



Your risk for chronic pain may be in your genes. Researchers in Toronto and Montreal studied women after mastectomies and found those with a wonky pain receptor (P2X7) in a specific gene had more chronic pain—a discovery that may help scientists fight pain by targeting the problem protein.



Migraines

Chronic Neck and Back Issues

Post-Op Problems

Fibromyalgia

Carpal Tunnel Syndrome

THE SCARY TRUTH ABOUT OUR PAIN PROBLEM

Getting good treatment for pain is hard. It's even harder if you're a woman (ouch!), worse still if you're attractive (ouch again!). Here's why it's time we paid more attention to pain

BY SYDNEY LONEY

My mother doesn't believe in migraines.

Or fibromyalgia. Or any other nebulous condition for which there is no clearly visible physical sign. And should any of them come up in conversation, they're quickly dismissed with a snorted "What nonsense." To believe pain is truly present, my mother needs an affliction she can see—like the arthritis that swells and knots her knuckles after an afternoon in the garden. Now *that's* a pain she can believe in.

As with so many things in life—melting glaciers as a sign of climate change, Barack Obama's birth certificate as proof of his citizenship—seeing is believing. Which poses a problem for the seven million (that's one in five) Canadians who endure chronic pain every day, all day. No one believes them. Not their friends, their family, their co-workers; not even their doctors. Without a visual cue—like an eye patch, say, or a cast or cane—pain is invisible. Researchers at the University of New Brunswick discovered that no matter how much you're suffering, you'll get better care if you hobble into your doctor's office leaning on a cane. This fact frustrates Dr. Mary Lynch, director of the Pain Management Unit at the QEII Health Sciences Centre in Halifax.

"In Canada, pain is under-recognized and under-treated," Lynch says. "And that's all pain, whether it's due to trauma, surgery, illness or disease. It includes pain in the community, in our hospitals and in our emergency rooms—it's a huge problem." And it's a problem that has a lot to do with how easy it is to dismiss a condition we can't see. A nationwide survey by the Canadian Pain Coalition found 53 percent of us don't believe chronic pain exists. On the other hand, an Angus Reid Poll found 70 percent of us believe there is intelligent life on other planets (and 54 percent think extraterrestrials have already paid us a visit). So...aliens from outer space? Sure. Chronic pain? No way.

What all of this means is pain doesn't get the attention it deserves when it comes to researching new treatments or educating doctors about how to deal with it. Here's a favourite stat from the country's top pain experts: Veterinarians in Canada get five times (the "five" is always emphasized) more training in pain management than family physicians do. Good news for our four-legged friends, but bad news for us, considering pain is the most common reason Canadians go to the doctor and is responsible for 78 percent of our trips to the ER. As a result, it's costing us \$60 billion a year in health care expenses and lost productivity.

Then there's the personal cost of being in perpetual pain. Studies show chronic-pain

sufferers have a worse quality of life than people with other chronic illnesses, including lung and heart disease. "Pain can wreck a person's life," says Lynch. "They can't function, they can't work, they lose relationships and become socially isolated and depressed. Many start to wonder whether life is worth living." The suicide rate is double for those in chronic pain compared with the average person. "Most doctors know patients who have killed themselves due to pain, and I'm no exception," Lynch says.

The situation is so dire that all the staff at her pain clinic are trained in crisis management because they field so many calls from desperate people. Yet, Lynch says, it's surprising how difficult it is to change attitudes. "If you're not experiencing chronic pain or haven't seen someone you love go through it, it's harder to understand," she says. And all too often, chronic pain is seen simply as a symptom of something else, when it's actually a disease unto itself.

