

PainCommunity NEWS

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Ouch! My Aching Back

Have you ever lifted something a little too heavy or overdone it at the gym? Maybe you suffer from arthritis or you sustained an injury in a car accident or on the job. Whatever the reason, you know that back pain can literally stop you in your tracks, making it difficult to do even simple things like getting out of a car, holding a child or carrying a bag of groceries.



Back pain is one of the most common (and expensive) ailments in the U.S., and Americans spend at least \$50 billion every year in search of back pain relief, according to the National Institute of Neurological Disorders and Stroke. Studies suggest back pain is also one of the most common reasons for missing work, accounting for some 83 million lost work days each year.

Back pain can be the result of a fall or an accident, but more commonly it is caused by overuse of the back muscles. Everyday tasks like doing household chores or sitting hunched over at a desk can cause muscles and ligaments (bands of cartilage that attach bone to bone) to become overstretched or torn. Being out of shape or physically inactive also ups the likelihood of back pain. Yet, according to the National Center for Health Statistics, 70 percent of American adults don't exercise regularly despite other proven health benefits.

Fortunately, for most people back pain usually resolves itself within a few weeks with little or no treatment. However, some will go on to develop persistent back pain that lasts greater than six weeks to three months or longer — long past the expected point of healing — and experts don't really know why.

"We don't yet have a good scientific explanation for why some people develop prolonged pain, while others do not," said Anne Marie Fras, MD, anesthesiologist and pain management specialist at Duke University School of Medicine. "Many times x-rays and evaluations are all normal, yet some people continue to experience pain, and it can be very perplexing and frustrating for both the patient and the clinician."

Dr. Fras says that while it's hard to know what specific risk factors might lead to the development of persistent back pain, taking care of overall health and physical condition is a good first line of defense in preventing back pain flare ups.

Maintaining a healthy weight, sticking with a light aerobic and strength training program, and eating a healthy diet can go a long way in building a strong and healthy back, even for those

"We don't yet have a good scientific explanation for why some people develop prolonged pain, while others do not."

— Anne Marie Fras, MD,
Duke University School of Medicine

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Getting Away from Back Pain

Summer is here and for many of us that means hitting the road to take that long-awaited vacation. Perhaps it's going on a once-in-a-lifetime trip abroad, visiting the grandkids, or just spending a restful week at the nearest beach. Whatever the reason, back pain is probably the last thing you want to think about on your summer getaway.



Whether you are traveling by plane, train or car, long journeys can be hard on the back. Sitting in the same position for too long and carrying heavy luggage can be a challenge for even the healthiest individual. If you're one of the many Americans who struggle with back problems you might even fear that taking a trip will only make matters worse.

But taking a few simple precautions will help prevent back pain flare ups, and let you get the most out of your time away.

PLANNING AHEAD

Before you set out on your journey, contact your health care provider to make sure it's safe for you to travel. If you take medication for your back pain, be sure to pack it in your carry-on bag so that it's easily accessible. It's a good idea to keep prescription medications in the original bottles, especially when you fly.

You might also consider taking along heat or ice packs if they help ease your back pain. If you have a history of back trouble, you should carry a brief description of your issues as well as a list of any medications you are taking, especially if you are traveling alone.

Pack as lightly as possible, and always use



rolling luggage. If you're traveling alone, ask a friend or family member to help you pack your car or accompany you to the airport to help you lift and carry your bags.

You'll want to be comfortable while traveling, so make sure you wear light and loose fitting clothing that allows you to move freely. Wear tennis shoes or other supportive shoes with a low heel to minimize the impact on your back.

ON THE ROAD

If you're taking a road trip, make sure that you will be comfortable in your seat. Don't hunch forward, and consider purchasing a good back support pillow. A rolled up towel or t-shirt can even do the trick.

Plan to take frequent rest stops and give yourself plenty of time to reach your destination. You might even take advantage of the opportunity to do some sightseeing by taking a break at some of the towns and landmarks along the way.

Ideally, you should stop every two hours or so and walk around for a few minutes. A little light stretching will help ease any tension you might have in your neck and back, especially if you are the one behind the wheel. If your trip is going to take six hours or more, plan to stop for a sit-down meal or picnic, rather than going to a drive-through and eating in the car. This will give your back a much needed break.

Bring along some good music or books on tape to help pass the time and keep your mind off any discomfort. If you are traveling with other adults, ask that they share the driving as much as possible.

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UP IN THE AIR

If you've ever flown, you know how cramped and uncomfortable airline seats can be. Try to book an aisle seat if you can. This will give you more room to stretch your legs and allow you to get up and walk around every hour. Some airlines offer seats with extra leg room, although this is often for an additional fee. Also let the airline know in advance if you need special assistance including help carrying your luggage if you are traveling alone.

On the day you travel, arrive at the airport as early as possible. If you're rushing around and feeling stressed, you are more likely to aggravate your back pain. Try to stand, stretch and walk around as much as possible before boarding the plane. You'll have plenty of time to sit during the flight.

Don't be afraid to ask for help lifting your luggage into the overhead compartment. If you have to lift it yourself, make sure you bend from the knees and avoid any twisting motion that might be hard on your back.

Once you are seated, try to

maintain good posture. Put a pillow behind your back if necessary, and keep both feet flat on the floor. Try not to fall asleep in an uncomfortable position, and make sure you walk around and stretch as much as possible once you are in the air.

Think about bringing along some soothing music or meditation CDs, especially if you are a nervous flyer. This will help you relax during the flight and ease any stress and tension, which can worsen the pain. You'll also want to avoid alcohol and drink plenty of water during the flight to keep from getting dehydrated, especially if you are taking pain medication.

If flying isn't your cup of tea, buses and trains are good travel options too, and might even provide you with more leg room and flexibility.



GETTING THERE

When you reach your destination, spend a few minutes walking around and consider taking a warm shower to ease muscle tension. Many hotels and resorts offer massages and other spa services that might help you relax after a long trip.

Stay active throughout your vacation, but don't overdo it. Whether you are exploring a new city or taking the grandkids to a theme park, most trips require a lot of walking. Pace yourself and stop to rest as often as you need. If you find that you need assistance getting around, many tourist spots rent scooters or wheel chairs for a small fee.

Be cautious about doing any activities that might not be good for your back. A light boat ride or stroll on the beach will probably be good for you, but the bungee jumping and roller coaster rides are best left to the kids.

