

# CHRONIC MUSCULOSKELETAL INJURIES IN THE WORKPLACE

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## When Experts Disagree

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What can you do when experts disagree? One doctor says the worker has a real injury, another says the pain is psychosomatic, and yet another says the worker is faking. Whom should one believe? More to the point, how does one decide whom to believe? This is an issue in the case of chronic musculoskeletal problems, where different experts have different explanations for what is happening. They cannot even agree on a name.

There are two main reasons for this. The first is that these problems present challenges for those who make diagnoses. They are not as obvious as a broken arm. Therefore, there are quite a number of possible explanations that could be entertained at first glance. The second reason for the diversity of explanations is that there are strong social interests involved—vested interests, some may say—which means that workers, doctors, employers, and others have something to gain by preferring one explanation over another. This does not necessarily mean that anyone is consciously biased; it simply means that there are benefits to be had by sincerely believing certain points of view.

When divergent explanations for a phenomenon exist—chronic musculoskeletal problems, in this case—it is common to hear the cry: “Give me the facts!” Surely it must be possible to dispassionately look at the evidence and decide which explanation is best. Unfortunately it is not that easy. “The facts” are never unambiguous, even in fields such as physics and molecular biology. Different scientists may disagree about what counts as a fact. There may be disagreement

about the methods used to investigate the phenomenon or the way findings are interpreted. When scientists agree, it is not because the evidence is unambiguous and overwhelming; instead, they say that the evidence is unambiguous and overwhelming because they agree! At least, this is the perspective adopted by some sociologists of science, who argue that scientific consensus is a social process involving persuasion, negotiation, and resolution of conflict (Albury, 1983; Barnes, 1974; Feyerabend, 1975; Latour and Woolgar, 1979). One of the factors in this social process is the influence of interest groups.

To delve into the controversies over chronic musculoskeletal problems, we start by listing the main explanations and outlining some of the main areas of dispute. Then we look at a range of different interest groups, from people with these disorders to government, and comment on how they tend to align themselves in support of various explanations. Finally, in light of this survey of interests and knowledge, we suggest a few simple procedures for assessing conflicting claims.

## EXPLANATIONS FOR CHRONIC MUSCULOSKELETAL PROBLEMS

We list here six common explanations of chronic musculoskeletal problems (Bammer and Martin, 1988, 1992; Meekosha and Jakubowicz, 1986). Supporters of each explanation typically cite certain evidence in its favor, but each explanation has difficulty with some evidence that does not fit. The latter we list under the category "anomalies."

### Organic Injury

*Explanation:* the body suffers a real injury, typically affecting muscles, nerves, and/or tendons, as a result of rapid, repetitive movements, less frequent but more forceful movements, static load, or some combination of these

*Common names:* chronic musculoskeletal injuries, repetition strain injuries (RSIs), occupational overuse disorders, cervicobrachial disorders, cumulative trauma disorders

*Evidence cited in support:* reproducibility of symptoms; link with characteristic activities; aggravation by continuing the activities; growing body of pathophysiologic evidence

*Pain and disability:* real and work related

*Anomalies:* objective signs may not be present; symptoms may vary in location or seriousness; problems may not go away with rest or other treatment

*Typical advocates:* workers with problems; sympathizers

*Beneficiaries if this explanation is accepted:* workers

*Typical responses:* rest; avoidance of activities causing pain; biomechanical and organizational modification of workplace

*References:* Cohen et al. (1992), Dennett and Fry (1988), Helme et al. (1992), Quintner and Elvey (1991)

### Malingering

*Explanation:* workers are faking pain and disability to avoid work or obtain compensation

*Common names:* malingering, faking, goldbricking

*Evidence cited in support:* observations or indications of workers freely doing things they say are impossible or highly painful; unwillingness to return to modified work

*Pain and disability:* not present

*Anomalies:* objective signs in some cases; prevalence in the most committed workers; similar problems related to recreational activities such as sports

*Typical advocates:* sceptical employers, co-worker and insurers

*Beneficiaries if this explanation is accepted:* insurers; employers

*Typical responses:* disbelief; loss of pay; refusal to provide compensation; dismissal

*References:* Ireland (1986); Scarf and Wilcox (1984)

