widely abused due to its ability to deliver a euphoric high when crushed or dissolved. In 2010, the manufacturer introduced an abuse-deterrent formulation to curb misuse. However, this reformulation had unintended consequences, as many people transitioned from prescription opioids to illicit substances like heroin and fentanyl, increasing overdose rates.

The Shift from Prescription Opioids to Illicit Drugs

Recent data indicate that while prescription opioid misuse remains a problem, the majority of opioid overdose deaths now involve illicit drugs such as fentanyl and heroin. A study projected that by 2025, nearly 80% of opioid overdose deaths will result from these illicit substances. This shift reflects a broader trend where fewer individuals are initiating opioid misuse with prescription medications and instead are starting directly with illicit opioids like fentanyl.

Gender-Specific Impacts

Women have been disproportionately affected by prescription opioid misuse in certain ways. Fatal opioid overdoses are three times higher than a decade ago. For the 12 months ending in December 2021, there were nearly 80,000 deaths from opioid overdoses, the highest in the U.S. to date. Prescription opioid pain



relievers accounted for the overwhelming majority of opioids misused in 2020 (more than 90%). Women are more likely than men to be prescribed opioid analgesics for the treatment of pain, sometimes using them with benzodiazepines such as Valium. Women are also more likely to say that they use opioids to help with stress or depression, to crave the opioids more, and in one study, to have more medical problems than the men who participated.

These factors are likely to be part of why women tend to start misusing opioids more quickly than men and are more likely to develop opioid use disorder. This is especially concerning when we learn that rates of fatal opioid-involved overdoses since 1999 have increased faster in women than men (14-fold vs. 10-fold). Despite these differences, treatment approaches often remain gender-neutral, which may limit their effectiveness for women.

Biological Factors in Oxycodone Misuse

Emerging research highlights the role of sex hormones in influencing opioid use behaviors. For example, studies using animal models suggest that hormonal fluctuations in females may reduce the reinforcing effects of oxycodone during certain phases of the estrous cycle. This underscores the importance of considering biological differences in developing strategies to combat opioid use disorder.