Set aside some time each day to keep up with your regular back exercises. If you have access to a swimming pool, take advantage of the opportunity to do some water exercises that are easy on your back.

When it comes to back pain, taking care of yourself on the journey is just as important as reaching the destination. By planning in advance and making a few simple adjustments, you can fully enjoy the summer vacation you deserve.

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who have already suffered a back injury.

"Patients who are more quickly enrolled in an exercise or physical therapy program that allows them to strengthen weak muscles and retrain muscles that have developed bad habits are going to do far better than patients who don't implement that type of therapy," said Dr. Fras.



According to Dr. Fras, some people are surprised to learn that factors like smoking and being less optimistic can also contribute to prolonged back pain.

"One theory is that smoking narrows the blood vessels, leading to a decrease in the amount of nutrients and oxygen that are carried to the spine, making it more susceptible to injury and slower to heal," said Dr. Fras. "Some surgeons will refuse to operate on patients who won't give up the habit because of the lack of improvement we see when someone continues to smoke."

Recent research shows that people who are dissatisfied with their job or have a history of depression might also be more likely to develop persistent back pain. Individuals who feel less hopeful about their chances for recovery or who are afraid of getting injured again may fail to comply with health care providers' orders to resume activity as soon as possible, setting themselves up for problems down the road.

In fact, studies have shown that light movement actually speeds up recovery by increasing blood flow to injured areas and improving flexibility, while decreasing pain at the same time.

"Movement really helps the healing process," said Dr. Fras. "We used to advise patients to go on extended bed rest, but we now know that it becomes much harder to regain muscle strength than it did to lose it by staying in bed. If a patient wants to get better, they have to keep moving."

The good news is that, contrary to what many might fear, most back pain does not require surgery. Even cases of prolonged back pain can be managed with medication, mild exercise and physical therapy and will likely resolve on their own over time, according to Dr. Fras.

"A lot of people are looking for a magic bullet or they think 'I hurt, therefore I need surgery,'" said Dr. Fras. "It's only a very small number of patients that improve with back surgery."

If you experience back pain that lasts for more than a few weeks, contact your primary care or another health care provider who knows your medical history. Together, you can work to create a recovery plan that's right for you.

For more information about chronic back pain, keep an eye out for APF's new back pain spotlight. See details on page 8.

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Dear Friends:

As you'll read in this issue, the **2010 Advocacy Summit** was a tremendous success. As in past years, this gathering served as a powerful reminder of the struggles faced by people living with pain, as well as their resilience and dedication to improving pain care for others. A central part of this year's Summit was to officially launch **September Pain Awareness Month** activities — Action Network leaders and allied organizations started planning activities to mobilize others (see page 8). Those in attendance left reenergized to take action and raise public awareness about pain in their local communities.

To this end, we must rally together to increase APF's membership. As with previous health movements, we know there is power in numbers. One out of four Americans experiences pain, and its association with cancer, diabetes, arthritis and other diseases means that none of us can turn a blind eye to pain and its impact on people's livelihood. Please join us today and help us to raise public awareness and understanding.

Without greater public knowledge about pain and the challenges of living with pain, we cannot effectively fight for better care and secure greater investments in pain care and research. Increasing our membership means that more people are accessing and using APF's information and support; it also means more people can join our advocacy efforts to expose the injustices of pain and effect change. Our capacity to accomplish our mission depends on our members.

If you are already an active member, we greatly thank you for your efforts and ask that you make a commitment to ask just one person — a friend, neighbor, coworker, family member or someone at a local support group — to join us. If you're not an APF member, please join us today. Membership is free at www.painfoundation.org. We can improve pain care in America, but not without the millions of voices of people affected by pain.

Sincerely,

Will Rowe
Chief Executive Officer

Back Pain at a Glance



If you've ever had back pain, you're not alone. All told, four out of five Americans will suffer with back pain at some point. Back pain is among the most common reasons for visiting a health care provider and a leading reason for staying home from work.

Back pain is usually evaluated and diagnosed by your doctor, who will perform a complete physical exam and ask about your medical history. However, in cases of obvious or suspected injury or if back pain persists, providers might order imaging tests including X-ray, MRI or CT scans, bones scans or other tests.

What It Feels Like

Back pain can occur anywhere along the spine and may include:

- Persistent muscle aches or stiffness
- Stabbing or shooting pain
- Muscle spasms
- Difficulty standing up straight
- Limited range of motion
- Pain that gets worse with activity or prolonged sitting
- Pain that radiates down to the buttocks and legs

Risk Factors

Experts aren't sure what leads some people to go on to develop persistent pain, but risk factors may include:

- Poor posture
- Being inactive/poor general health or physical condition
- Smoking cigarettes
- Being overweight or obese
- Aging (older adults are more susceptible than young adults or kids)
- Sleep position or a mattress that doesn't offer good support
- Pregnancy
- Working at a job that is stressful or requires heavy lifting, long periods of sitting in one position or repetitive motion

- Depression, anxiety or job dissatisfaction
- Previous back injury or back surgery

Treatments

Most episodes of back pain resolve within a few days to weeks no matter what treatment is used. But for many others, back pain becomes the major problem.

In the short-term, more conservative therapies are recommended and typically include:

- A short (one to two day) rest period
 - Taking over-the-counter pain relievers such as NSAIDs (ibuprofen or naproxen) or acetaminophen, as appropriate
 - Applying ice to reduce inflammation and swelling
 - Using heat or taking hot showers to relax tense muscles
- Persistent back pain may respond to:
- Exercise and physical therapy
 - Prescription pain medications, topical creams and ointments that can be rubbed into the skin near the affected area, muscle relaxants and some antidepressants
 - Cortisone injections
 - Transcutaneous electrical nerve stimulation (TENS)

- Complementary therapies like spinal manipulation, acupuncture or acupressure, meditation, yoga and other relaxation exercises
 - Surgery, though this is unlikely
- The goal with any treatment is to reduce or eliminate pain, improve function and give individuals the skills they need to self-manage the pain.

For more information about treatment options and how to use many of these techniques, read APF's *Treatment Options: A Guide for People Living with Pain* at www.painfoundation.org.

When to Seek Immediate Medical Help

If you experience back pain along with any of these symptoms, you should contact your health care provider immediately:

- Trouble urinating or loss of bladder/bowel control
- Fever or headache
- Weakness, numbness and/or tingling in the groin area or legs
- Pain in the chest or left arm
- Unexplained weight loss
- Your pain goes down your leg below your knee and/or it becomes more intense

Possible Causes

Back pain may be the result of an injury, such as a sprain or strain in the muscles or ligaments caused by lifting something too heavy, abruptly moving/twisting your body the wrong way or overdoing it at the gym or in the garden.