GOOD PAIN VS. BAD PAIN

When you look at pain from an evolutionary perspective, it does serve a purpose, says Diane LaChapelle, associate professor of psychology at the University of New Brunswick. "It can be a sign of damage, a warning mechanism that you need to do something." This is acute pain—the kind you get when you stub your toe or sprain your ankle. (Incidentally, researchers >

PHANTOM LIMB PAIN

Some days, Shelley Churchill feels a sudden, stabbing pain in her right leg, which is weird because the leg hasn't been there since she was five. "People with phantom limb pain experience it differently, but for me it feels like there's a cramp and I need to bend my knee." Her leg was removed two inches above the knee after she was diagnosed with bone cancer. Now, Shelley speaks about amputeeism, pain and prosthetics for the War Amps' Champs Program. She often gives talks in classrooms, removing her leg (she has three prosthetics: an electronic one, another for sports and a waterproof one for swimming) and passing it around for the kids to hold. "It's a good way to get a healthy dialogue going." Her pain is worse when she's tired or stressed, so she manages it with rest, warm compresses and soothing cups of tea. "When I have an exam and the pain wakes me up at 3 a.m., I tell my mind, 'The leg hasn't been there for 20 years, so let it go!'"

PEOPLE IN PAIN

Shelley Churchill, 26

IS A STUDENT IN MOUNT PEARL, N.L., WHO STILL FEELS PAIN IN THE LEG SHE LOST AT AGE FIVE.

BUNNY PHOTO, ROBERTO CARUSO.

MICROSCOPE PHOTO, ISTOCK.

PEOPLE IN PAIN

Barbara Stowe, 56

WAS A PROFESSIONAL DANCER IN VANCOUVER BEFORE CHRONIC PAIN ENDED HER CAREER.

CHRONIC BACK PAIN

Holding a phone hurts too much, so Barbara Stowe puts it on speaker while she talks about the time when her days were defined by ballet. "Dancing was my great joy and having to stop was devastating." At 28, Barbara was diagnosed with Hodgkin's disease and underwent chemotherapy, which weakened her muscles. One day she went into a deep plié and couldn't get up. Back pain spread to her neck and shoulders and was followed by coccydynia (tailbone pain). "I just kept taking activities out of my life until one day I gave up. I thought, 'I've done everything I can and nothing's working.'" For two years, Barbara couldn't sit properly or lie on her back. Then she tried yoga therapy. "The combination of movement and mindfulness helped me sit again." She's even been able to cut one of her pain meds by a third. "People are told they just have to live with pain," says Neil Pearson, the physical therapist who helped Barbara get her life back. "We give hope to people with other diseases, but that's what's missing in pain treatment. People need to know it's possible to change pain—maybe not with a light switch, but with a dimmer."

in the U.K. found swearing actually does help in those situations—a few choice curse words can boost pain tolerance, especially for those not normally prone to profanity.) Acute pain tends to be as short-lived as the injury that caused it, although if it isn't managed properly, it can become chronic.

"With chronic pain, the warning system goes awry, and the pain signal doesn't stop," says LaChapelle. "Your brain sends the same information about pain even after your body has healed." Chronic pain can be caused by an injury, infection or disease. And it can happen to anyone at any time. The Institute of Medicine in the U.S. identified childbirth as a common source of chronic pain: 18 percent of women who deliver by Caesarean and 10 percent who deliver vaginally are still in pain a year later.

HOW STEREOTYPES ARE HURTING US

Most of us who have only ever experienced temporary acute pain can't imagine what it would be like if it didn't go away. But we've been taught that it's possible to "push through pain" and that pain is something that can and should be overcome. No pain, no gain, after all. Athletes are good examples of people who've been conditioned to believe pain is something you can defeat if you try hard enough. When Canadian triathlete Paula Findlay suffered a labral tear in her right hip in July 2011, she opted for injections to "manage" her pain instead of surgery to repair the tear. The 23-year-old, who ranked number 1 in her sport, wrote in her blog that she had decided the battle was a mental one. Her mantra was "Never, never, never give up" (courtesy of Winston Churchill). So she didn't. And the whole world saw the heartbreaking result at the 2012 Summer Olympics.