### Compensation Neurosis

*Explanation:* workers unconsciously develop symptoms in order to obtain compensation, either monetary or psychological (increased attention and concern), often after recovering from a real injury

*Common name:* compensation neurosis

*Evidence cited in support:* lack of objective signs; variability of symptoms; recovery after financial payout received

*Pain and disability:* experienced as real but not linked to organic injury

*Anomalies:* objective signs in some cases; similar problems related to recreational activities such as sports; lack of recovery after financial payout received; loss of pay and sympathy after reporting problems; lack of objective signs for psychosomatic origin; lack of effectiveness of therapy

*Typical advocates:* sceptical employers and insurers

*Beneficiaries if this explanation is accepted:* insurers; employers

*Typical responses:* disbelief; counseling or therapy<sup>1</sup>; refusal to provide compensation

*Reference:* Rush (1984)

### Conversion Disorder

*Explanation:* workers develop psychosomatic symptoms in order to escape (convert) psychological problems; no injury is involved

*Common name:* conversion disorder

*Evidence cited in support:* lack of objective signs; variability of symptoms; pre-existing or concurrent psychological problems

*Pain and disability:* experienced as real but not linked to organic injury

*Anomalies:* objective signs in some cases; similar problems related to recreational activities such as sports; lack of objective signs for psychosomatic origin

*Typical advocates:* sceptical employers and insurers

*Beneficiaries if this explanation is accepted:* insurers; employers

*Typical responses:* disbelief; counseling or therapy<sup>1</sup>; refusal to provide compensation

*Reference:* Lucire (1986)

### Normal Fatigue

*Explanation:* normal pain and discomfort from physical work is interpreted as injury

*Common name:* normal fatigue

*Evidence cited in support:* lack of objective signs; variability of symptoms; recovery after rest

*Pain and disability:* real but not caused by underlying injury

*Anomalies:* lack of recovery after rest

*Typical advocates:* sceptical employers and insurers

*Beneficiaries if this explanation is accepted:* insurers; employers

*Typical responses:* rest; ergonomic changes at work

*Reference:* Hadler (1986)

### Social Iatrogenesis

*Explanation:* workers with normal pain are encouraged by doctors and others to become patients with pain; a widespread belief in the hazards of certain activities becomes a self-fulfilling prophecy

<sup>1</sup>Although counseling or therapy should be the response, in our experience the assessment that leads to this diagnosis is a medicolegal one and hence treatment is rarely offered.

*Common names:* social iatrogenesis; pain-patient model

*Evidence cited in support:* lack of objective signs; variability of symptoms; "epidemics" of cases at particular times and places with no connection to objective conditions of work

*Pain and disability:* real but not caused by any underlying injury

*Anomalies:* objective signs in some cases; similar problems related to recreational activities such as sports; lack of objective signs for psychosomatic origin

*Typical advocates:* sceptical employers and insurers

*Beneficiaries if this explanation is accepted:* insurers; employers

*Typical responses:* change in social attitudes to normal pain

*References:* Bell (1989), Spillane and Deves (1987)

### Areas of Debate

The above descriptions inevitably simplify the information about, and the case for and against, each explanation. More detailed accounts and arguments are readily available. There is a close similarity between compensation neurosis and conversion disorder, each of which offers a psychological explanation for problems, and between normal fatigue and social iatrogenesis, which complement each other. Beyond this, it should be obvious that it is quite possible for different explanations to be correct but only to apply in certain circumstances. For example, proponents of the normal fatigue explanation usually accept that some relatively well-defined disorders such as carpal tunnel syndrome are real, attributing less specific problems to normal fatigue, and proponents of the organic injury explanation accept that a small percentage of people do fake symptoms. Finally, our assessments of the typical advocates and the usual beneficiaries are accurate at most in a rough sense.

Some of the main areas of debate are indicated by the evidence and anomalies listed for the six explanations. In many cases, one explanation's supportive evidence is another explanation's anomaly, and vice versa. Nothing surprising in this! What would be surprising would be for a single explanation to explain everything. In that case, there would be no controversy. Some of the main areas under dispute are as follows (Bammer and Martin, 1988):

*Objective signs (e.g., swelling).* Critics of the organic injury explanation often point out that, although workers have symptoms—they tell of pain and disability—many exhibit no objective signs of injury. However, lack of signs is not a definitive objection. Other physical problems, such as migraine headaches, are widely accepted as real and organic even when there are no signs. Intriguingly, there is a

double standard here. What are the objective signs for compensation neurosis or for any of the other explanations?