Other common causes of back pain involve structural problems that affect the bones and/or nerves of the spine. These include:

- Arthritis (Osteoarthritis)
- Osteoporosis
- A ruptured or herniated disk
- Abnormal curve in the spine like scoliosis
- A narrowing of the spinal canal called spinal stenosis that can pinch nerves

Other conditions can result in back pain including, but not limited to, fibromyalgia, kidney problems, infection, and pregnancy. Stress and tension can also contribute to back pain.

In many cases, the cause of back pain may be unknown.

Sources: Mayo Clinic, National Center for Complementary and Alternative Medicine, National Institute of Neurological Disorders and Stroke, National Institute of Arthritis and Musculoskeletal and Skin Diseases, North American Spine Society, WebMD

For more information, visit www.painfoundation.org.

TOP 10 TIPS + PREVENTING AND FINDING RELIEF FROM BACK PAIN

If you have back pain, there are many things you can do to get you back on track, while also helping to prevent future pain or loss of function.

- 1. Strengthen your core.** Strengthening and stretching your back and abdominal muscles may be your best defense against back pain and can help prevent future back pain. Daily exercise and conditioning can support the back by improving posture, balance and flexibility and reducing pressure on the vertebrae. People with chronic back pain (pain that lasts more than three months) may benefit from a more intensive physical therapy program.
- 2. Watch your weight.** Excess weight (especially around the waistline) can put additional strain on your back, so try to shed extra pounds. Exercise and eat a healthful diet full of fresh fruits and vegetables, low fat dairy, lean meats and high fiber foods. Getting enough calcium and Vitamin D every day can help keep your bones healthy and strong.
- 3. Communicate effectively about your pain.** Help your health care provider come up with an appropriate and tailored treatment plan for your condition by accurately describing the pain. Where and when does it hurt? What makes it feel better or worse? Does it come and go, or is it continuous? Use APF's *Targeting Chronic Pain Notebook* to keep a daily record of your pain and how it interferes with your life.
- 4. Watch for and report other symptoms.** Certain symptoms including numbness or weakness in your legs, pain that reaches below the knees, unexplained weight loss, and changes in or loss of bladder or bowel control, among others, can signal more serious health problems.
- 5. Straighten up.** Whether you are sitting or standing, poor posture is a major culprit in causing back pain or making it worse. Slouching or being hunched over can stress or pull the back muscles and cause pain. Having good posture helps maintain the natural curves of the back, keeping it strong.
- 6. (Re)consider where and how you sleep.** We spend a third of our lives sleeping, so be sure your mattress supports and keeps the spine straight. Sleeping on your side is best. Bend your knees and pull them slightly toward your chest. Consider placing a pillow between your knees to keep your spine in alignment.
- 7. Make needed changes at work and home.** Talk to your employer about making your workspace back friendly and avoid strenuous activities like lifting. Take breaks from your desk or work station about every two hours. At home, keep frequently needed household items within easy reach and take care when bending to do household chores, feeding your pets or giving your kids a bath.
- 8. Avoid lifting heavy items or twisting your back.** Lifting heavy objects is one of the easiest ways to injure your back. Always ask someone to help you. Squat, keep the object close to you, bend and lift with your knees, not your back. Push, do not pull when moving heavy objects across the floor.
- 9. Go for comfort over style.** If you stand or walk for long periods each day, be sure to wear flat, comfortable shoes with good arch support.
- 10. Kick your smoking habit or don't start.** Smoking increases your risk of heart disease and many types of cancer, and research also shows that it may lead to persistent back pain or make existing back pain worse. Experts aren't exactly sure how smoking affects back health. One theory is that it narrows the blood vessels and leads to a decrease in the amount of oxygen and nutrients that reach the spine, making it 1) more susceptible to injury and 2) slower to heal.

As with any pain condition, it's important to learn as much as you can and be actively involved in your treatment plan. Back pain often comes back, so take steps to protect your spine and keep your back healthy and strong.

Sources: Mayo Clinic, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health

NEW!

APF's **Online Guide on Persistent Back Pain** is now available. Visit www.painfoundation.org today.

Included in this new resource are articles, worksheets and tips about preventing and managing back pain, including:

- *Oh, My Aching Back! The ABCs of Chronic Back Pain*
- *Common Causes and Knowing When to Seek Care to Avoid Problems*
- *Finding Relief: 10 Ways to Manage Back Pain*
- *Lifestyle Tips: Preventing Back Pain from the Start*
- *Back Pain & the Workplace*
- *Back Truths: Debunking Common Myths about Back Pain*
- *In Your Words: Profiles of People Living with Back Pain*

You'll also find *Terms You Need to Know*, a list of helpful resources and tips for self-care at home.

Check back for added interactive features, including *Test Your Knowledge*, downloadable checklists and helpful resources.

This project is made possible by support from Purdue Pharma LP.

Pain & Sleep



Having pain often means many wearisome nights tossing and turning. In fact, two-thirds of people living with pain say they have poor or unrefreshing sleep, according to the National Sleep Foundation.

It's no secret that sleep affects both your physical and mental well-being. A lack of quality sleep can lead to depression, memory loss, irritability, difficulty coping and even interfere with the body's ability to heal. To make matters worse, long-term sleep deprivation may cause changes to the body over time, increasing one's risk for obesity, diabetes and heart disease.

But if you have trouble catching some ZZZs — not to mention the accompanying frustration of watching the clock, anxiously counting the hours left before the alarm sounds — there are things you can do to get a better night's sleep.

What Happens When We Snooze?

To understand the sleep-pain relationship, one must know what happens when we sleep.

There are two basic sleep states: rapid eye movement (REM) sleep and non-rapid eye movement (NREM) sleep. NREM consists of four stages that last from five to 15 minutes each. In a normal sleep cycle, a person progresses through all four stages before entering REM sleep.

- **Stage 1:** the period when you're first falling asleep. You may drift in and out of a light sleep and can be awakened easily.
- **Stage 2:** eye movement stops and your brain waves start to slow down, with occasional bursts of rapid brain waves. You become less aware of your environment, your heart rate and breathing are regular and your body temperature begins to drop.
- **Stage 3:** the brain begins producing extremely slow delta waves, which are mixed with faster, smaller waves. These slow waves are important for achieving deep, restorative sleep.
- **Stage 4:** the brain mostly produces slow delta waves. There is no eye movement or muscle activity.