After struggling through the swim portion of the race, Findlay lagged behind on her bike. By the time she started running, it was clear she was hurting—but her team doctor convinced her to finish. The world watched as she stumbled back onto the track with her mouth twisted and tears trickling from beneath her sporty red shades. In her post-Olympics blog entry Findlay wrote, "I ran three of the most painful, embarrassing laps ever, being lapped [in] the race that

I was supposed to be a contender in, humiliated and screaming at myself inside." Worse still, when it was all over, she felt she had to apologize for not bringing home a medal.

"There's a tremendous guilt that comes with pain," LaChapelle says. "If you say, 'Oh, I can't do that because of the pain,' you're not taken seriously." The consensus among many of Findlay's teammates and members of the media (who nonetheless admired her "grit") was that she never should have been in London in the first place. She was a victim of the belief you can beat pain mentally, pushed by doctors and trainers who felt the same way. And the fact she looks young, healthy and attractive probably didn't help. There are many stereotypes that affect how people with pain are perceived, and they often influence treatment, LaChapelle says. In her research, she discovered that the more attractive and healthier you appear, the more discounted your pain is. "It's just not seen as having as much impact," she says. "People think, 'How much can it really be affecting you when you look okay?'"

You're also at a clinical disadvantage if you happen to be a woman. In one study, LaChapelle discovered health care professionals feel more anger and annoyance when female patients complain about pain, whereas men elicit greater sympathy. "The stereotype is that men are more stoic and stronger than women, so if they complain, it must be *really* bad." You can see the outcome of these attitudes in pain treatment, too, she says, because men are more often prescribed pain medications, like opioids, while women are given psychological meds, like sedatives, for the same condition. This is especially irritating considering that new research from Stanford University found women feel pain more intensely than men (women's pain levels are 20 percent higher overall). So basically the message is women feel it more but should complain about it less.

WHY YOUR DOCTOR CAN'T HELP YOU

The first place people head when something's hurting is to their doctor's office. Unfortunately, pain isn't easily pinpointed with a few medical tests. "The main tool we have to diagnose pain is history, meaning what patients



One in 10 people who go to the hospital for a routine surgery winds up with chronic pain.

“The stereotype is that men are more stoic and stronger than women, so if they complain, it must be really bad.”

tell us," Lynch says. If you're lucky, your doctor will be immune to prevailing stereotypes and will be well versed in pain management, but most aren't. "People ask me, 'How can this be? Aren't health care professionals trained to treat pain?'" says Lynch. "The answer is no." Medical students might get a few hours of pain education at most, and since pain questions seldom crop up on licensing exams, there's little incentive to pay attention in class. In which case your only hope is to be immediately referred to one of the country's scarce pain clinics (only 270 nationwide), since the longer pain goes untreated, the harder it is to fix. A more likely scenario: You'll be bounced around to several doctors, told there's no physical reason for your pain and that it's all in your head, before your name finally gets tacked on to the bottom of a one- to two-year wait-list to see a pain specialist.

The wait-list at the Wasser Pain Management Centre at Mount Sinai Hospital in Toronto is four to six months, which is pretty good, all things considered, says the centre's director and clinical neurologist, Dr. Allan Gordon. "We see people when their GPs realize the problem is beyond their level of comfort," he says. Like most pain clinics, the Wasser centre takes a multidisciplinary approach with specialists including an on-site psychiatrist, dentist, sex

therapist and gynecologist.

"I look at this as being a pain enterprise," Gordon says, leading the way down the clinic's long, nondescript corridor past several closed doors. Behind each is a room devoted to a different aspect of pain management. "We're one of the few pain clinics in North America to have a gynecologist," he says proudly. (About 15 percent of his patients arrive with chronic sexual pain disorders, such as endometriosis.)

We wind up in the clinic's pain-fighting epicentre, Gordon's office. He drops into a rolling chair, combs a hand through wiry dark hair and swivels gently back and forth while explaining why an interdisciplinary approach is the key to pain management. "Ten years ago, we just had everyone on meds," he says. "Now, that's just one part of a larger approach. We've learned that to treat pain holistically, we have to address both the physical and the psychological symptoms." This means understanding how pain affects everything from movement and mood to sleep and sex, then bringing in a diverse team of experts to tackle each area.

