

# Zooming

In the clinic on

## chronic pain



ASSOCIATION QUÉBÉCOISE  
DE LA DOULEUR CHRONIQUE

# Zooming

in on

chronic  
pain



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## SUMMARY

In the past, when someone complained of having had constant pain for months or years, he or she was often considered a hypochondriac. Today, thanks to research, we know that there is indeed such a thing as chronic pain and that can be a condition in itself. However, it is a poorly understood, major public health problem that wreaks havoc on the lives of those affected.

Chronic pain has a major social economic impact. In Quebec, in 2004, there were more than 1.2 million people suffering from chronic pain.<sup>1,2</sup> Recurrent and tenacious, this type of pain is often not due to any specific cause. Given the powerlessness of physicians and the scepticism on the part of family and friends, people suffering from chronic pain can see their lives turned upside down. The physical and psychological consequences wreak havoc and plunge the person into isolation and distress. What's more, the prejudices surrounding this medical condition often lead these individuals to put off seeing a doctor, with the result that they keep themselves from obtaining acceptable pain relief. And, unfortunately, some people suffering from chronic pain choose to end their lives.<sup>3</sup>

Chronic pain also has an impact on the level of productivity and on absenteeism among working-age people. Furthermore, there is the increased use of health care services when pain is misdiagnosed or not controlled, in addition to the regular use of medication to relieve pain. One thing is certain: chronic pain generates substantial costs for society as a whole.

Pain is a subjective, personal experience that can't be measured with medical examinations. Since it is multifaceted, it can seldom be treated in just one way. This can be disconcerting, both for the patient and health professionals, who may sometimes feel that they are at a dead end.

Sometimes, it takes more than one diagnosis and several medical visits before realizing that the patient has chronic pain. With the means presently available, patients can learn to better control chronic pain and enjoy a certain quality of life once again.

Chronic pain can have repercussions at the physical and psychological, social, family and economic levels. However, above all, chronic pain needs to be demystified, and people who suffer from it need to be heard and their pain managed. Patients have an important role to play in the diagnosis and control of their pain, but it is up to health authorities to recognize that chronic pain is, in fact, a disease. Chronic pain should be treated, not ignored or trivialized.

# CHRONIC PAIN

## explained

### What is chronic pain?

Chronic pain is a serious health problem that has a devastating effect on the lives of those affected. It is characterized by recurrent local or diffuse pain that persists for months or even years. It may be the result of an accident, an illness or an infection and extends beyond the normal period of healing. Chronic pain can also be associated with a chronic disorder or a progressive or degenerative disease (such as inflammatory bowel diseases), fibromyalgia, low back pain, arthritis, migraine, shingles, multiple sclerosis and neuropathic pain<sup>4</sup>. Chronic pain may either be intermittent (attacks) or persistent (lasting more than 12 hours a day). It takes on various forms: sharp, intense, burning, shooting or even a prickly sensation. Overall, this condition may start suddenly or gradually in any part of the body, and with no identifiable cause.

### Chronic versus acute pain

In general, pain is defined as an “unpleasant sensory or emotional experience associated to actual or potential tissue damage or described in terms of such damage (IASP 1986) Most of the time, pain indicates that something is not right. It may appear suddenly or gradually. There are two main types of pain: acute and chronic.

**Acute pain** is a warning sign felt when tissues have been injured (as the result of a cut or following surgery). When this happens, nerve endings quickly send signals to the brain via the spinal cord. In turn, the brain sends a message to the body to react to the pain (such as letting go of the blade). In other words, when a person feels acute pain, he or she knows where it hurts and why. As for its duration, acute pain normally lasts no more than a few days and never more than 6 months.<sup>5</sup> If it goes untreated, acute pain can turn into chronic pain.

Definition	Examples
<ul style="list-style-type: none"> <li>• Persists for more than 3 to 6 months.</li> <li>• Experienced after the expected time of healing.</li> <li>• Usually serves no protective function.</li> <li>• Detrimental to patient health and functional capacities.</li> </ul>	<p><b>Non cancer pain:</b></p> <ul style="list-style-type: none"> <li>• Neuropathic pain (due to a lesion or dysfunction of the nervous system).</li> <li>• Fibromyalgia (chronic, diffuse pain characterized by the presence of “pain points”).</li> <li>• Migraine and headaches.</li> <li>• Low back pain.</li> <li>• Arthritis pain (painful inflammation of the joints).</li> </ul> <p><b>Cancer pain</b></p> <p><b>Psychogenic pain</b> (pain that cannot be attributed to a disease or previous injury or to any other visible lesion).</p>

**TABLE 1**  
**Definition and examples of chronic pain manifestations**<sup>5,6,7</sup>

**TABLE 2****Chronic versus acute pain<sup>8</sup>**

	Chronic pain	Acute pain
<b>Cause</b>	<ul style="list-style-type: none"> <li>• May be due to a known or unknown cause.</li> <li>• May be related to a chronic disease.</li> <li>• May be caused by a lesion to a nerve (following an accident, an infection or surgery or simply due to a nerve dysfunction.)</li> </ul>	<ul style="list-style-type: none"> <li>• May be caused by tissue injury (mosquito bite, sprain, fracture, etc.).</li> <li>• May result from an illness (a headache that accompanies a cold), an injury (burn) or surgery.</li> </ul>
<b>Duration</b>	<ul style="list-style-type: none"> <li>• Persists beyond the normal healing process or for more than 3 to 6 months.</li> </ul>	<ul style="list-style-type: none"> <li>• May last a few minutes to a few weeks.</li> </ul>
<b>Manifestations</b>	<ul style="list-style-type: none"> <li>• May be intermittent or continuous, occur as a sudden attack, may be diffuse or sharp burning sensations, prickly sensations or numbness.</li> </ul>	<ul style="list-style-type: none"> <li>• Pain is specifically located and from known cause.</li> </ul>
<b>Prognosis</b>	<ul style="list-style-type: none"> <li>• Not expected to heal, however remission is sometimes possible.</li> </ul>	<ul style="list-style-type: none"> <li>• Usually, pain disappears during the healing process.</li> </ul>

As for **chronic pain**, it occurs even if the initial disease or injury is treated and clinically cured. It may therefore occur in the absence of any visible signs of disease or bodily injury. For some unknown reason, the pain signals remain active in the nerve endings, sending false pain messages to the brain. It's as though the nervous system can't manage to stop feeling the pain. These pain signals can remain active in the body for weeks, months or even years.

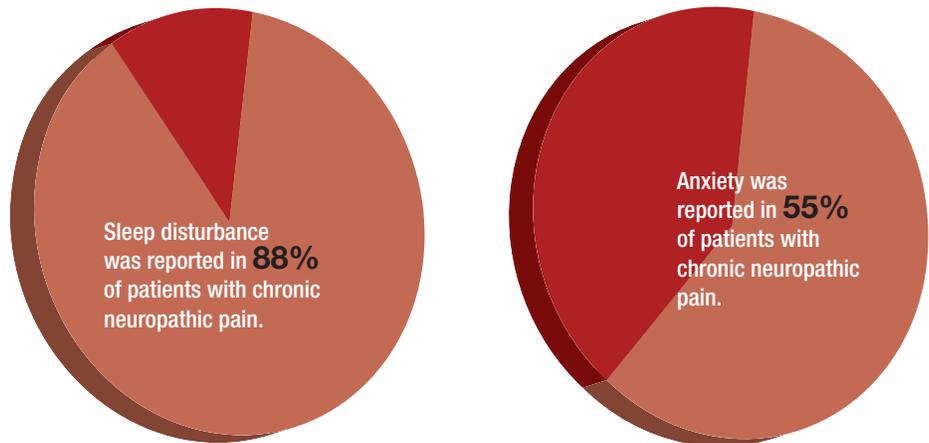
Chronic pain may also be caused by an injury or dysfunction of the nervous system. This is referred to as "neuropathic" pain.<sup>9</sup> It's frequently observed in diabetics and due to high, uncontrolled blood sugar levels (hyperglycemia) that can affect nerve fibres. Nerves located in the body's extremities (feet and hands) are most affected. Multiple sclerosis and shingles can also cause neuropathic pain.