Stages 3 and 4 are the deepest stages of sleep, and you may feel groggy or disoriented if awakened.

Though your body may be at rest during the deepest stages of NREM sleep, it's very busy restoring energy, building bone and muscle, repairing and regenerating tissues, organizing memories, and integrating new information. During this time, your body also releases hormones needed for growth and healing. Reaching and staying in deep sleep mode is essential for maintaining your physical and mental health.

Rapid eye movement (REM) sleep is a more active stage of sleep, where heightened brain activity often leads to intense dreaming. Experts aren't sure of the purpose of REM sleep, but most agree that it is part

SLEEP MAY BE INTERRUPTED DUE TO:

- Pain itself
- Pain treatments
- Coexisting health problems like allergies, epilepsy or lung disease
- Sleep disorders like restless legs syndrome, insomnia, apnea or narcolepsy
- Environmental factors like too much light, noise or a room that is too warm or cold

of a healthy sleep cycle. Studies have shown that being deprived of REM sleep can worsen pain.

A person with a normal sleep pattern usually completes up to five sleep cycles a night, spending most of their time in NREM sleep. The problem is that people with pain may find their sleep cycles are often short-circuited. And while sharp pain might cause you to bolt upright out of bed, milder more persistent pain can wreak havoc on your sleep and you might not even know it.

What Keeps You Up at Night?

"In some people, pain sensations can cause sleep to become very fragmented, leading to incomplete sleep cycles and a general lack of continuous sleep overall," said Clete Kushida, MD, PhD, of the Stanford University Sleep Medicine Center.

According to Dr. Kushida, people with pain often experience "microarousals" — rapid changes from deeper stages (3 or 4) to lighter stages of sleep (1 or 2). During a microarousal, a person doesn't become fully awake and aware, but the restorative stages of sleep that are essential for health are continually disrupted.

"Microarousals can happen many times throughout the night, and typically the patient has no idea," said Dr. Kushida. "They might only recall waking once or twice if at all, and they may feel very sleepy or fatigued the next day but not know why."

Research has shown that sleep loss actually enhances feelings of pain, and studies of people with fibromyalgia, rheumatoid arthritis and other pain conditions have confirmed the sleep-pain connection.

In addition to pain interfering with good sleep, many of the medications used to alleviate pain

symptoms may also be responsible for disrupted sleep. Sleep studies have confirmed that people using opioid pain medication (for example, morphine, codeine) often experience a reduction in rapid eye movement (REM) and deep, slow wave sleep.

The long-term use of opioid medications has also been associated with the development of central sleep apnea — a condition where a person repeatedly stops breathing during sleep due to faulty brain signals. In fact, one recent study estimates that as many as three-fourths of individuals on a long-term opioid regimen may experience some type of sleep apnea.

"This is a very serious issue because not only can this disrupt sleep, it can potentially lead to more dramatic health problems," said Dr. Kushida. "Patients taking pain medications should be carefully monitored for sleep problems and any signs of troubled breathing at night."

Getting the Sleep You Need

The good news is that there are a number of treatments available to ease the sleep problems that go along with chronic pain and its treatment. These may include medication adjustments, physical therapy, light exercise, bright light therapy, counseling and practicing proper sleep habits like cutting out caffeine and daytime naps. If a person feels like their pain is well controlled at night, and they are still having difficulty sleeping, there may be other issues that need to be addressed, according to Dr. Kushida.

"It's possible to have a sleep disorder that exists alongside a chronic pain condition, and treating such a disorder could potentially lead to an improvement in pain symptoms and overall health," said Dr. Kushida.

For this reason, it's important that you talk with your health care provider if you feel like you're not getting a good night's sleep. Your doctor may ask you to come in for an overnight sleep study (polysomnogram) to figure out if there's something more going on (See page 7 for what to expect). You may need to be formally evaluated for a sleep disorder if you:

- Have difficulty falling or staying asleep three or more nights a week
- Snore loudly
- Have noticed or been told that you stop breathing or gasp for breath while sleeping
- Experience frequent morning headaches
- Feel excessively sleepy or frequently doze off during daily activities like watching TV, reading, or driving
- Feel unpleasant, tingling feelings or can't stop moving your legs when trying to sleep

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Healing with H₂O

As summer heats up, many people will be looking to escape the climbing temperatures by hitting the beach, lake or pool. For those who live with pain, embracing the water can provide more than just a way to cool off, it can also ease aches and pains.

Aquatic therapy — a low-impact exercise program performed in the water — is quickly gaining popularity among people of all fitness levels, especially those with pain. In fact, these exercise routines are proving to help promote healing and improve function for individuals with a

variety of pain conditions including fibromyalgia, arthritis, back pain, as well as the aches and pains of pregnancy.

Using the basic principles of water, viscosity, buoyancy, and hydrostatic pressure, people are able to move without the fear of being sore or overdoing it and these routines can be fun too.

"When you are submerged in a warm-water pool, the warmth and buoyancy minimize stress and weight bearing on the joints," said Brenda Klass, PhD, MFT, DACFE, president and founder of Care Center Rehabilitation and Pain Management, a rehabilitation center in Encino, Calif. "This results in a

cushioning affect, increasing one's ability to exercise, which can ultimately reduce pain levels."

Research is also finding that for some people with pain, water-based exercises may actually have more long-term benefits than traditional exercise programs. These benefits include:

- improved balance
- greater core muscle strength
- increased blood flow due to the (hydrostatic) pressure of the water against the limbs

According to Klass, water therapy also improves cardiovascular strength and endurance, which can also result in better sleep and reduced blood pressure muscle tension and overall pain. She

explains that when people exercise in an aquatic environment, their exercise heart rate is lower; which means less oxygen intake is needed. This, in turn, allows them to relax.

"Regardless of the type of aquatic therapy used, one of the most important things for chronic pain sufferers is to exercise. Exercise is a primary coping tool for pain," said Klass. "The weightlessness and cushioning effect of the water provides a level of security and patients are able to get over the mental hurdle that exercising will lead to more injury or pain."