*Underlying pathology.* Many critics of the organic injury explanation say that there is no evidence of underlying pathology. Some say permanent injury of muscles through overuse is impossible. However, one explanation for lack of evidence of pathology is simply that medical science has not yet developed the methods or insight to explain what is happening. In addition, there is now growing evidence for possible underlying pathology (see Chapter 3).

*Reproducibility of symptoms.* Critics of the organic injury explanation often say that symptoms do not make clinical sense. Again, this may simply mean that clinical science has not yet come up with an explanation but that one is possible. Critics sometimes also dismiss plausible explanations. For example, some critics cite development of pain in the "other arm"—the one not originally injured—as a symptom that does not make clinical sense. However, it is possible that this pain developed because the "other arm" was overused through avoiding use of the injured arm.

*Effectiveness of treatments.* Critics of the organic explanation say that, when an injury does not respond to rest, some other explanation is needed. This is hardly a definitive argument, especially considering that there is little evidence that any of the treatments recommended for compensation neurosis and the like are successful.

*An "epidemic" of cases.* There have been great surges in reported cases of chronic musculoskeletal problems at certain times and places. For example, the number of reported cases of "repetition strain injury" in Australia skyrocketed in the 1980s. The idea of an "epidemic" suggests contagion rather than work-induced injury. Those who say that most cases are due to organic injury argue that injuries have been occurring in workplaces around the world for decades, but only occasionally are the circumstances favorable for workers to report them. When employers are able to dismiss injured employees easily, workers are hardly likely to make complaints. Critics argue that media reporting on a burgeoning problem of injuries encourages workers with normal fatigue to imagine that they are injured, makes malingering more likely, and suggests potential physical symptoms to those with psychological problems. The disappearance of an epidemic is also cited as evidence for a nonorganic basis for the disorders, but, as we have shown elsewhere, this is not necessarily the case.

In each one of these areas of contention, there are arguments for and against each explanation, arguments that in many cases can be backed up with studies and by the testimony of experts. Going deeper into the issue may not resolve it, because the divergent viewpoints influence the selection and interpretation of evidence at every level. Most crucially, which experts should one believe?

## EXPLANATIONS AS A FUNCTION OF INTERESTS AND KNOWLEDGE

### Incentives and Objectivity

In assessing work-related chronic musculoskeletal problems, the stakes are high. Is the injury real, faked, or psychological? Is recovery more likely through rest, exercise, therapy, or scepticism? Is it a worse mistake to disbelieve someone who actually has a real injury or to believe someone who is faking? What is the impact of a diagnosis on other workers? What measures should be taken in the workplace to prevent further problems? The answers to these questions can affect the health and livelihood of workers, the economic viability of enterprises, and the sorts of tasks and technologies that are introduced.

Science does not provide a final answer to any of these questions. Because the stakes are high, there are also strong incentives to pursue certain types of explanations. A diagnosis of organic injury validates a worker's suffering but can be costly to an employer or insurance company. A diagnosis of conversion disorder tells workers the problems lie in life outside of work and reduces immediate costs to employers and insurance companies. It should not be surprising that different groups prefer different explanations.

There is no conspiracy here, and probably little cynicism. It is safe to presume that proponents of different explanations sincerely believe their points of view. It just happens that there is a convergence between interests and preferred explanations.

For example, a psychiatrist may know a lot about psychosomatic disorders. Some psychiatrists may see patients who seem *not* to have organic injuries, so a psychosomatic explanation seems plausible. Once this explanation is tentatively adopted, the psychiatrist is attuned to look for supporting evidence and examples and to find holes in other explanations. Then an insurance company enters the picture. The company asks this particular psychiatrist, who is the one with an explanation to suit the company's judgment—that the sudden upsurge of cases must be something other than real injuries—to testify on its behalf. The psychiatrist testifies in court and, by being an open advocate, develops an even greater commitment to the psychosomatic explanation. (It would be embarrassing to back down at this stage.) The greater visibility of the psychiatrist leads to more referrals, more invitations to give testimony, and so forth.