Furthermore, unlike acute pain, chronic pain does not always have a known cause, and there is sometimes no curative treatment for the disease that's responsible for it (for example, arthritis pain or migraine).

**Figure 1**

**Prevalence of sleep interference and anxiety in a study of people suffering from neuropathic pain<sup>14</sup>**

Source: K. Meyer-Rosberg, 2001.



### Symptoms: more than just pain

Chronic pain is accompanied by a constellation of symptoms that cause the individual great physical and psychological pain.

The **physical symptoms** of chronic pain differ very widely. Some people with neuropathic pain experience temporary numbness, tingling, prickling (paresthesia), sensitivity to touch or temporary muscle weakness, while others will experience more intense symptoms, such as a burning sensation (especially at night). The areas most often affected are the back, legs<sup>10</sup>, hands and feet.<sup>11</sup>

Those with arthritis pain describe a range of symptoms totally different from those of neuropathic pain. For example, swelling, stiffness, inflammation and pain in one or more joints reduce joint mobility.<sup>12</sup>

Pain is not the only symptom of chronic pain. Because of its tenacity, it can weaken the immune system, reduce tolerance to stress and cause depressive states.

**Depression** is, in fact, one of the most frequent problems for people suffering from chronic pain.<sup>5</sup> The risk of depression is even greater if the person has decreased autonomy or poor mobility that reduces his or her participation in social activities. It is thought that 30 to 60% of patients with chronic pain develop depression as a direct result of their pain.<sup>13</sup>

Due to the nature of the disorders that accompany chronic pain, it is even harder for patients to cope with their condition. Sleep interference and anxiety, which are even more frequent than depression, stem from the wearisome consequences of living with chronic pain. Lack of restorative sleep lowers the pain tolerance threshold, so much so that the combined effect of chronic pain and lack of sleep results in a vicious cycle. In a study of chronic neuropathic pain, nearly 90% of subjects experienced sleep interference which, in more than half the cases, was accompanied by anxiety.<sup>14</sup>

## What are the known causes of non cancer chronic pain?<sup>10</sup>

Non cancer chronic pain is not yet recognized as a disease.

There are two prevailing schools of thought in the health care field.<sup>15</sup>

- **Chronic pain is a symptom, just like acute pain;**
- **Chronic pain is a disease since neurochemical changes occur in people suffering from chronic.**

## Known medical causes of non cancer chronic pain are:

- **A chronic disease that cannot be adequately treated and causes pain (for example, AIDS, trigeminal neuralgia and sickle cell anaemia).**
- **Acute pain that persists beyond the normal period of healing but does not last longer than 6 months (following surgery for example).**
- **Pain with an ill-defined or difficult to determine cause (for example, migraine, fibromyalgia).**
- **Phantom pain following an amputation. In such cases, pain is due to damage to nerve endings.**
- **Pain maintained by the nervous system with no apparent trigger (such as complex regional pain syndrome, neuropathic pain, etc.).**

## What are the risk factors increasing the incidence of developing chronic pain?

Among the psychosocial factors that increase the risk of developing chronic pain are psychological traumas experienced in childhood and adolescence (40% increased risk) and a relatively stressful or stressful work environment (40% to 80% increased risk).<sup>16</sup>

## Diagnosis

Pain is a subjective, personal experience that cannot be measured with medical tests or examinations. Making a diagnosis can, therefore, be a very complex undertaking. That is why health professionals need to take the time to talk with their chronic pain patients and ask them about their physical symptoms and their environment. Doing so enables health professionals to identify the type of pain, understand and assess the patient's condition and determine the appropriate therapeutic approach.<sup>4</sup>

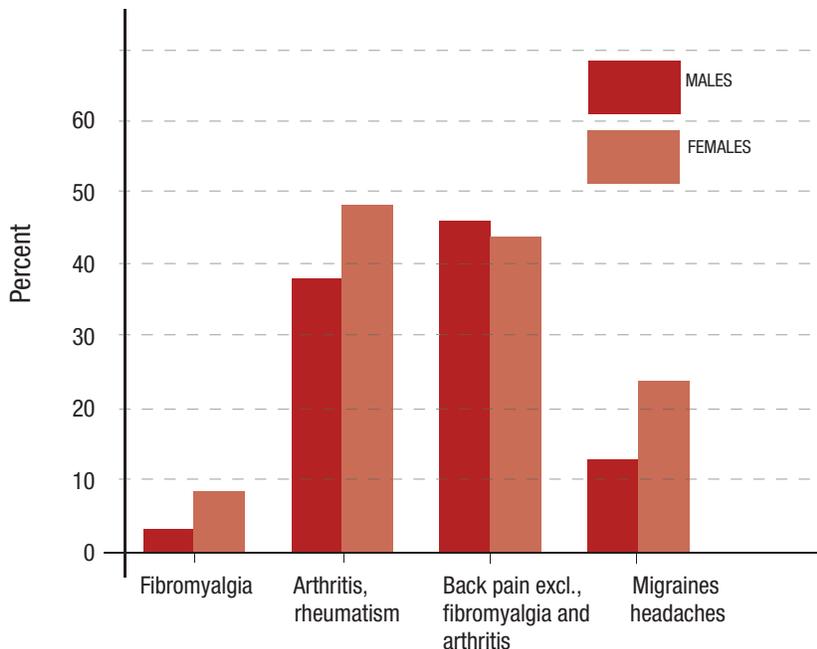
In turn, patients should become active partners in identifying their painful condition and managing their pain. To this end, they can keep a personal pain diary in which they record the intensity, duration, frequency and type of pain experienced as well as any interventions (pharmacological or other) and their effects. The patient may also ask a loved one to accompany them during their medical visits and provide the health professional with any missing information.<sup>5</sup>

## EPIDEMIOLOGY

### Who suffers from chronic pain?

Millions of Canadians experience debilitating chronic pain that is not adequately treated. According to the Canadian Chronic Pain Study II, in 2004, more than 1.2 million Quebecers suffered from chronic pain.<sup>1,2</sup> Chronic pain affects both men and women, all ethnic backgrounds and ages combined.<sup>17</sup>

The prevalence of chronic pain increases with age (especially in people 55 and over) and would be lower in people with high incomes.<sup>10</sup> Women are more susceptible to chronic pain than men. This can be explained, in part, by the fact that testosterone protects men against pain. However, the connection between oestrogen and pain is still not very clear. We do know that women often see their pain intensify in the days preceding menstruation and after menopause, periods characterized by a decrease in oestrogen.<sup>10</sup>



**Figure 2**  
**Prevalence of chronic conditions among people with chronic pain<sup>17</sup>**

Source: M. Meana, 2003.