Giving pain patients access to alternatives to conventional drug treatments is more important than ever in light of the current controversy over prescription painkillers. When Canadians were identified as among the highest users of prescription opioids in the world, there was ▶



HEADACHE HELL

Six years ago, Lucy Rossiter was on her way to becoming a psychologist, working on her PhD and raising her three-year-old son. One afternoon she bent to pick some shoes up off her deck and hit her head on a metal bar, causing a mild concussion that led to chronic migraines. She struggled to finish school and start a private practice, before realizing she couldn't have the life she planned. "I was an Irish dancer, I played squash—now

a 20-minute walk triggers a headache." Her disability tested her marriage and caused financial strain. People ask why she can't work and whether she watches TV all day. "The perception is you're just lazy, but being in constant pain is nothing short of exhausting." Worst of all is the impact on her son. "He feels my absence during acute attacks, and I can't do physical activities with him anymore, like go skating or ride a bike."

Watching him play squash one day, Lucy suddenly decided to join him on the court. "He was overjoyed—it was worth every second of pain for the look on his face when he saw a glimpse of my pre-injured self," she says. "My pain has made me appreciate the things I can do with him—and it has taught him the power of accepting limitations and moving forward in spite of them."

If you missed our migraine feature, turn to page 96.

PEOPLE IN PAIN

Lucy Rossiter, 41

ORGANIZES HER LIFE IN FREDERICTON AROUND DAILY HEADACHES.

AMBULANCE PHOTO: ISTOCK.

MONKEY PHOTO: ROBERTO CARUSO.

PEOPLE IN PAIN

Stephanie Clayton, 10

CAN BE CLIMBING A TREE IN TORONTO ONE MINUTE AND DOUBLED OVER ON THE GROUND THE NEXT.

TOTAL BODY PAIN

"Watching your child skin a knee is bad, but seeing her in pain every day is horrible," says Stephanie Clayton's mother, Denise. "I wish I could just take it all away." Stephanie was born with an omphalocele, a condition where abdominal organs grow outside the body. Several surgeries put things back in place, but Stephanie suffers from intestinal failure. "Pain rules her every minute," Denise says. Medication, music, psychotherapy and art help Stephanie cope. On bad days, Stephanie's face is pale and pinched, but when her intravenous tubes are covered up and she looks well, you can't tell she's hurting. "She's very misunderstood, and even our expectations are high—we forget she's battling pain all the time," Denise says. Her daughter just wants to be like other kids and learn to snowboard (and skate and horseback ride). She joined a snowboarding class and when it was too painful to walk up the hill, she crawled up, then boarded down. "We're grateful for a pain team that lets her live and play the way she wants to," Denise says. "It's a stressful, complicated life, but we just live day by day and hope."

panic. OxyContin (also known as "hillbilly heroin") was outlawed from prescription pads last March, but many pain experts argue that getting rid of the drug won't solve the problem because addicts will simply resort to less-controlled, but potentially more harmful, opioids.

In the United States, OxyContin has already been replaced by heroin as the average addict's drug of choice. "OxyContin was the most commonly prescribed painkiller on the market, but when it became a street drug, it left a huge void for pain patients," Gordon says. "The biggest risk of being overly opioid-phobic is that people don't get treated at all, and that's already happening."

THE ROAD TO PAIN RELIEF

Part of the solution to addiction to opioids is educating doctors about how to properly prescribe them, as well as how to incorporate non-medical treatments into the mix, from using professional resources like physiotherapists to exploring strategies patients can try themselves, like tai chi. Gordon, for instance, is researching how listening to the right music can ease the relentless, diffuse pain of

fibromyalgia. And in his spare time, he's teaching other health care professionals about all the other treatment options out there. "The biggest goal is to download pain management to primary care physicians," he says. "The problem is there are about 12,000 family doctors in Ontario, and we've maybe worked with 500 of them." Some provinces have mentorship programs; others, like British Columbia, have hotlines so doctors can dial up a pain specialist whenever they're overwhelmed and need help. "We don't have that in Ontario, but I wish we did," Gordon says.