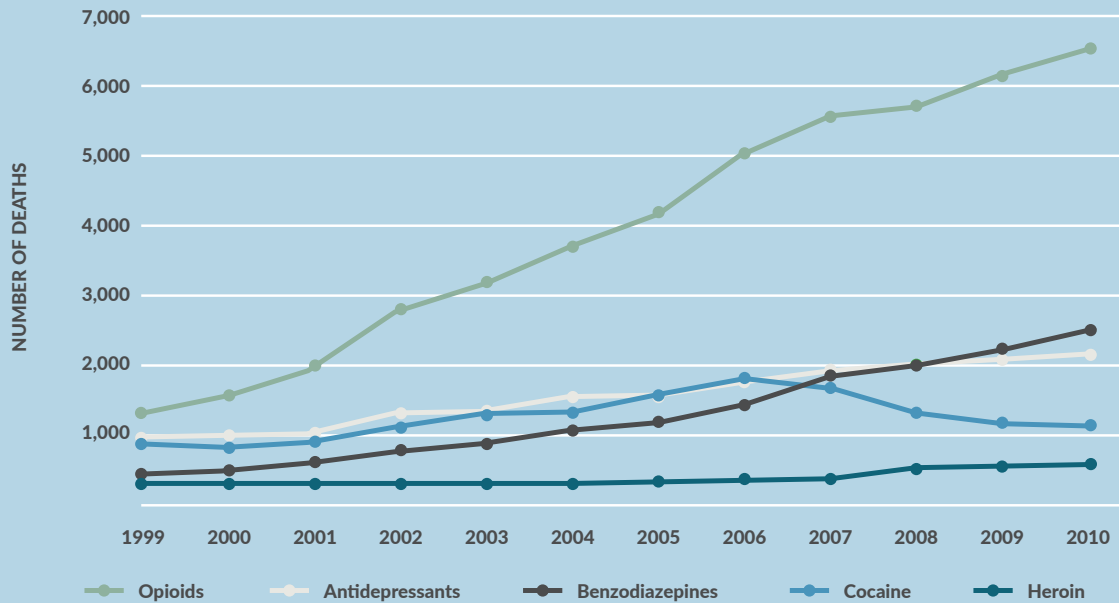
Health Risks and Overdose Effects

Chronic use of oxycodone can lead to severe health consequences, including respiratory depression, liver damage (when combined with acetaminophen), and addiction. Overdose symptoms include extreme drowsiness, slowed breathing, pinpoint pupils, and potential death. These risks increase when you consider the increasing presence of fentanyl in pills marketed as oxycodone.

Whole Person Pain Treatment is More Important Than Ever

These disturbing statistics, and a trend of women using, depending on and dying from opioid use, make it even clearer that the health of the whole person — the whole woman — is essential to address. Incorporating a tool such as the HOPE Note into primary care, taking a Personal Health Inventory, and providing support for women who have become dependent on prescription opioids or those bought in the community is essential.

Figure 1. Drug Overdose Deaths Among Women



Source: National Vital Statistics System, 1999–2010 (deaths include suicides)
 Drug overdose deaths among women, by select drug class, United States, 2004–2010. Data from National Vital Statistics System.

Quintiles IMS. An Analysis of the Impact of Opioid Overprescribing in America: Pacira Pharmaceuticals; September 2017.

Women are also using more opioids during pregnancy, putting their infants at risk of dependence and post-partum withdrawal. This, in turn, has led to what experts call an epidemic of infants born already dependent on opioids, who then have to go through a painful withdrawal process.

While opioids definitely have a place in the treatment of acute pain (such as after surgery or accidents) and in palliative care (such as during a sickle cell crisis or near the end of life), the Centers for Disease Control and Prevention and other medical organizations recommend starting with non-opioid alternatives as a first-line treatment for chronic pain, including acetaminophen (Tylenol), nonsteroidal anti-inflammatories (i.e., Motrin, Aleve), antidepressants, and anticonvulsants, and non- drug approaches such as yoga, manipulation, acupuncture, massage, and mind-body methods.



Facing Discrimination

Numerous studies dating back decades attest to the fact that the medical system does not take women's pain seriously, whether chronic or acute. For instance, a 2011 report from the National Institutes of Health found that medical professionals were more likely to dismiss women's reports of pain.

An oft-quoted study of 981 men and women seen in the emergency room found that women were 13 to 25 percent less likely to receive strong pain medication, despite the fact that they had the same pain scores as men and waited about 16 minutes longer to get medication. Women with endometriosis, an extremely painful reproductive condition, often go years before getting a diagnosis. They are told their excruciating pain is a normal part of menstruation, or even that it is all in their heads—and are prescribed antidepressants.

Meanwhile, a 2015 survey of more than 2,400 women with chronic pain, most with fibromyalgia and/or back pain, conducted by National Pain Report and For Grace, a non-profit organization, found that more than 90 percent of those with chronic pain thought the system discriminates against women with pain, with 65 percent saying they thought doctors took their pain less seriously. The survey also found that women believe there is a gender bias in how doctors treat their pain (Figures 2 and 3). Interestingly, it didn't seem to matter if the doctor was male or female.

Figure 2. Do you feel you are treated differently by doctors because you are a woman?