## The prevalence of four conditions

A Canadian study conducted in 2000 and 2001 determined the prevalence of four chronic conditions strongly associated with the presence of chronic pain: fibromyalgia, arthritis/rheumatism, back pain and migraine. The results are presented, by gender, in Figure 2.

### 1. Neuropathic pain

Approximately 500,000 Canadians suffer from neuropathic pain, which is often accompanied by other states of pain, such as fibromyalgia, osteoarthritis and migraine.<sup>5</sup>

### 2. Fibromyalgia<sup>18</sup>

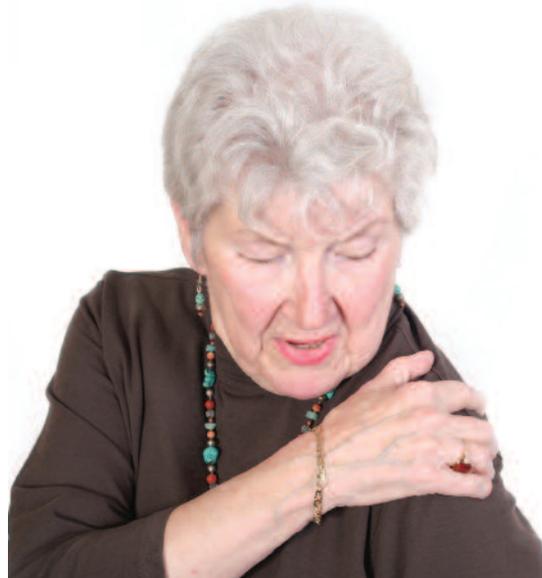
A Canadian study involving 3,395 subjects estimated the prevalence of fibromyalgia at 3.3%, represented as 4.9% of women and 1.6% of men affected with this condition.

### 3. Arthritis<sup>12</sup>

Arthritis affects close to 4 million Canadians, roughly 1 out of every 6 people. The prevalence of arthritis in Canadians 15 and older is expected to increase by nearly 1% every 5 years to exceed 20% by 2026.

### 4. Migraine<sup>19</sup>

The lifetime prevalence of migraine in Canada is between 7 and 17%. Migraine may accompany depression.



## Chronic pain statistics

- **According to the Canadian Chronic Pain Study II, which was conducted in 2004 in the general population and among general practitioners who treat chronic, moderate to severe non cancer pain, 16% of Quebecers<sup>1</sup>, or more than 1.2 million people, had chronic pain.<sup>2</sup>**
- **In Canada, according to different scientific studies, between 16 and 29% of people experience chronic pain or discomfort.<sup>21,22</sup>**
- **Among Canadians with chronic pain, 39% are 55 years of age and older.<sup>10</sup>**
- **Because of the aging of the population, the incidence of chronic pain or discomfort is expected to increase by 70% over the next 25 years.<sup>20</sup>**
- **Among Canadians with chronic pain or discomfort, 10% are limited in their activities,<sup>23</sup> and 20% report that they experience pain on a daily basis.<sup>24</sup>**

## PAIN THAT HAS consequences

### Physical and psychological consequences

The physical and psychological consequences of chronic pain are devastating. The pain has a direct impact on the individual's functioning, sleep, mood, and family and interpersonal relationships.<sup>4</sup> The heavy burden carried by people suffering from chronic pain is made worse by the ongoing myths and prejudices about chronic pain.

At a **physical level**, chronic pain often causes muscle tension, changes in appetite, reduced mobility and fatigue.<sup>6</sup> If pain is not controlled, it can worsen over time and cause additional disabilities.

At a **psychological level**, chronic pain can be accompanied by emotional issues, such as anger and the fear of being injured again.<sup>6</sup> Mental anguish is often the result of ongoing and persistent pain. Furthermore, when the source of pain remains unidentifiable, scepticism on the part of physicians as well as the person's friends and family may constitute an additional hardship for the person suffering from chronic pain.<sup>14</sup>

### Difficulties for working life

Pain's repercussions on a person's functional capacity, at work and at home, are significant. Performing daily tasks becomes difficult and the capacity to work is further diminished, which explains the low rate of full-time employment among people suffering from chronic pain.<sup>17</sup>

A person with moderate or severe chronic pain loses an average of \$12,558 in yearly income.<sup>24</sup> Among Canadians living with moderate or severe pain:<sup>24</sup>

- **33% stated that they lost their job because of their pain.**
- **47% stated that they reduced their job responsibilities because of their pain.**
- **49% stated that their pain resulted in a loss of income.**

### When those around become discouraged

People suffering from chronic pain often lack support from family or health professionals. They are sometimes rejected by their loved ones, who become impatient when faced with an invisible and seemingly endless painful condition.<sup>17</sup> In a survey of Canadians, 30% of people suffering from chronic pain believe that their families don't know how much their pain affects them.<sup>24</sup> As for health professionals, they often become discouraged due to their powerlessness to relieve the pain or because of the risk of addiction to pain medications among their clientele.



### Addiction and tolerance

Treating chronic pain poses major challenges, to both patients and health professionals. Since pain is a multidimensional problem, it can seldom be treated in just one way. Tolerance to opiates used to treat chronic pain may arise, fortunately it not a common occurrence.<sup>5</sup> It is encountered mainly in people with a personal or family history of addiction to another substance, such as alcohol. Physical dependence to opiates used to relieve chronic pain as dependence. If needed, such physical dependency can be resolved by a gradual reduction of the dose until medication use has been completely stopped.

Medication use is generally higher in people who suffer from chronic pain than in those who do not, which generates considerable costs. The use of pain medications, such as analgesics, tranquilizers, antidepressants and opiates, is reported to be 2 to 4 times higher in people suffering from chronic pain.<sup>17</sup>

**TABLE 3**

**Medication use by people suffering from chronic pain vs person without pain, and according to age<sup>17</sup>**

	Under 65 years old		65 years old and over	
	% No pain	% Pain	% No pain	% Pain
<b>Any medication</b>	<b>79</b>	<b>93.1</b>	<b>91.2</b>	<b>96</b>
<b>Pain relievers</b>	<b>65.5</b>	<b>82.7</b>	<b>62.9</b>	<b>80.1</b>
<b>Tranquilizer</b>	<b>1.5</b>	<b>7.2</b>	<b>3.3</b>	<b>11.4</b>
<b>Anti-depressant</b>	<b>3.5</b>	<b>12.4</b>	<b>3.6</b>	<b>8.4</b>
<b>Codeine, Demerol, morphine</b>	<b>3.8</b>	<b>18.3</b>	<b>3.2</b>	<b>13.5</b>
<b>Sleeping pills</b>	<b>2.5</b>	<b>10.7</b>	<b>7.3</b>	<b>17.3</b>

Source: M. Meana, 2003.

A distinction should be made between opiates abuse and physical dependence on and tolerance to the effect, which are two normal phenomena. Physical dependence means that suddenly discontinuing the opiate would trigger withdrawal symptoms, whereas tolerance means that stronger doses of opiates are gradually required to obtain the same level of pain relief.

However, there is some concern when people suffering from chronic pain try to treat themselves using their own methods, one example is self-medication, because they feel to their own devices. This type of behaviour is seen in people who have been suffering for several years already.<sup>10</sup>

## Risk of suicide

People living with persistent pain or discomfort may have a tendency to isolate themselves. The lack of understanding on the part of those around them, the limited effectiveness of medications, the absence of a favourable prognosis and a disrupted working life may lead some individuals to wall themselves into their pain. When physical and psychological suffering becomes too invasive, escape seems impossible.