With so much disparity in resources between provinces, Lynch wants to take things a step further, which is why she co-chaired Canada's first national pain summit in Ottawa last spring. She's also leading the charge for a national pain strategy. (Australia was the first country to introduce one in 2009, and it led to millions of dollars being allocated to improving pain education and access to care.) Lynch says one of the biggest benefits of a national pain strategy would be to educate health care providers and generally raise awareness—she's tired of

hearing about people whose pain isn't being taken seriously. "We need to teach Canadians that people with pain are not a bunch of wimps, malingerers or drug seekers," she says. "They're real people with a real disease that needs to be treated."

This is where a national strategy and more money for pain research might help most. Just last year, studies using functional magnetic resonance imaging identified how chronic pain shifts the landscape of the brain—scientists can actually see the decrease in brain matter and how brain activity is altered.

Better yet, a recent study shows treating pain effectively can reverse those changes. Using before-and-after brain scans, researchers at McGill University followed patients who received spinal injections or surgery to relieve chronic back pain. They discovered that six months after their pain was gone, patients had increased cortical thickness in areas of the brain related to pain reduction—and they have the pictures to prove it. That's got to be better than a grainy image of a UFO captured on someone's iPhone, right? 📱



NO PAIN, ALL GAIN

Ten of the newest ways scientists say you can ease your pain at home

ommmm



1 SPEND MORE TIME ON THE MAT

When it hurts to move, try moving more. A recent study of 313 adults in the U.K. found 12 weeks of yoga improved chronic lower back pain; another study found not only did a little stretching and twisting relieve pain, it also helped with depression and reduced patients' use of pain meds.

2 PRACTISE TAI CHI

More meditative than karate or tae kwon do, the ancient Chinese practice of tai chi combats aching joints, fatigue, sleeplessness and other symptoms of fibromyalgia.

3 WORK IT OUT

Stiff neck? Gentle exercises work better than pills, say researchers at Northwestern University in Chicago. They found 48 percent of people who did neck exercises (such as flexing and rotating) had a 75 percent reduction in pain, compared with the 33 percent who found relief with medication.

4 STICK A NEEDLE IN IT

Studies show acupuncture may be better than drugs when it comes to taking the edge off. A Taiwanese study of 77 people with carpal tunnel syndrome showed just eight acupuncture sessions trumped two weeks of oral steroids.

5 GO FOR A LATTE

Another perk (pun intended) to enjoying that mochaccino: New research from Norway found people with chronic neck and shoulder pain felt better after a cup of coffee. Scientists believe caffeine reduces pain by blocking adenosine, a brain chemical involved in pain processing.

6 SIP GINGER TEA

Cooked or raw, studies show a daily dose of this knobby root relieves sore muscles with pain-fighting properties similar to those of non-steroidal drugs.

7 GET YOUR GAME FACE ON

Your Xbox may not be a total time-waster: Researchers at Keele University in the U.K. found 10 minutes spent shooting virtual enemies can be an effective way to fight pain.

8 PUT YOUR EARBUDS IN

Listening to lyrics from your favourite band triggers an emotional and intellectual response, relieving pain by activating sensory pathways that compete with pain pathways, reports a study in the *Journal of Pain*. And the more absorbed you are in the music, the less pain you feel.

9 FALL IN LOVE

Yes, love conquers all—and that even applies to pain. When you think about the object of your affections, the areas of your brain that light up are the same ones drugs target to reduce pain. Scientists at Stanford University found passionate love can provide pain relief in a similar way to both prescription drugs and the more illicit variety.

10 THINK POSITIVE

Roughly 80 percent of pain sufferers toss and turn at night, but positive thinking may make for more peaceful slumber. Researchers at Johns Hopkins University in Baltimore studied 214 people with chronic jaw and facial pain and found those who didn't dwell on their discomfort slept better and felt less pain.

TEDDY AND BUNNY PHOTOS: ROBERTO CARUSO.