The same sort of process can apply to proponents of any explanation. No malice or dishonesty need be involved. People of good will can legitimately ally themselves with different camps. This pro-

cess can continue as long as there is enough ambiguity to allow different explanations to seem plausible, enough power and money to encourage advocacy of particular explanations, or both. The important thing to note is that interest groups, such as insurance companies, can have an influence on people's alliances, even though all concerned believe they are being fair and objective.

Is there some way to be fair and objective, not just in intent but in reality? We think not, because there is no universal standard, and there are no ultimate facts to which to appeal—at least not in a controversial area such as that of chronic musculoskeletal problems. Every one of us is influenced by commitments, beliefs, social location, personal experiences, friendships, aspirations, and the like. We can carefully examine and assess our beliefs and commitments, but there is no way to make them totally free of social influences—nor, perhaps, would we want to.

Nevertheless, the fact that perfect objectivity is not possible does not mean that all explanations are equally valid. Far from it. It is certainly worthwhile to examine evidence and listen to arguments in order to make the best judgment possible in the circumstances, and in accordance with one's own values. It is also important—and this is our main point—to *take into account potential vested interests when assessing evidence and arguments.*

### Interest Groups

With this context, we now list some of the main interest groups involved in the controversy over chronic musculoskeletal problems. In each case, we suggest the sorts of explanations they are likely to prefer, noting that there are always some people who diverge from any pattern.

#### THOSE AFFECTED

Workers who suffer pain and disability are likely to believe that it is real—it feels real, after all—and to prefer the explanation of organic injury. Nevertheless, some find that other explanations seem to "fit" better. They may see a relationship with problems outside work or may be convinced that they are suffering from normal fatigue consequent on an increase in a normal workload.

#### CO-WORKERS

The responses of co-workers to workers claiming to have chronic musculoskeletal injuries can vary enormously. Some, especially those who have experienced similar problems, believe that the injuries are real. Others, especially those who have never experienced any prob-

lems, may blame those affected for trying to get out of work. The attitudes of workers are likely to be influenced by attitudes of employers, trade unions, and doctors and by stories in the media.

#### TRADE UNIONS

In principle, trade unions might be expected to stand up for workers claiming that they have been injured at work, but this often does not happen. Trade union officials can be torn in different directions: by the claims, beliefs, and disbeliefs of workers, by doctors, and by their own negotiating relationship with employers. When trade unions take a strong stand about the significance of workers' claims, this can have a powerful legitimating effect.

#### EMPLOYERS

In the short term, employers have an interest in denying the existence of disputable claims and in saying that problems are not work related. This is especially the case when injured workers can be dismissed and easily replaced. Therefore, employers are likely to favor explanations of malingering, psychological origin, normal fatigue, and social iatrogenesis. However, if the number of workers affected is large or if it is difficult to replace them, or if those affected are workers with whom employers have highly valued personal relationships, then the problem may be taken more seriously. Measures may be taken to prevent injuries, such as introducing "ergonomic" furniture and equipment, changing work organization, and alerting workers to hazards. Employers may also introduce measures to rehabilitate and support those already affected. If such measures reduce problems, then the employer comes out ahead in the long run, whatever the explanation.

#### INSURANCE COMPANIES

When a large number of new claims of injury appear, insurance companies are likely to investigate with a sceptical eye, especially when plausible alternative explanations are possible. By contesting the organic injury explanation, insurance companies resist an entire class of claims. In contrast, if the organic injury explanation becomes widely accepted, then it is easier for insurance companies to pass on costs to companies via higher premiums.

#### GOVERNMENTS

Governments often ally themselves with employers. In some cases they are the employers themselves, and in other cases they have strong interests in promoting investment and employment locally. However, governments are subject to pressure-group politics. If popular pressure increases, governments may take action. It is important

to remember that governments are not unified. Different government officials and employees—politicians, policy advisers, health care practitioners—may have different views and different agendas.