The risk of death by suicide among people living with chronic pain is double that of the general public. The lifetime prevalence of suicide attempts varies from 5 to 14%, and the prevalence of suicidal ideation is about 20%.<sup>3</sup>



People living with persistent pain or discomfort may have a tendency to isolate themselves.

# CAN CHRONIC PAIN be prevented?

It's difficult to prevent the onset of chronic pain because we seldom know its cause. However, it is possible to prevent pain from becoming worse through various methods.

## Medication at the first sign of pain

Drugs are an important part of treating chronic pain. The person living with chronic pain should take them at the first sign of pain; when pain is well established it is more difficult to relieve. In addition, the stress associated with pain reduces the person's ability to manage it.<sup>5</sup> However, medication has limited effectiveness. Chronic pain is a complex medical condition. This is why it's important to choose a pluridisciplinary therapy.

## Yes to physical activity!

Many people think that physical activity worsens chronic pain, but exactly the opposite is true. When you move around, your body releases substances—mainly endorphins and enkephalins—that prevent pain messages from reaching the brain.

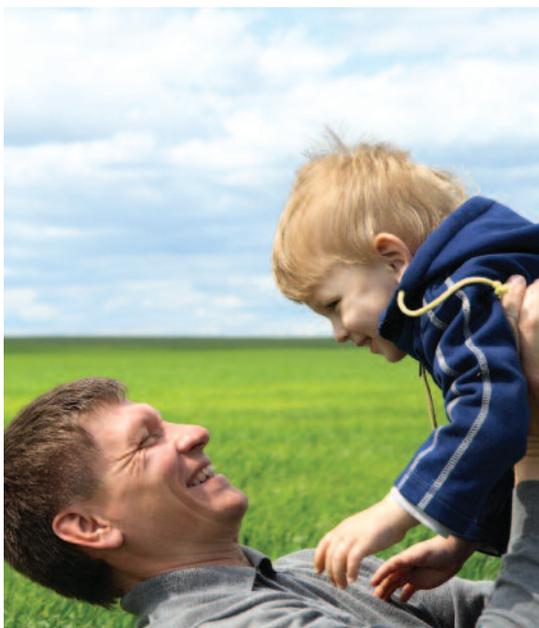
It's best for patients to increase their level of activity very gradually and to consult their doctor beforehand to obtain approval.<sup>25</sup>

### Furthermore, physical activity:

- **Promotes relaxation and reduces stress.**
- **Keeps muscles strong and supple and protects joints against injuries.**
- **Promotes weight loss and alleviates tension on the joints.**

## The stress factor

Stress, defined, among other things, as a bodily reaction to changes that occur in everyday life, does not always have a negative effect. In fact, a certain amount of stress is sometimes necessary, since it makes it possible for the body to react appropriately to a given situation, to perform well and to excel. However, when stress is rather intense and lengthy, the body's reaction may lead to the symptoms that can negatively affect health. This is especially true for people suffering from chronic pain, since they seem to have lowered resistance to life's everyday stresses. In fact, stress leads to performing actions that increase pain or causes the onset of symptoms such as muscle tension, headaches and fatigue, etc.



**Managing stress and its negative effects is possible.**

- **First, identify the source of stress.**
- **Next, the situation allowing, take action to modify or eliminate said source.**
- **Adopt an attitude that allows you to change your perception of the situation, for example, you could focus on your strengths or work on your self-confidence.**
- **It's also desirable to find ways to alleviate the unpleasant sensations associated with stress. Talking to people about your problem, engaging in enjoyable activities in an effort to think about other things or to have fun, laugh and ease the situation, and adopting a healthy lifestyle are some of the ways to achieve this.<sup>26</sup>**

**We can adopt a mental attitude that allows us to view the situation differently.**

Relaxation activities can help relieve pain because, among other things, they reduce muscle tension and stress. The method used or the activity chosen is of little importance. Whether it's relaxation, yoga, tai chi, qigong, the Feldenkrais method, massage, a hot bath, reading, cooking or something else, what's important is to feel good doing it.<sup>27</sup>

### **Watch your posture!**

People who suffer from chronic pain have a natural tendency to adjust their posture to feel better. However, this can become a double-edged sword, since there is always a risk that tension can be created on a structure that's not made to withstand it, thus causing additional pain.

A good preventive measure is, therefore, to adopt a proper posture at work and during leisure activities. The most minute act, when performed daily yet incorrectly can, in the long run, become a problem.

### **Education for people living with chronic pain and their loved ones**

Persons suffering from chronic pain who understand their pain and its treatment are more likely to be faithful and committed to their treatment, which is a factor that cannot be ignored.

It's also important that loved ones be informed as to what the person living with chronic pain experiences each and everyday. This would certainly help put an end to the prejudices surrounding chronic pain. Support from family and friends is a significant component in ensuring the wellbeing of the person suffering from chronic pain.

# TREATMENT

## The importance of the multidisciplinary approach

Pain is multifaceted, which means that it needs to be attacked on several fronts for it to be adequately controlled. There are pain clinics in some Quebec hospitals, but waiting lists are long, and not all clinics have a multidisciplinary team. The type and quality of care provided varies greatly from clinic to clinic.

Most chronic pain patients would benefit from a multidisciplinary approach, mainly because the physical pain is often accompanied by psychological and functional problems. Simply managing the physical pain is unlikely to be effective in the long term. It's essential to address the patient's psychological and social stresses to improve his or her wellbeing.<sup>28</sup>

Patients being treated at a multidisciplinary clinic are twice as likely to reintegrate the workplace and resort to healthcare services than patients treated with a single-discipline approach.<sup>29</sup> According to a recent systematic review of randomized clinical trials, it seems that patients with fibromyalgia or chronic low back pain benefit most from multidisciplinary clinics.<sup>30</sup>

Physiotherapy can help strengthen muscles and joints to ensure that the body gets moving again. A personalized exercise and physical activity program may also help to improve balance, coordination, cardiovascular function, and mood.

Certain patients may require a psychological follow-up. Cognitive-behavioural therapy, hypnotherapy and relaxation techniques are all indicated for chronic pain patients. The psychologist can also help the patient find ways to cope with the pain and grieve the loss of certain physical abilities.<sup>10</sup>

Patients treated according to a **multidisciplinary approach** are twice as likely to reintegrate the job market.

## Partners in treatment

Patients need to be active partners in managing their daily lives and their pain.<sup>4</sup>

Here are a few examples of what patients can do to improve their partnership with health professionals:<sup>5</sup>

- **Keep a pain diary to record the severity of your pain, when it was felt, the measures taken to relieve it, and the effect obtained. It's also useful to record any medications taken and the concomitant activities.**
- **Describe the pain using words such as “sharp”, “shooting”, “intense”, “painful”, “prickly”, “weak” or “oppressive”.**
- **Evaluate and rate pain on a scale of 0 to 10, where 0 is no pain and 10 is the worst possible pain imaginable.**
- **Record what is tried, what helped them and what made the pain worse.**
- **Remember that you are your body's best specialist You have the right to be heard when you talk about your pain.**
- **Have a family member or a friend accompany you for medical visits so as not to miss any important information.**
- **Continue taking you medications as prescribed and discuss any concerns or side effects with your healthcare team.**
- **Remember that you have the right to refuse treatment, to have your pain assessed on a regular basis and to have you treatment adjusted if the pain is not relieved.**

Patients' expectations influence treatment much more than we believe. A person who expects pain may completely block the effect on an analgesic, while a person who has an expectation of pain relief can dramatically amplify the feeling of relief. This is called the placebo effect and should not be underestimated.<sup>31</sup>

## Available medication

There are several medication classes available to relieve chronic pain. Each has its own indications and limitations.