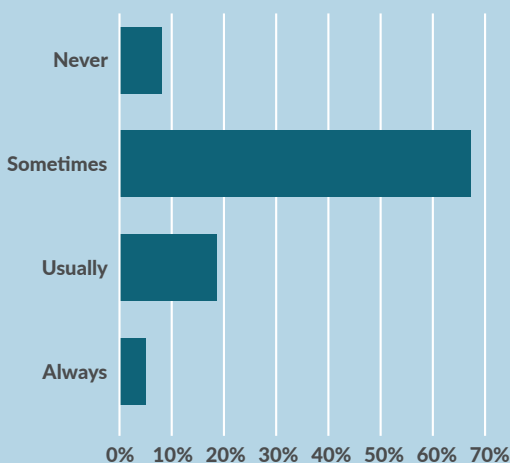
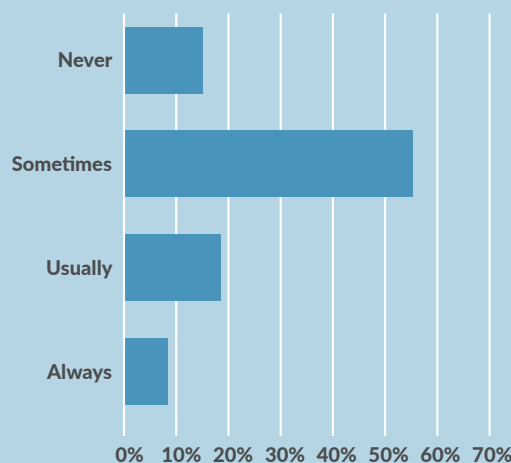


Figure 3. Do you think the health care system discriminates against female patients?



Source: Women in Pain Survey. 2015. www.surveymonkey.com/results/SM-P5J5P29L.

In addition, 75 percent of the survey respondents said their doctors told them they had to learn to live with the pain. More than half said their doctors didn't know what was wrong with them, while 52 percent said they were told that since they "looked good," they must be feeling better. Forty-five percent were told that the pain was all in their head.

This is why it's so important that you take a proactive role in finding the right doctors and other health care practitioners to work with. You have to advocate for yourself at a time when your energy and drive may be sapped by the pain. If you can't do this on your own, bring someone with you to appointments and have them help you research providers to find those who will listen to you and provide the evidence-based care you deserve. Ideally, that will be an integrative medicine physician, where I think you'll find your best chance of being listened to, believed, and treated with respect.

Keep in mind, though, that communication goes both ways. While you should expect your doctor to communicate openly with you, respect your goals and decisions, and take your pain seriously, you also have a role. You must engage in your own self-care for health.

My advice is to keep a pain diary for at least a week before your visit in which you rate your pain every couple of hours on a scale of 1 to 10, noting what you were doing or thinking when it occurred. When talking with your doctor, focus on the impact the pain has on your life (for example, it keeps you from exercising or going to work), not just the pain itself. Be specific when defining the pain in terms of the location, intensity, and when it is worst. Also list non-drug behaviors that help relieve the pain and improve function, including sleep, movement, diet, and stress management. Then bring that list with you when you see your health professional. It will make the visit more productive and help you both better understand your pain and how it impacts your life.

Getting it Down in One Place

Even with the advent of electronic health records, it's still a good idea to keep track of your medical history yourself. This includes tracking emergency contact information, diagnoses, current treatments (including prescription and over-the-counter medications and supplements), and allergies. You can use an app or do it the old-fashioned way, writing things down by hand.


Who is Treating Your Pain?

You may see several physicians as you search for pain relief. These include:

- **Primary care physicians.** Pain is one of the main reasons people see their primary care physicians. They treat all conditions and should view your condition holistically. You may also want to explore a primary care physician or nurse practitioner trained in functional medicine. Visit www.ifm.org to find a functional medicine specialist.
- **Pain management specialists.** These physicians often are trained in anesthesia with additional training in pain management. They include interventional anesthesiologists, who can implant pumps and other devices to help relieve your pain.
- **Neurologists.** These physicians focus on the central nervous system. They are most likely to treat neuropathic pain (pain related to the nerves).
- **Orthopedists and sports medicine doctors.** These physicians address the skeletal system, including bones, joints, and tendons.
- **Rheumatologists.** These physicians address the immune system. They are likely to treat people with painful autoimmune diseases such as lupus, scleroderma, and fibromyalgia.