### DOCTORS

Doctors can be pulled in different directions. They are influenced by their patients, by their relationship with employers, by their training and attitudes, by other doctors, and by other factors. Most doctors are likely to support the dominant explanation—the medical orthodoxy—at any given time. Usually that has been that chronic musculoskeletal problems are not common and not a particular problem. However, sometimes claims of injury become more visible and the organic injury explanation becomes the standard one, as in Australia in the 1980s. In any case, it is always possible for a minority of doctors to take individual stands. Medical researchers have an interest in promoting their particular perspectives. Doctors in workers' health care centers are more likely to take the complaints of workers seriously. Those who work for or receive many referrals from employers are likely to be more sceptical of the organic injury explanation.

Because doctors have a great deal of credibility in our society, they are often sought out to defend particular positions. A doctor who is willing to take a stand against the current orthodoxy may be championed by other interest groups, as in the case of the psychiatrist mentioned earlier.

### SOCIAL MOVEMENTS

When a considerable number of people join campaigns for a certain sort of change in society, this can be called a social movement. There are many types of social movements, including the feminist movement, the environmental movement, evangelical religions, and promoters of computerization. A key function of a social movement is to move an issue onto the social agenda—in other words, to make it seem of significance to many people, whether they support or oppose change. In short, a social movement turns something into a "social problem" (Mauss, 1975).

For most of the time and in most places, chronic musculoskeletal problems have not been on the social agenda. Sometimes, when the social circumstances are right, social action leads to these problems becoming more visible and being taken more seriously. Beginning in the late 1970s, a few doctors at workers' health care centers in Australia began to publicize the pain and disability they perceived among manual workers from repetitive movements and static load. The term "repetitive strain injuries" was adopted by some doctors who wrote about the problem. Several groups took up the issue: women's health groups, trade unions, and workers themselves. Then the media be-

came interested and this triggered a massive increase in visibility and activity with respect to RSI. The issue went from being a silent occurrence perceived only by isolated individuals to a social problem recognized by most of the population. The groups pushing RSI into visibility were, for the most part, not formally coordinated, but their efforts pushed in the same direction and thus they can be called a social movement. In this case, the social movement led to recognition of a social problem (Bammer, 1990; Bammer and Martin, 1992). Obviously, this movement favored the organic injury explanation. Previously, other explanations were seldom necessary, because so few individuals tried to obtain official recognition for their injuries. The explicit formation of the alternative explanations occurred in response to the movement's success.

### Summary

The perspectives of every group and individual are influenced by their interests—influenced, but not determined. The point is that, when listening to what someone says, it makes sense to think about whose interests are being served by their viewpoint.

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## JUDGING CLAIMS

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Given the complexity of the issue and the influence of competing interests, how should one proceed in trying to make a decision? There is no magical solution that avoids all the difficulties. We offer here some pragmatic guidelines.

*Seek out a range of alternative perspectives.* Do not rely on a few authorities. Ask to hear the arguments and see the evidence. For example, suppose you hear or read about the organic injury explanation. Are any anomalies acknowledged? If so, how are they explained? Are any alternative explanations mentioned? If not, why not? Look for material on other explanations.

*Access the arguments and evidence in the light of interest groups involved.* That means giving more scrutiny to claims made by those with a vested interest. "More scrutiny" means an extra dose of scepticism, not automatic rejection. After all, the fact that someone has a vested interest does not necessarily mean that individual is wrong.

For example, suppose the normal fatigue explanation is being presented by a medical researcher. Ask who employs the researcher, who provides research grants, and who pays for trips to courts to give testimony. If there seems to be a vested interest involved, give the

claims of this researcher extra scrutiny, and listen to what critics say about the researcher's findings.

*Apply the same procedures to other issues, including methods of treatment and strategies for prevention. Who benefits?*

*Look at your own interests. If the influences on you are likely to sway you in a particular direction, you can make a special effort to hear the other side. This is a challenge, to say the least!*

## CONCLUSION

We started out by asking the question, "What can one do when experts disagree?" The answer is that one must make one's own decision. There is no ultimate expert who can be trusted. In making one's own decision, it is valuable to seek out a range of opinions, perspectives, and evidence and to examine them with a sceptical eye, with extra scepticism when vested interests are involved.

Listening to all sides and being sceptical does not mean having no opinion. It is quite compatible with taking a stand and arguing strongly for a particular viewpoint. The more people there are who genuinely decide for themselves, without kowtowing to conventional opinion or whomever is doling out money, the healthier the debate, and ultimately—we hope—the healthier workers will be.

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