**Nonsteroidal anti-inflammatory drugs** are best to relieve mild to moderate pain. They are primarily effective for musculo-skeletal related pain, such as strains, sprains, arthritis and headaches. They have a syner-

gistic effect with opiates.<sup>32</sup> When administered together, lower doses of opiates can be administered. However, this aspect of those medications is seldom put into practice. For reasons that remain unclear, some patients may not respond to one anti-inflammatory drug but will find relief with relief with another. It's impossible to predict. It is basically a trial and error process.

The use of anti-inflammatory drugs may have some restrictions due to their side-effects, since they interfere with platelet aggregation, thus making the blood thinner. This may cause a problem in people taking anticoagulants, for example. Anti-inflammatory drugs are known to cause gastrointestinal problems such as heartburn and ulcers. The gastrointestinal tract may be somewhat protected when such drugs are taken with food as well as some type of protective medication. COX-2 inhibitors, a class of prescription anti-inflammatory drug, cause fewer gastrointestinal problems. Anti-inflammatory drugs may also cause kidney or liver problems, high blood pressure, and fluid retention.<sup>33</sup>

**Antidepressants** are another class of medication that is frequently used to relieve chronic pain, although most have not been specifically studied for this indication. They are often subject to social prejudices, and when patients are prescribed such medication they require a good dose of reassurance. Independent of the antidepressant effect, they are prescribed for their analgesic effect, that is why they are used in most

patients. However, if a patient develops depressive or anxious symptoms because of his or her persistent pain, a single antidepressant medication could relieve these symptoms.

There are several families of antidepressants, but only two have demonstrated analgesic effectiveness: tricyclic antidepressants and serotonin-norepinephrine reuptake inhibitors. **Tricyclic antidepressants** are old medications. They are seldom prescribed for depression since they need to be prescribed in high doses, which often result in several side effects. Doses used to relieve chronic pain are lower, which means fewer side effects. Nonetheless, most patients will experience some drowsiness and anticholinergic effects (dry mouth, constipation, blurred vision, urinary retention), and severity will depend on the agent used. These effects are often transient and can be reduced by lowering the dose or switching to an agent that is better tolerated. The analgesic effect can occur a few days after the start of treatment, but it often takes weeks to achieve the maximum effect associated with an increase in the gradual dosage.<sup>33</sup>

**Serotonin-norepinephrine reuptake inhibitors** also produce analgesic effects that are independent of the antidepressant effect. It is as if both of these neurotransmitters play a role in perpetuating pain. These agents are generally better tolerated than tricyclic antidepressants, but they have similar efficacy.<sup>33,34</sup>

A certain number of **anticonvulsants** are prescribed to relieve different types of chronic pain of neuropathic origin, often with interesting results. The mechanism differs according to the active agent. Some prevent repeated electrical discharges in the nerve fibres, while others cause the release of substances that have inhibitory effects on pain. Just like antidepressants, they aren't exclusively used for epilepsy, but for their ability to stabilize message transmissions from nerves.<sup>33,35</sup>

The most commonly used anticonvulsants are well tolerated. Other anticonvulsants have serious side effects: they are toxic for the liver, blood vessels and skin; cause kidney stones and interact dangerously with other medications, in addition to causing drowsiness, dizziness and sometimes fluid retention.

Antidepressants and anticonvulsants are often considered co-analgesics.

**Opiates** are generally reserved for the treatment of more severe pain. Their use is controversial in treating chronic pain due to the risk of developing a tolerance or an addiction to this type of medication. However, the risk of abuse is very low in people suffering from chronic pain. This risk may be further reduced by screening at-risk patients and by carefully and closely monitoring patients. Ideally, a patient should be given opiates from a single doctor and a single pharmacy to ensure a close therapeutic follow-up.

Opiates provide pain relief by interacting with  $\mu^*$  receptors, which are located mainly in the spinal cord. These drugs are available in different pharmaceutical forms (immediate-release or slow-release tablets or capsules, suppositories, transcutaneous patches, and intramuscular, intravenous and subcutaneous injections). Opiate therapy is usually initiated with immediate-release tablets, which are taken several times a day. After a few weeks, the physician assesses the average daily use and translates into the administration of slow-release tablets once or twice daily. The use of immediate-release tablets is still permitted if the pain is poorly controlled. The doses should be re-evaluated frequently, especially if the patient is also taking antidepressants or anticonvulsants. Patches are reserved for patients with moderate to severe pain who have already been on oral opiates for a certain amount of time. Opiate doses vary considerably from individual to individual because no two people experience pain with the same intensity.<sup>33</sup>

**Cannabinoids**, or cannabis derivatives, are also prescribed for pain relief, especially pain caused by multiple sclerosis. Although not very common, their use is currently undergoing extensive research.<sup>36</sup>

\*  $\mu$  receptors are receptors located at the surface of several nerve cells or nerve endings involved in transmitting pain.

Furthermore, **pain medications** used to relieve chronic pain are not without side effects.

Sometimes, certain patients also take **muscle relaxants** to relieve pain. In fact, these relaxants have a limited effect on muscles. They mainly have intrinsic analgesic properties. As for **antispasmodics**, they have a more focused effect. People suffering with multiple sclerosis or spinal cord injuries, for example, may find some relief with this type of medication.<sup>36</sup>

Apart from medications that have analgesic effects, chronic pain patients can take **adjuvant medication**, which is used to treat problems associated to pain, such as anxiety and depression. Thus, their pharmacological profile may include benzodiazepines and other antidepressants.

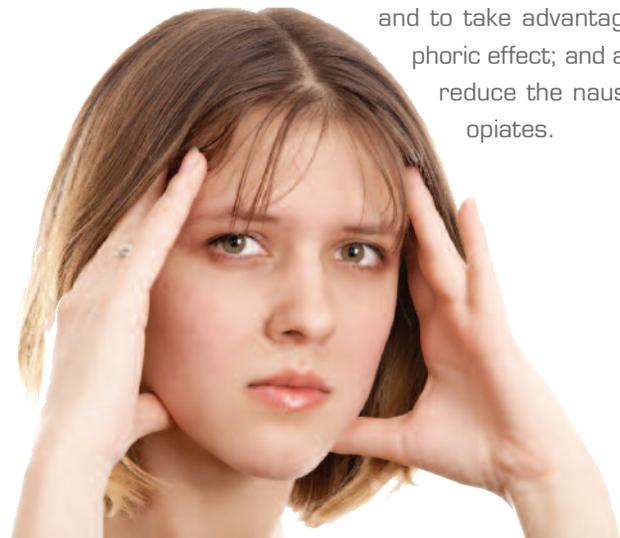
Furthermore, pain medications used to relieve chronic pain are not without side effects. Since patients can seldom stop taking these medications altogether, they have to deal with these effects. Therefore, they often need to take medications to alleviate them. Some of the most frequently used agents are laxatives, to relieve constipation caused by opiates or tricyclic antidepressants; central nervous system stimulants, to counter sedation caused by opiates and to take advantage of their euphoric effect; and antiemetics, to reduce the nausea caused by opiates.