Ideally, you will also see complementary health providers trained in pain management. These include:

- **Chiropractors.** Chiropractors see approximately 40 percent of chronic pain patients, with one study finding that about a third of patients with chronic back or neck pain turned to a chiropractor.
- A survey from *Consumer Reports* found that 59 percent of people with chronic pain who saw a chiropractor were highly satisfied, compared to 34 percent who saw only a primary care physician.
- **Acupuncturists.** There is good evidence of the long-term benefits of acupuncture on chronic pain. One study found that acupuncturists treat about 7 percent of chronic pain patients.
- **Physical therapists.** Physical therapists specialize in restoring function to patients with chronic pain. For instance, if you have arthritis of the knee, they work with you to strengthen the muscles that surround the knee, which can help with the pain.
- **Massage therapists.** About half of those who get a massage every year are doing it for some medical reason, primarily pain relief, or soreness and stiffness. One survey of more than 1,000 adults found that 89 percent believed that massage was effective in reducing pain, with 28 percent stating they used massage therapy for pain relief.
- **Cognitive behavioral therapist.** Dozens of studies attest to the benefits of this psychological approach, in which you work with a therapist to reframe how you think about and react to your pain.



Don't limit yourself to just one type of provider. When it comes to treating chronic conditions such as pain, a whole person approach merging the traditional and complementary is best. You can take steps to manage your own pain, including with meditation, massage, and yoga, as well as lifestyle management that includes getting enough sleep, following a healthy diet, exercising, and engaging in healthy social activities.

You can learn more about whole person health approaches at www.HowWeHeal.com



Managing

Managing chronic pain requires a holistic approach of medical and complementary therapies. A 2015 survey of 2,400 women with chronic pain found that 65 percent had tried exercise; 49 percent massage; 45 percent physical therapy; and 42 percent meditation for their pain. Many also tried yoga (27 percent), chiropractic (26 percent), acupuncture (20 percent), and medical marijuana (18 percent).

One area that is important and should not be neglected is how you think about your pain. One study found that women with negative thoughts about their pain—who magnify the pain in their minds—report more severe pain and are more likely to be taking prescription opioids than men with the same painful condition or women with lower levels of negative thinking.

This is where cognitive behavioral therapy can be particularly helpful. This form of short-term therapy teaches you to put your pain into the proper context and veer away from negative thoughts. Studies show it is quite effective at treating chronic pain and reducing catastrophizing, with or without other approaches.

Depression and Pain

If your doctor, family, or friends tell you that you seem depressed, they might be right. Pain and depression often go hand in hand, with pain both a symptom and a cause of depression. That doesn't mean the pain you feel isn't real or that it's "all in your head." In fact, headaches, body aches, and back pain are all symptoms of possible depression. So don't let anyone minimize the pain you're feeling.

For while there's a large emotional component to pain that the medical profession might separate out as depression or anxiety, it doesn't matter if the pain is physical or emotional; it's the cross link that's real, and it leads to real impairment. In fact, true remission only occurs when you treat both the emotional and the physical symptoms of depression.

That's why I consider it so important when I see a patient with pain to assess her as a whole person— not just focusing on her pain.

One aspect that often gets ignored is the social aspect of pain. When you're in pain, you tend to withdraw from your normal activities. This means withdrawing from people—and the people you love withdrawing from you. The isolation this creates can be devastating because social support is essential to health and healing. Indeed, without a social network, stress hormones surge, triggering the release of inflammatory chemicals and activating genes that can damage the mind and body. This includes slowing the healing process and preventing restorative sleep.

Another important component is self-care. Women are famous for pouring all their energy into caring for others and very little into caring for themselves. This is what happened to Carol, a 47-year-old patient of mine. She had been doing really well with her self-care—eating right, exercising, finding time to do the things she enjoyed and saying no to those she didn't—but then her 10-year-old son was diagnosed with a mental health condition, and her self-care went out the window. She started gaining weight and stopped her stress management program. Then she was in a car accident and hurt her neck. What should have been a short-term issue turned into a chronic pain condition.

Working together, we identified a safe, quiet place in her house where she could go to be alone and do whatever she liked. She called it “My Space.” Simply carving out that time for herself helped her see how she had lost her way, and gradually she was able to reintegrate the other lifestyle approaches she needed to return to a healthier—and pain-free—life.