Different types of aquatic exercise

There are many types of

aquatic exercise including water therapy, Watsu, water Shiatsu, Bad Ragaz, Halliwick, Ai Chi, aquatic Pilates and general aerobic or step exercises, and water yoga. When performed in deep water, many of these techniques require a special belt or vest to keep you afloat while you exercise.

Water Therapy (also called balneotherapy) is typically led by a physical therapist and includes movements tailored to work on specific problem areas. Depending on the therapist, the water routine might incorporate equipment like barbells, noodles, pull-up bars attached to the pool, buoyancy vests or water weights.

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Ask an Integrative Medicine Expert

Robert Bonakdar, MD



Robert Bonakdar, MD, is a fellow of the American Academy of Family Physicians and a member of the American Medical Association, American Holistic Medical Association and the American Academy of Medical Acupuncture. Dr. Bonakdar is the director of pain management at Scripps Center for Integrative Medicine and co-director of the annual *Natural Supplements Conference: An Evidence-Based Update*. He is the author of *The Herbal Guide: Dietary Supplement Resources for the Clinician*, and has been voted one of San Diego's Top Docs by his physician colleagues in 2007, 2008 and 2009.

Q: What exactly is integrative medicine?

A: It's based on the concept that the best treatment for any condition starts with a menu of individualized treatment options and a holistic assessment of the person being treated.

Traditional medicine might include things like surgery and medications; integrative medicine is also open to and inclusive of complementary approaches like massage, yoga, mind-body therapies, acupuncture and stress management, which may help to improve pain or associated conditions.

Pain is a very individual experience. What works for one person might not work for another. That's why it's important to come up with a toolbox tailored for each person.

Q: How can people living with pain benefit from this approach? Are there promising studies about the benefits of these therapies?

A: The experience of pain is mediated by a complex set of factors and it frequently affects one's sleep, mood, physical conditioning and social functioning. So it makes good sense that an integrative

approach is needed to see reductions in pain and improvements in quality of life that can then be sustained over time.

Recently, research has shown that among people with chronic daily headache who have tried more traditional treatments, an integrative approach — dietary changes, stress management and exercise, all basic things that are fairly easily adopted — significantly reduces headaches and increases quality of life. From a scientific standpoint, there is also synergy among these therapies; in other words, if you help someone eat well and manage stress, he or she will probably benefit across the board.

A Cochrane review, which is the gold standard of evidence-based reviews, recently found that in some cases acupuncture is more beneficial or at least as effective as medications for the treatment of migraine headaches six months out. Even though there is solid backing for using acupuncture, patients don't always get the gold standard treatments, as noted in these studies because of a number of barriers including lack of discussions with their

clinicians, finding a qualified provider, insurance coverage, and so on.

Functional MRI studies are also providing mounting evidence for these older therapies. For example, these imaging tests have shown consistent changes at the brain level when people receive acupuncture, findings that have been validated at several centers. Acupuncture can quiet the limbic system — an area of the brain that influences a number of things, including pain and hyperarousal. Based on this research, there appears to be a biological and neurological basis that helps us to better understand why therapies like this might help alter pain and stress.

Q: What initially drew you to integrative medicine?

A: I was fortunate to be awarded a Richter Fellowship through Occidental College that allowed me to study in Southeast Asia in 1992 before going to medical school. Other models of health care intrigued me.

In these countries, acupuncture, Tai Chi and mind-body therapies were applied, including in the hospital setting. This facilitated a team approach to

caring for patients. It was then that I realized that the practice of medicine doesn't have to be viewed from the perspective of alternative versus legitimate.

Patients don't typically seek medical care wanting just one treatment modality. They want to get better and this very often means a combination of therapies. They certainly don't care about the turf battles. Western medicine is wonderful for many reasons and is my choice if the scenario points to it as the best treatment at the time. But more often, when people are in pain, they are best served by viewing their pain in an integrative fashion, recognizing that the right tool may come from various systems of care that have not yet been considered or attempted.

I still teach Tai Chi and practice acupuncture as part of my practice and enjoy discussing other integrative treatments that may be worth a therapeutic trial. It's been rewarding work especially for people with pain who are sometimes seen as refractory or "never going to get better." As clinicians, we get frustrated when a patient doesn't get better despite our best efforts. Some might react to using

complementary medicine as an indication they are not doing a good enough job and may feel these therapies are out of their comfort zone. But sometimes we need to try new options — even teaching patients how to breathe better or reduce stress can go a long way to improving health. Using these complementary approaches in combination with others gives us an opportunity to better help patients and, as doctors, that's what we all want to do. We need to expand the therapeutic toolbox wisely.

(continued on page 7)

Want more information?

- Check out these resources:
- American Academy of Medical Acupuncture www.medicalacupuncture.org
- American Academy of Pain Management www.aapainmanage.org
- National Center for Complementary and Alternative Medicine <http://nccam.nih.gov/>
- Office of Dietary Supplements National Institutes of Health <http://ods.od.nih.gov>
- United States Department of Agriculture My Food Pyramid www.mypyramid.gov

Healing with H₂O (continued from page 4)

BENEFITS OF MOVING IN THE WATER:

- Decreases wear and tear on body during exercise
- Reduces pain while exercising
- Builds strength, endurance and activity tolerance
- Increases pain tolerance
- Improves movement of joints and soft tissue
- Increases range of motion and flexibility
- Provides another support system through group classes
- Reduces chance of injury
- Addresses muscle imbalances and postural problems
- Stimulates endorphins, the body's natural morphine to manage pain
- Promotes a healthy heart
- Decreases muscle tension
- Improves circulation
- Allows you to better cope with stress and grief
- Boosts energy and motivation

Watsu is a passive aquatic specialty technique. With Watsu, the therapist cradles the individual, moving them very slowly in a rocking motion in water that is set to at least 92 degrees. The therapist then slowly moves one segment of the body through the water, resulting in a stretch of another part of the body due to the water's 'drag' effect. The gentle rocking promotes relaxation, allowing increased range of motion and ultimately results in individuals having an ability to move in ways that might be difficult — if not impossible — without the weightlessness of the water.

"I had one pain sufferer tell me that he was unable to put his hands over his head. It prohibited him from performing even the simplest of everyday tasks," says Klass. "However, when he was submerged in the water, he was pleasantly surprised with the ease at which he was able to lift his arms and increase his abilities for movement."

Aquatic Pilates is a form of

exercise which uses pulleys and bands that are secured to the pool deck. The goal is to stretch muscles and increase stability, balance and core strength.