NB: In palliative care when dosage is rapidly increased, it may become necessary to administer stimulants to the patient's nervous system to keep him or her alert. However, in cases of chronic pain, stimulating the central nervous system is seldom required. The preferred approach is to progress slowly to avoid side effects.

### Promoting therapeutic compliance

Given the number of medications that a chronic pain patient needs to take, there should be no surprise that therapeutic compliance problems occur along the way. Forgotten doses, intentional changes to the treatment, and premature discontinuation of certain medications are more frequent than commonly believed. In a recent survey conducted by the Chronic Pain Association of Canada, 91% of respondents stated that they believed medication is effective in relieving pain, although 2 respondents in 3 said that they wait until the pain is intolerable before resorting to medication.<sup>38</sup> And yet, to be effective, most medication to relieve chronic pain should be taken on a regular basis, not just as needed.

Patients and their healthcare professionals should feel free to broach the subject during each visit to optimize the treatment and the patients' well-being.



## Complementary therapies and alternative medicines

Alternative and complementary medicines are increasingly accessible to patients for regaining control of their lives. Some of these practices can help, but very little scientific evidence support their effectiveness. Presently, the most studied and most promising therapies seem to be acupuncture, massage therapy, chiropractic treatments and osteopathy. These methods don't work for everyone. Each person should determine what works best for them.<sup>10</sup>

The most studied and most **promising therapies** seem to be acupuncture, massage therapy, chiropractic treatment and osteopathy.

When pain medication has limited effectiveness, many patients turn to natural health products for pain relief. It's always best to ask advice from a pharmacist before using such products. Some of these treatments may have powerful interaction with other prescription drugs or may be contraindicated. Capsaicin can be of some help for certain types of musculoskeletal and neuropathic pain,<sup>39</sup> while glucosamine has a beneficial effect on joint pain due to osteoarthritis.<sup>40, 41</sup> However, just like prescription pain medications, they are not a panacea.

## Surgery

Surgery is seldom an option to relieve chronic pain, since its cause is sometimes diffuse and unknown. However, if the cause is identified and involves a localized physical structure, then surgery is a valid treatment option, but this is only in a handful of cases.

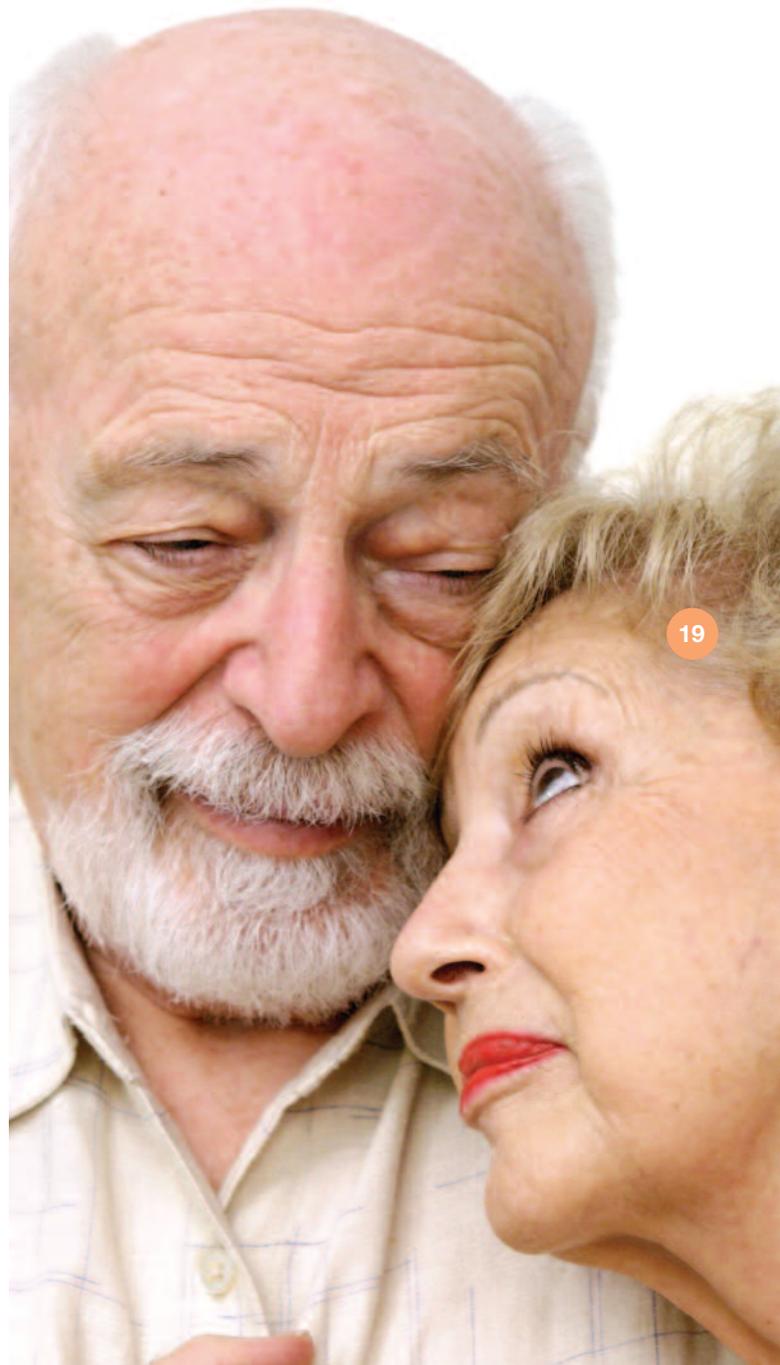


# THE ECONOMIC BURDEN of chronic pain

Chronic pain has a major economic impact on society:

- **In Canada, the annual cost attributable to chronic pain is estimated at more than \$10 billion. This figure includes medical expenses, lost income and lost productivity.<sup>38</sup>**
- **In the 1994-1995 and according to The Canadian National Health Survey, respondents with severe chronic pain had, during the previous year, seen a physician more often (average: 12.9 vs. 3.8 visits) and had been hospitalized for longer periods of time (average length of stay: 3.9 days vs. 0.7 day) than those without chronic pain.<sup>20</sup>**
- **The average number of missed work days per year due to chronic pain is 9.3 days. That number increases to 16 days for people reporting pain as severe.<sup>22</sup>**

People living with chronic pain use health-care services more often than other individuals. These medical consultations represent a substantial burden on our public healthcare system, especially since most patients living with chronic pain repeatedly seek medical advice in the hope of finding a specialist that will help them treat their problem.<sup>17</sup>



**TABLE 4**

**Percentage of healthcare use for people suffering from chronic pain vs people without chronic pain<sup>17</sup> (over the previous 12 months)**

	Under 65		65 and over	
	% No pain	% Pain	% No pain	% Pain
<b>Overnight patient in hospital/nursing home</b>	<b>6.0</b>	<b>12.7</b>	<b>12.7</b>	<b>22.9</b>
<b>Consultation with family physician/GP</b>	<b>74.7</b>	<b>88.5</b>	<b>87.5</b>	<b>93.5</b>
<b>Consultation with other doctors</b>	<b>23.8</b>	<b>45.7</b>	<b>33.5</b>	<b>46.1</b>
<b>Consultation with chiropractors</b>	<b>10.5</b>	<b>19.5</b>	<b>7.6</b>	<b>10.0</b>
<b>Consultation with physiotherapists</b>	<b>6.6</b>	<b>19.4</b>	<b>6.5</b>	<b>14.0</b>
<b>Consultation with care providers working parallel to the standard healthcare system</b>	<b>10.4</b>	<b>20.4</b>	<b>4.9</b>	<b>8.8</b>

Source: M. Meana, 2003.