Pain During Labor

There is no minimizing the magnitude of the pain of giving birth. But there *are* non-pharmaceutical ways to minimize the pain itself. A review of 11 randomized, controlled trials conducted with 1,374 women found that relaxation techniques and yoga could reduce the pain of labor, increase satisfaction with childbirth, and lower rates of instrument-assisted vaginal delivery.

Another analysis of five trials on self-hypnosis during labor found it reduced the need for pain medications—including epidurals—and left women more satisfied with their pain management compared to women who did not use hypnosis. There is also good evidence for the pain-relieving properties of acupuncture during delivery, with studies finding that women who use it during labor are less likely to use other types of pain relief; have less pain and fewer instrument deliveries; and are more relaxed and have a greater sense of control. Acupressure also provides pain relief.



Time to Journal

Journaling is a way of going on a retreat without leaving your home. It is a way to access and acknowledge past experiences that may be causing you pain and reintegrating them into your life so they become a part of you. It helps bring order to your deepest thoughts and fears and enables you to learn from the person who knows you best: you. Plus, you can go back and read what you've written to see how much progress you've made. Bottom line: Journaling provides a safe environment that enables you to face your traumas. When that happens, remarkable healing follows. Indeed, studies find that journaling can reduce pain, improve depression, and even lower markers of inflammation.

Journaling can also provide clues as to what makes your pain worse. For instance, one of my chronic pain patients, Mary, started keeping a journal in which she wrote down observations about what made her feel well and what did not. They didn't have to be linked to her pain. It could be anything she saw that helped her feel better about herself—helped her feel happy and well. After two months of keeping this journal, she returned with several insights.

First, her back felt worse when she did not get enough sleep. Her normal pre-bed routine was eating a bowl of ice cream while watching the news, then reading on her iPad for 20 minutes before turning out the light. We talked about the stress that watching the news could trigger and the fact that the late-night snack could make for a less restful sleep as her body digested the food. Reading her tablet, with its “blue light,” is a known sleep deterrent.

So Mary began a sleep hygiene program that involved some calming tea before bed and five minutes of sitting quietly. When she got into bed, she read a real book before turning out the light and kept her phone and other electronics out of the bedroom. The result? Her sleep improved, leading to less pain on the days she followed this routine.

She realized other things through journaling as well. When she did her stretching and physical therapy exercises she definitely felt better. But she had been doing them sporadically. After seeing the pattern, she made them a priority first thing in the morning. She also learned something else: On the anniversary of her father's death, she felt excruciating pain. “Maybe I haven't truly dealt with his death,” she said to me. So she started therapy to explore that issue.

For More Information

For more information on whole person pain care, read Dr. Wayne Jonas' *Guide to Optimizing Treatment through Integrative Health for People Living with Pain*, available at howwehealcampaign.com/resources/pain-management

My point is that the act of writing things down—with a pen and paper, not a phone or computer—can help you see the influences of your current and past life on your chronic pain.



Conclusion

Pain is the most common reason for doctor visits. And yet it is one of the most challenging medical conditions to treat, in part because it is so subjective and individualized. You and your friend might have the exact same diagnosis and yet feel the pain in completely different ways. That's why it's so important to remember that your pain is real and that you deserve the right treatment.

Finding the right combination of approaches to manage and reduce your pain can be a frustrating process. So I encourage you to be patient and to refuse to allow anyone to dismiss your pain. I also urge you to seek help from a variety of practitioners—both medical and complementary—in your search for pain relief and to take a whole person approach.

While they may not be able to completely cure your pain, the right mix of treatment and support, together with your commitment to doing your part, should definitely be able to reduce the frequency and severity of pain and give you back a better quality of life.

What You Can Do Now

1. **Focus on self-care**—What works for you now?
2. **Find your meaning**—What matters to you?
3. **Ask provider to do a whole person health visit and HOPE Note**—Explore how the areas of your life impact your health. (Learn more at healingworksfoundation.org/resources/hope-note)
4. **Develop your own health care team**—Consider including traditional, complementary and alternative providers and health coaches



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