Ai Chi, a water version of Tai Chi, is designed to strengthen and tone the body while also promoting relaxation and a healthy mind-body relationship. This and many other types of aquatic therapy is performed individually with instruction from a therapist, who is usually poolside.

Aquatic Dancing uses aerobic exercises choreographed to music. Exercise routines might include a combination of abdominal stretches, arm swings, kicks, lunges and many other movements.

Water Exercise is simply walking or jogging in the water and is popular among many age groups. It often incorporates arm movements and exercises. This activity promotes endurance, range of motion, flexibility and strength.

Water Yoga uses a blend of basic yoga postures designed to gently challenge posture, balance, and mind while allowing muscles to be stretched and relaxed by the water.

Where to Begin?

There are a number of aquatic therapy centers throughout the United States and many YMCAs now offer aquatic therapy classes. Group classes not only provide physical benefits, but mental renewal and support as well. Classes promote socialization, which is extremely important for those living with pain, many of whom feel isolated by their condition, added Klass.

To safely perform water-based exercises, Klass stresses the importance of doing the right exercises for your condition, and doing them correctly. She recommends scheduling a one-on-one consultation with a highly skilled instructor who is credentialed or certified in aquatic therapy and has experience working with people living with pain.

If aquatic therapy is unavailable in your community, but you have access to a pool, find an exercise physiologist or personal trainer who has experience working with people with pain and ask them to work with you to develop an exercise program that can be adapted to water. Klass says there are also self-exercise kits available through stores such as Target, Walmart, and even online, which may be able to be incorporated into your workout.

"A program designed for your specific physical needs, as well as enjoyment is the most appropriate," said Klass. "The benefits are worth the investment."

As always, talk with your health care provider before starting any exercise program. In some cases, this type of therapy may be covered by health insurance. And remember, simply getting into water and gently moving your body can open up a world of physical and mental benefits.

A conversation with Judith Paice, PhD, RN

Northwestern University Feinberg School of Medicine

Q: What sparked your interest in teaching pain at the end of life to other cultures?

A: Pain is a universal experience that connects all of us as human beings. However, the way we express pain varies greatly from culture to culture. Pain treatment and the barriers experienced by people with pain are also quite different around the world. Since the early 1990s, I have had the privilege of traveling to many countries, including China, Indonesia, Tanzania, Kenya, Tajikistan and others, to teach about pain and palliative care.

Q: How did you first start doing pain work internationally?

A: In 1992, Charlie Cleeland, PhD, a leader in cancer pain research, wanted to include a nurse in teaching efforts about cancer pain in China. As we'd never met, he took a chance when he invited me to participate. These experiences — a total of seven trips between 1992 and 1996 — sparked my passion for international educational efforts.

In the past 10 years, I have worked with Betty Ferrell, PhD, at the City of Hope and other colleagues to create a curriculum to teach end-of-life care. The program, the End of Life Nursing Education Consortium (ELNEC), was developed to benefit US-based nurses. Since then, we were asked to adapt ELNEC for an international audience, which has been the beginning of a fantastic collaboration and has also led to great friendships.

Q: What have these experiences meant to you?

A: They have enriched my life tremendously. I've met amazing, dedicated individuals, who are striving to provide good pain management techniques despite limited resources. My experiences abroad have also taught me cultural humility — we must respect the beliefs and traditions of our international colleagues and their patients. Our way is not necessarily the "right way," nor is it the only effective strategy for improving care.

Q: What are the major barriers to pain care? How did these compare in developing countries?

A: In the U.S., we continue to face barriers to good pain control, including insufficient education of health care professionals, fears of addiction, lack of access to specialists, regulatory obstacles, and economic constraints. Much work has been done to overcome these hurdles, but more efforts are needed.

In many developing countries, the effort to overcome these barriers has only just begun and the situation is more dire and overwhelming. For



Paice with others at conference in South Korea

example, financial barriers are prominent. Health care systems are woefully underfunded and often dangerously understaffed. We made rounds in a large hospital in Nairobi, Kenya and although the hospital was built to house 2,000 patients, the facility was caring for 3,000; patients were forced to share beds. In the Central Asian country of Tajikistan, there was only one machine to provide radiation therapy (used to reduce the pain of bone metastases), yet it was defective and it was unclear when it might be repaired. Additionally, patients often can't afford health care or even the money to travel to a hospital or clinic.

In Indonesia I remember meeting a man with advanced bone cancer who could no longer work. He had to make choice between buying pain medicines and feeding his children. He chose to care for his family and, as a result, suffered great physical pain. In several countries we saw people riding on the back (or handlebars) of bicycles to get to a clinic. In one very creative solution, the Tanzanian government is implementing a plan to provide clinics throughout the countryside so that no patient has to walk more than 5 km (about 3.1 miles) to obtain care.

Q: What are some universal truths about pain and end-of-life care? Lessons you've taken away?

A: The level of compassion expressed by health care professionals, despite working in difficult situations, is inspiring. We found that doctors and nurses around the world desperately wanted to relieve pain and they often suffered when unable to meet this goal. We met health care professionals who experienced profound grief because of the unrelieved pain felt by their patients, often compounded by witnessing repeated loss within their own families, as well as brutal deaths due to tribal warfare and genocide.

We also learned that although developing countries may have limited resources, human relations are often quite rich including extended families and community. These connections are often lacking in our very technical, Western society. The greatest lessons learned from these international experiences are that people everywhere have similar hopes and dreams, along with the wish to be treated with dignity.



Children's clinic in Africa; many have neuroblastomas and sarcomas and candy is the universal language



Women's ward at Ocean Road Cancer Hospital in Dar Es Salaam, Tanzania

"People everywhere have similar hopes and dreams, along with the wish to be treated with dignity."

VOLUNTEER CORNER



Shirly Reid

Ontario, Canada
PainAid Position: International Board Team Leader, Discussion Board and Chat Room Moderator

Shirly Reid was living a good life. In her early 20s, she married the love of her life and became the mother of an active baby girl. She loved her job at the local pharmacy, and was optimistic about the future. Then the pain began.

First, it was unexplained bladder and pelvic pain. She suffered for five years before she was finally diagnosed with interstitial cystitis — a chronic inflammatory bladder condition. At the time, she was also caring for her mother who had been diagnosed with Parkinson's disease. For years, she kept up the pace as best she could — working full-time, caring for her loved ones, holding together a household and coping with her own pain — but it all became too much and she had to make the difficult decision to quit her full-time job.