As previously mentioned, a person suffering from Moderate to severe chronic pain loses an average of \$12,558 in income a year. In fact, a study conducted in 2007 stated that among Canadians experiencing moderate to severe pain:<sup>24</sup>

- **33% stated that they lost their job because of their pain.**
- **47% stated that they reduced their job responsibilities because of their pain.**
- **49% stated that their pain resulted in a loss of income.**

Chronic pain represents an intangible cost that cannot be quantified. Beyond the direct economic costs that it generates, it puts significant social, psychological and family pressure on the person suffering from chronic pain and those around them.

# LIVING WITH chronic pain

## Fibromyalgia: courage, trust and hope

*I'm 47 years old, and I have fibromyalgia. I was diagnosed in 1995 by a neurosurgeon. I was really wondering what it was, and when he explained it to me, I must say that I was very upset, especially since he told me that it's an incurable disease and that they can only relieve the symptoms.*

*I'm no longer able to work full-time, but at least I can work 20 hours a week. I joined a choir last September, and it's done me a lot of good. It's demanding, but it's really worth the effort. Also, I've been doing yoga for several years, and it's really good for my health.*

*I'm interested in all kinds of cultural things, and they give me something different to think about. It's true that it's often discouraging to be suffering every day, but I tell myself that life goes on and that it's beautiful, despite everything. I sincerely think that life has a lot of things to teach me through this strange disease.*

*I still hope that I will be rid of it and that someday I'll be cured. You never know, medicine might find a miracle drug. I have faith, and this helps me. I am convinced of this. I'm lucky to have an understanding man at my side who helps me a lot. To all those women who, like me, have fibromyalgia, I say, "Be courageous and take care of yourselves, and don't feel sorry for yourselves, because that is very harmful." I wish us luck, but I want us to trust in life!*

Source: [http://blogue.passeportsante.net/temoignages/2008/05/fibromyalgie\\_courage.html](http://blogue.passeportsante.net/temoignages/2008/05/fibromyalgie_courage.html)

## My life is all about "managing" my pain

*I'm 60 years old and have had chronic pain for six years now. I worked for an oil company for 35 years. In August 2000, I was at work when I felt this enormous pressure on both of my temples. Until then, I had never had a headache before! The next day, the pressure was still there. Also, it was accompanied by impaired function of my left leg, my arm and right hand. (...) According to the medical team, it was best that I be hospitalized so that I could be examined by different specialists. I trusted them all. According to these doctors, my case was very unclear. Doctors managed to rehabilitate my leg. Time took care of the rest for my arm and hand. Unfortunately, the pressure on my temples persisted. (...)*

*I held an executive level management job. I was managing a credit margin of up to a quarter million dollars. A bad decision could cause substantial financial losses. The pain was preventing me from properly performing my duties. (...) The pressure in my temples was so severe that I couldn't concentrate. This was become too dangerous for my reputation and for the company. I tried to work less, but the pain persisted. I had to take an extended leave of absence.... (...)*



*I suffer in silence... Actually, I don't want to put my wife through this. When the pressure is very intense and the pain is very bad, my balance is affected, and when alone, I use a cane to help me move around. It's impossible for me to do anything intellectual. The pain is tenfold. I can no longer do my personal accounting or concentrate on a captivating film. Even the smallest intellectual effort intensifies the pain.*

*The same for physical effort.(...) Today's pain is not the same I felt in August 2000. In the beginning, I had very good periods in which pressure was almost non-existent. (...) Now, the pain attacks at any time of the day. (...) Chronic pain is making me bitter, but I try not to let it show. When someone asks, "You seem to be doing well, Michel!", I answer with a fake smile: "Yeah... all is well, except for my head." My condition is continually deteriorating. A complete cure seems like a dream beyond reach...*

Source: [http://blogue.passeportsante.net/temoignages/2006/11/ma\\_vie\\_se\\_limite\\_a\\_gerer\\_mon\\_m.html](http://blogue.passeportsante.net/temoignages/2006/11/ma_vie_se_limite_a_gerer_mon_m.html)

## Groundhog Day... The pain is always there!

*I'm 29 years old. October 11, 2003, life taught me just how precious and fragile it is. Because of an accident, I'm living with permanent pain, 24 hours a day, 7 days a week. It's as if these wicked little monsters were taking pleasure sinking their claws deep, very deep into my body. There has been some improvement, albeit short-lived. However, the disappointments are piling up. The rare progress that was supposed to be felt is not happening. This isn't easy to accept. Nor is it easy to get people to listen to you and understand you, because the pain's invisible. When I experience intense stress or frustration, the pain gets worse... You just try and remain zen-like! It's difficult to get the people around you—family, friends, doctors and other health professionals—to understand... There are so many challenges!*

*Some days are better than others and I don't know why. I feel guilty putting my family through my sudden mood changes, often despite my better judgement, and making them feel powerless and uncomfortable about my pain. We ask ourselves of we really have to go through this for the rest of our lives? After everything I've tried, I can't believe that there is no miracle solution. Yes, I can walk and I do sports, but no one can know how painful some of these activities can be.... But at least I have both my legs!*

Source: Judith, Communication Advisor

# HOW TO HELP a person living with chronic pain

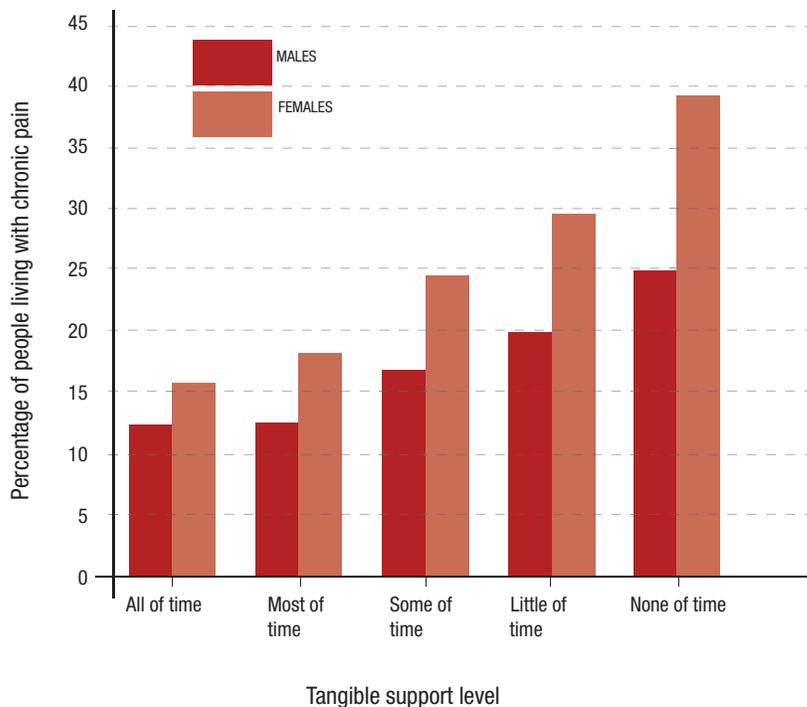
## First, help yourself

Breaking the silence about chronic pain is critical. No one can feel someone else's pain. That is why it's often difficult for loved ones to understand what the patient is going through. If the patient feels discouraged or hopeless, he or she should immediately get help and talk about it with his or her doctor and ask for a referral to a psychologist or counsellor.

It's also important to break the isolation. By joining various support groups or a chronic pain association, the person living with chronic pain can share his or her ordeal with others like him or her. Often, people say

that they manage to better cope with their situation since they are no longer alone. As part of a group, they can share ideas and talk about how they have adjusted to daily life.

People living with chronic pain are generally advised to take care of themselves, despite the pain, to stay as active as possible, at least 30 minutes a day, if possible. Otherwise, the body quickly gets out of shape and getting back in working form will be a longer.<sup>42</sup>



**Figure 3**  
Prevalence of chronic pain according to perceived tangible support, Canada<sup>17</sup>



### Support from loved ones is crucial

Living with a person who suffers from chronic pain requires patience, energy and empathy. It's a known fact that social support wanes as friends and family become impatient with a usually invisible problem with no end in sight. This creates a vicious cycle, since there seems to be a correlation between chronic pain and perceived social support. In fact, people who receive less social support report pain more frequently. This applies to men and women and proves that perceived social support is an important factor that should be considered with people living with chronic pain.<sup>17</sup>

Since the pain is not felt by the other loved ones, it's important to ask the person who is suffering from chronic pain to describe the pain and how it keeps them from functioning. People suffering from chronic pain are ideally the best people to tell their loved ones what to do or, what not to do. Loved ones also face prejudice in terms of this condition. They can obtain accurate information from health professionals on the condition that is affecting their loved one, the treatment and the outlook.

Caregivers need support, too. They can turn to the **Care-ring Voice Network**, a free, bilingual, confidential program that provides information and support to caregivers and their families via conference calls. The network hosts telephone training sessions on a range of important topics to ensure quality of life. Participants can take advantage of this unique opportunity to learn new things from health professionals who lead workshops, and they can share their experiences with other participants going through similar situations. Participants in the telephone workshops have to enrol as members of **Care-ring Voice Network**. Once enrolled, they can add or remove sessions from their account. When they enrol in a given telephone workshop, they receive a detailed e-mail on how and when to join the workshop. Enrolment is free, as are the workshops.<sup>43</sup>



- **Maintain productivity.**
- **Reduce the rate of absenteeism due to health problems, such as chronic pain.**
- **Reduce the economic burden, that is, the cost of training new employees, the cost of insurance (drugs and medical expenses), short- and long-term disability (inability to work).**

## Challenges in the workplace

As population continues to age, there will soon be a shortage of specialized manpower. This shortage is already being felt. Since chronic pain is a current issue and its prevalence increases with age, it's important for employers to look after their employees' health to keep them active and healthy as long as possible. In addition to preventing a corporate manpower shortage, keeping employees active and healthy is a good investment:

Just like the loved ones of people living with chronic pain, employers should learn about the condition and its treatment. Because each patient's case is unique, a healthy employer-employee dialogue is essential to reaching a mutual understanding.



## GLOSSARY

### Anticonvulsant

A drug used to prevent, reduce or stop the convulsive seizures characteristic of epilepsy.

### Antispasmodic

A drug used to reduce muscle stiffness observed in certain neurological diseases.

### Co-analgesic

A drug with no analgesic properties in the pharmacological sense of the word, but which is very effective in relieving certain types of pain.

### Complex Regional Pain Syndrome

An unpredictable complication that can occur after any trauma to an area of the body. It is characterized by deep, diffuse pain that increases with the smallest stimulus (heat, cold, emotions, movements), stiffening and skin changes (swelling, colour, temperature).

### Endorphins, enkephalins

Morphine-like substances naturally produced in the brain inhibiting the passage of pain messages to the brain and may be as potent as morphine.

### Epidemiology

Affection characterized by chronic and painful muscle points (myalgia) associated with fatigue, sleep disturbances and in a certain number of cases with a depressive state.

### Fibromyalgia

Affection characterized by chronic and painful muscle points (myalgia) associated with fatigue, sleep disturbances and in a certain number of cases with a depressive state.

### Inflammatory bowel disease

Diseases that affect the gastrointestinal tract (extends from the mouth to the anus), causing inflammation and abscesses in the intestines, which bleed easily. This term refers to two diseases: Crohn's disease and ulcerative colitis.

### Lumbago

Pain in the lumbar region (lower back region just above the buttocks).

### Multiple sclerosis

A disease of the nervous system that attacks the myelin sheath (which protects nerve fibres in the brain and spinal cord) in a plaque-like fashion, thus disrupting or blocking the transmission of messages in the nerves.

## Neuropathic pain

Pain due to a lesion to the nervous system. It can occur after non-painful or normally not very painful stimuli, or it can be spontaneous, occurring in the absence of stimuli.

## Neurotransmitter

A substance released by nerve ending that enables messages to be transmitted from cell to cell to produce a biological effect.

## Phantom pain

A sensation of pain perceived in a limb after it has been amputated.

## Prevalence

The number of cases of a disease in a given population.

## Prognosis

The assessment of the course and outcome of a disease.

## Shingles

Infectious disease caused by the reactivation of the chickenpox virus. It is characterized by the appearance of vesicular eruption over an area of the skin and by acute pain.

## Sickle cell anaemia

A hereditary genetic disease of the blood characterized by changes in red blood cell shape and rigidity that causes blood vessels to be obstructed.

## Trigeminal neuralgia

Intense pain felt along the trigeminal nerve or covering an entire side of the face, that is, the jaw, cheek, the temple near the ear, and around the eye socket.

## RESOURCES

For further information on chronic pain

- Association québécoise de la douleur chronique (AQDC)  
[[www.chronicpainquebec.org](http://www.chronicpainquebec.org)]
- Association québécoise de la névralgie du trijumeau  
[[www.aqnt.org](http://www.aqnt.org)] (website in French only)
- Canadian Institute for the Relief of Pain and Disability (CIRPD)  
[[www.cirpd.org](http://www.cirpd.org)]
- Canadian Pain Coalition (CPC)  
[[www.canadianpaincoalition.ca](http://www.canadianpaincoalition.ca)]
- Canadian Pain Society (CPS)  
[[www.canadianpainsociety.ca](http://www.canadianpainsociety.ca)]
- Chronic Pain Association of Canada (CPAC)  
[[www.chronicpaincanada.com](http://www.chronicpaincanada.com)]
- More Than Medication  
[[www.morethanmedication.ca](http://www.morethanmedication.ca)]
- Painexplained.ca  
[[www.painexplained.ca](http://www.painexplained.ca)]
- Partners Against Pain  
[[www.partnersagainstpain.com](http://www.partnersagainstpain.com)]
- Société québécoise de la douleur (SQD)  
[[www.sqd.ca](http://www.sqd.ca)] (website in French only)

### Caregivers

- Care-ring Voice Network  
[[www.careringvoice.com](http://www.careringvoice.com)]



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In the past, when someone complained of having had constant pain for months or years, he or she was often considered a hypochondriac. Today, thanks to research, we know that there is indeed such a thing as chronic pain and that it can be a disease in itself. However, it is a poorly understood, major public health problem that wreaks havoc on the lives of those affected.

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