To maintain an income, she started working for a friend's landscaping company on an as-needed basis. It gave her the flexibility she needed, but within months she injured her back so badly, it required surgery.

Her pain reached new heights five years later when she slipped on wet leaves and tore the muscles and tendons in her shoulder. She tried a variety of treatments, but nothing seemed to help. Reid felt like she was quickly losing the battle against the pain, and at her lowest point, she even considered taking her own life to end her suffering.

Reid says she knew she had to change her mindset and in a hurry. She turned to the Internet for help. Reid desperately searched for a pain forum in Canada to no avail, but she didn't give up hope and finally found PainAid, APF's online community for people living with pain. After a few months of perusing the message boards, Reid decided to try the morning Coffee Chat. She'd never joined an online discussion before, but she was pleasantly surprised.

"For the first time I felt like I wasn't alone," said Reid. "I was welcomed with open arms and the information, hope and support just kept coming."

Within a year, Reid was asked if she would like to lead some of the online discussions and daily chats for PainAid. She jumped at the chance to give back, answering questions, providing support and directing members to resources to help them better manage their pain.

Reid says it can be difficult to hear about the troubles others are facing, but she works to empower people to approach their given situation with a more positive attitude.

"I know how damaging negativity can be," said Reid. "My goal is to help people understand that a healthy support system is crucial for well being, and that effective pain management is only part of the answer. We've been able to form incredible bonds."

Currently, Reid serves as the team leader for PainAid's International Discussion Board, where she facilitates discussions about health care and pain management with members around the world. She says she is grateful for the opportunity to reach out to people in other countries who may not have access to pain resources and support.

"Pain knows no boundaries, yet I've been surprised to find that many countries offer little or no help at all," said Reid.

Reid says her philosophy toward her volunteer work with PainAid can be summed up with her favorite quote by Mark Twain: "The best way to cheer yourself up is to cheer someone else up."

"On a really bad day, participating in the discussion boards can help me take the focus off of myself by reaching out and helping others," said Reid. "It just has a way of lifting me up, and helping me move forward."

Reid says the goal of the PainAid discussion boards is to encourage the sharing of important pain information, education and support so that members have a starting point to move their lives in a better direction.

For more information, visit www.painfoundation.org.

FROM THE FIELD: APF's Action Network



Attendees of the 5th Annual Advocacy Summit

2010 ADVOCACY SUMMIT: A RESOUNDING SUCCESS — INSPIRING AND PROMPTING ACTION

Leaders of the American Pain Foundation's Action Network, along with representatives of organizations and alliances from 37 states, recently convened in Minneapolis for the Action Network's 5th Annual Advocacy Summit, "Finding Our United Voice: Conquering Pain Together," held April 15-18, 2010.

APF's Action Network leadership is the foundation and spring board for APF's advocacy efforts to expose the injustice of the undertreatment of pain. Action Network leaders comprise people with pain, health care providers and caregivers who work each day to raise awareness and promote positive pain policy and practice. Together, with APF members and collaborators, we are working to unite the millions of people affected by pain to transform pain care in America.

The Annual Summit is a dynamic opportunity for leaders, APF staff members and collaborators to learn, network and use this in-person gathering to strategize the best means to accomplish our goals. As in past years, the first day of the Summit was dedicated to ensuring our new and emerging leaders are provided with the tools needed for success, including a basic orientation to the network, media relations training and pain policy advocacy.

APF now has 92 leaders spread across 35 states and the District of Columbia and our influence is growing.

The Summit agenda included:

- Formally showcasing the work of the Action Network leaders at the evening opening celebration and reception
- Highlighting the pain advocacy work of other organizations and exploring ways to join forces and collaborate. This year, participating national organizations included: Arthritis Foundation, American Cancer Society Cancer Action Network, Intercultural Cancer Council, Michigan Department of Community Health, National Association of Chronic Disease Directors, American Academy of Pain Management, and the American Society of Pain Management Nursing
- Kicking off our 2010 Pain Awareness Month Campaign
- Offering a menu of 'how-to' workshops and panel discussions including: Successful Coalition Building at the Grassroots level, Social Networking Basics, Pain Management Education Conundrum: Moving the Needle on the Medical Schools and Licensing Boards Dashboards, Hot Topics in State Pain Policy, National Pain Policy Advocacy – What's Next? and Addiction and Diversion: What to Do About The Elephant in the Room, and Networking and Building Collegial Relationships.

A highlight of the Summit were the keynote addresses by dedicated APF Board members, disability lawyer Mary Vargas and media businesswoman Lisa Weiss. Vargas fired up the participants with her powerful call to rededicate ourselves to banding together to continue speaking up for the 76.5 million Americans in pain, while Weiss shared invaluable tips on how to skillfully frame our stories and information to turn the hearts and minds of people we are seeking to influence and motivate.

Although we do our utmost to minimize the pain complications associated with traveling, it does take many of our leaders, most of whom are people with chronic pain, several weeks to recover from the travel and packed Summit agenda. Yet each year leaders return with enthusiasm, willing to endure the pain because of their dedication to the belief that being a part of the Action Network and the Conquering Pain Together movement will make it easier for others to get the help they need. The growth, development and success of this movement are based on the exceptional dedication and commitment of this courageous group of leaders.

"We WILL change pain care in America for all Americans!"



Action Network leaders from Ohio, Lori Roach and Annette Keys



Mary Vargas shares her personal pain story, inspiring attendees



Sharon Barrett, Intercultural Cancer Council allied organizational representative and Janine White, Action Network Leader in Michigan

The Summit "... makes it possible for each of us, from the newest newbie to the most seasoned volunteer, to fulfill our goals and advance the mission of the APF."

Ask an Integrative Medicine Expert (continued from page 5)

Q: What is your advice for people with pain who may not have access to integrative medical centers?

A: These approaches don't have to be fancy. Some of the most important therapies are things people can do on their own — exercise, diet, even guided imagery, which can be used for pain, as well as associated issues such as insomnia, can be done at home with the help of a CD. Massage can reduce muscle tension and may increase levels of serotonin.

It's also important that people start the conversation with their health care provider. Approach the conversation as a planning or strategy session and ask about what other options might be tried. It should be a give and take relationship.

Doing some research with reputable sources is also important. In many cases, simply being educated about one's condition can be motivational. It's important not to lose hope and, instead, pursue treatments that will provide long-term relief.

Pain & Sleep (continued from page 4)

What to expect from a sleep study

If your health care provider suspects that you have an underlying sleep disorder, you might be asked to come in for overnight observation in the sleep laboratory. Although you might feel nervous about sleeping away from the comforts of your own home, sleep studies are usually comfortable and easy to tolerate for most people. Some sleep labs are even set up like hotel rooms.

Here's what one might expect:

- On the night of the study, you will be asked to arrive at the sleep lab in the early evening to prepare for the test.
- Electrodes will be placed on your head and face to record brain activity, eye movement, and muscle activity. Sensors are also placed around the nose, chest, and abdomen to record breathing patterns.
- Technicians can also monitor your activity through cameras and microphones placed discreetly throughout the room.
- Depending on your results, you may be asked to stay the next day for a nap study to see how quickly you fall asleep during the day. The nap study checks for sleep disorders like narcolepsy that might cause excessive daytime sleepiness.
- On the day of the study, don't take any naps and avoid alcohol, caffeine, sedatives and stimulants for at least 24 to 48 hours before the study.
- Bring your regular medications and take them as you normally would unless your health care provider has instructed you otherwise. Notify your health care provider several weeks in advance about all your medications, including anti-depressants and pain medications. These can affect the results of the study and your provider may want to adjust your dose in the weeks leading up to the study.
- Bring comfortable sleepwear and your favorite pillow or blanket from home if they help you sleep better.
- Notify the sleep clinic if you have a disability or special needs related to your pain condition. You may be able to bring a caregiver to the study, if necessary. Once the sleep study is complete, it will be sent to a sleep specialist for interpretation, and then on to your health care provider for follow up. The entire process usually takes up to two weeks, depending on where the study is done.

Sources: National Sleep Foundation, Stanford University, WebMD

BOOK REVIEW

Managing Pain Before It Manages You

By Margaret A. Caudill, MD, PhD, MPH



Reviewed by Carolyn Noel

“I was immediately intrigued by the title of the book and its pages did not disappoint.

While the book gives some basics for understanding pain and pain treatments, it mainly focuses on ways people living with pain can play an active role in their pain treatment plan through the use of mind-body techniques to lessen the focus on pain, calm the body's natural response to pain stimuli and increase their activity level.

I have to admit to a certain level of skepticism in years past about the value of relaxation techniques — an area of pain management I had not fully investigated. However, I have always recognized the effect that having a positive attitude can have on my pain levels. *Managing Pain Before It Manages You* is an excellent tool to guide the reader through various techniques, behaviors and ‘attitude adjustments’ that can positively impact quality of life. Readers are encouraged to listen to their bodies and become active participants in managing their pain.

I tend to agree with the author, who states ‘the solutions offered in this book are for real people living in the real world.’ The book provides helpful, down-to-earth advice that is of value to those living with pain, their family, caregivers, and health care providers. Supplemental audio downloads of guided relaxation exercises are available to purchasers through the publisher's website. ”

PAIN AWARENESS MONTH IS JUST AROUND THE CORNER!

HELP SPREAD THE WORD IN YOUR COMMUNITY

September is fast approaching and we need your help!

Plans are already underway to make this the most successful September Pain Awareness Month yet. APF is working with a number of collaborating organizations to create an influential movement to improve pain care in America. *Conquering Pain Together* will unite our voices to raise awareness about appropriate and effective pain care and create change!

Despite the fact that tens of millions of individuals and families are affected every day, pain and its management have been largely neglected. With the recent passage of the National Pain Care Policy Act, which was part of the Health Care Reform bill, it is

imperative that we put our best effort forward to ensure that appropriate pain policy is translated into practice.

That's why, this year for the first time ever, APF will lead a Virtual March on Washington to educate politicians and policymakers about the urgent need for improved pain management. We have also created a Pain Awareness Month Toolkit, housed on APF's Action Network website, to make it easy for people to take a stand for improved pain care. You will find a number of suggestions and tools to help you, your organization or your workplace get involved.

Please visit www.APFActionNetwork.org for more information about the network and how YOU can get involved in Pain Awareness Month.

I want to become a Champion over Pain!

☑ Sign me up to receive **FREE** APF Publications

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- ☑ Send me information about including APF in my Will or Estate Plans.
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- ☑ I would like to learn more about annuities and other planned giving programs.
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Baltimore, MD 21201-4111 • Phone: 410-783-7292 x100
Fax: 410-385-1832 • Email: donate@painfoundation.org

RESOURCES

AMERICAN PAIN FOUNDATION (APF)

is the nation's leading independent non-profit 501(c)3 organization serving people with pain. Our mission is to improve the quality of life for people with pain by raising public awareness; providing practical information, education and support; advocating to remove barriers and increase access to effective pain management; and promoting research. APF has a comprehensive website, PainAid (online support), consumer publications, APF *Pain Monitor* (monthly e-newsletter), a toll-free message line and public awareness and legislative activities.

1-888-615-7246

www.painfoundation.org

American Academy of Physical Medicine and Rehabilitation

www.aapmr.org/condtreat/pain/lowback.htm
(847) 737-6000

American Chiropractic Association

www.acatoday.org
(703) 276-8800

Medline Plus

Patient information on back pain treatment, prevention and research from the U.S. National Library of Medicine and the National Institutes of Health
www.nlm.nih.gov/medlineplus/backpain.html

National Institute of Arthritis and Musculoskeletal and Skin Diseases

www.niams.nih.gov/Health_Info/Back_Pain/default.asp
(877) 22-NIAMS (226-4267)

North American Spine Society

Non-profit medical society focused on improving spine medicine through advocacy, research and education. Includes patient information on spine disorders.
www.spine.org

Know Your Back

Patient education site from the North American Spine Society
www.knowyourback.org

Your Orthopaedic Connection

Patient information and detailed low back pain exercise guide from the American Academy of Orthopaedic Surgeons
<http://orthoinfo.aaos.org>

In the Next Issue

- September Pain Awareness Month Engages Communities Nationwide
- Unraveling the Role of Inflammation and Pain
- Anxiety's Emotional and Physical Toll



READ ALL ABOUT IT!

The latest issue of APF's *Pain Research & Practice Update* is now available at www.painfoundation.org.

Included are highlights from the recent American Academy of Pain Medicine conference, an expert Q&A about the role of vitamin D

in chronic pain, researcher highlights, migraines and stroke, Tai Chi and acupressure eases pain and much more!

