

Stressors, stress and strain

-- some basics

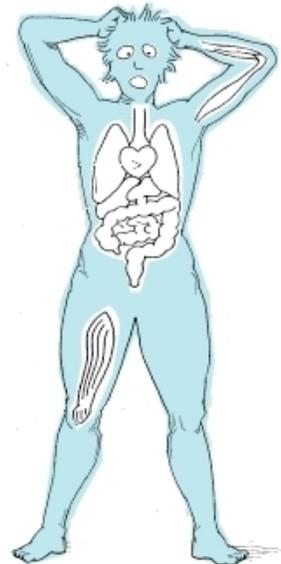
1. What is “stress” and strain or toxic stress?

Stress is a set of physical and psychological reactions to events that challenge or threaten us. The events can be things we see, hear, feel, etc.

The specific reactions vary amongst individuals but there are consistent patterns. Our body’s “stress response” is designed to protect us immediately and for the short-term. We can get away from the situation (the “flight” choice) or deal with it on the spot (the “fight” option). The response is ingrained in our brains, so it is difficult to change.

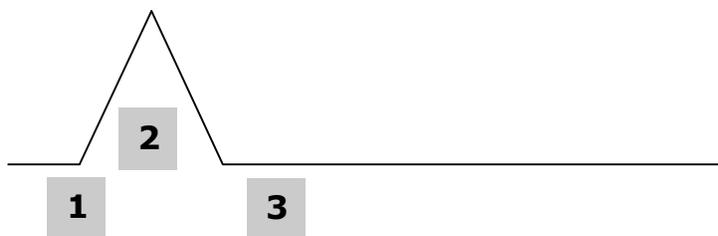
Unfortunately, the short-term response doesn’t work well when the challenges or threats are really difficult or don’t go away.

In those situations, our bodies and minds can’t relax and our protective response can’t cope. The reactions that normally help us are put into overdrive, and are forced to work overtime. The long-term effects to our bodies, minds and spirits are **toxic stress** or **strain**. They can be serious and long-lasting.



2. What’s normal? What’s toxic?

The “normal” short-term **stress** has three steps or stages:

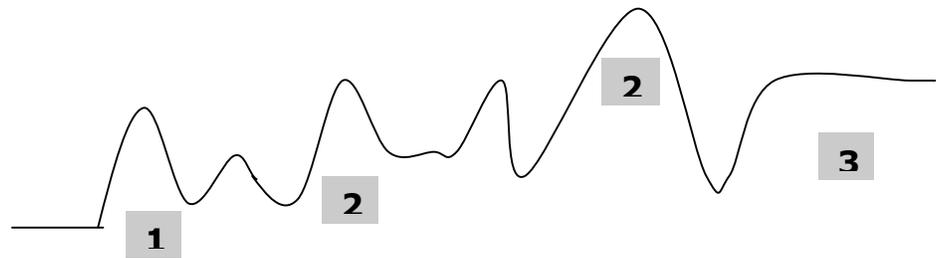


1. Stressor (an immediate threat, demand or challenge) arrives
2. Deal with the situation = the stress reaction or response
3. Stressor is gone and your body and mind relaxes back to “normal”

Examples of normal stress are:

- ✓ short-term anxiety when you lose something important
- ✓ someone yells at you or someone near you
- ✓ you’re scared by hearing a crash or bang

There are also three, but different, stages for **toxic stress**. For long-term effect or **strain**:



1. Stressor comes along (a demand, threat or challenge, but this one does not stop)
2. There's no way to deal with it = the response continues as the stressor stays or more stressors come along (your body tries to cope with the threats or challenges)
3. Stress response builds up to toxic levels or strain (you can never relax as the stressor doesn't go away or new ones come along), and may lead to long-term health or other effects

Toxic stress can result from staff shortages, harassment, bullying, constant noise, lack of say about your job, no respect or little support. This often has negative physical and psychosocial effects.

The more detailed picture

Although stressors are hazards to the mind, they become hazards to the body. (It's a bit like the union slogan: an injury to one is an injury to all.) We react to them with our bodies (physiologically) and our minds (psychologically and in terms of our behaviour).

These reactions are built into us; you could say that we're hard-wired this way. We developed the **stress reaction** long ago, to take care of ourselves when facing danger and in emergencies, such as the proverbial bear in the woods.

We deal with an immediate stressor by using "fight or flight". To do either, we need a general, co-ordinated and short-term response. The response requires energy and alertness for our mind and body. This is useful and appropriate for the short-term.

However, work stressors rarely come and go quickly. When stressors or hazards continue

day in and out, our bodies and minds do not have time to relax and recover. We're constantly in what scientists call a state of **arousal** or being alert. Our brain and its co-ordinating assistants used for the stress reaction get overwhelmed and worn out. The effects of these on-going stressors are called "**strain**".

What's going on?

Stress and strain are complex reactions in which our minds and bodies try to deal with challenges, threats or attacks. The reactions are controlled and sorted out by parts of the brain, using hormones and other feedback mechanisms. To work properly, they need energy and alertness for our mind and body.

Think of juggling balls. It may look easy but there's a lot of unseen co-ordination going on. The brain is the main co-ordinator of what we see and do. It tells our muscles to move in certain ways at specific times. We have to concentrate and be alert, not just about the balls but about what else is

happening around us -- Where are our feet? Where are other people? What's that noise? Where did that ball go?

Feedback from muscles in the eyes and arms tells the brain when they need more energy or can't keep going. Hormones and nerves help provide the feedback. If there are too many balls or too much time has gone by, your body is overwhelmed; it needs a rest.

Stress is ...

The feedback leads to increases in:

- metabolism (heartbeat, breathing)
- blood pressure
- cholesterol and fatty acids in the bloodstream
- production of stomach acids and blood sugar
- sweating (to cool muscles)
- opening of airways (to get more oxygen to muscles)

At the same time, some things have to slow down. They include:

- making proteins
- digestion
- immune and allergic response systems

Finally, muscles tense (getting ready to flee) and there can be localised inflammation causing swelling and pain in joints, muscles and skin.

These reactions cause feelings or sensations that may include:

- a racing heart
- butterflies or knots in your stomach
- dry mouth
- problems swallowing
- tension, aching, pain or shaking in various muscles

Strain or toxic stress is ...

When the hazards or stressors continue day in and out, our bodies do not have enough chance to relax and recover. Our brain and its co-ordinating assistants are overwhelmed and worn out. We're constantly in what scientists call a state of arousal or being alert.

Toxic stress or **strain** reactions can be:

- physical
- behavioural
- emotional
- mental/psychological

The physical reactions include:

- headaches and tension
- chest and stomach pains or problems
- problems in the digestive system including spastic colon, impaired digestion, ulcers and irritable bowel syndrome
- diabetes
- joint and muscle pains (musculoskeletal disorders/injuries (MSDs/MSIs), a.k.a. repetitive strain injuries or RSIs)
- arthritis
- weight gain or loss
- cardiovascular problems including high blood pressure, heart attacks and other changes to the heart and circulation system
- grinding teeth and the problems that result
- sexual dysfunction
- asthma
- immune system problems which then make it easier to get sick
- sleep disorders, insomnia, fatigue
- exhaustion
- burnout (physical exhaustion, emotional exhaustion and over-

extension, irritability, negative feelings about your self-worth and competence, feeling helpless and hopeless)

- menstrual disorders

When we are stressed, we tend to feel or be more:

- anxious
- irritable
- depressed
- accident-prone
- impatient

With time, mental, emotional and behavioural effects become more serious. They lead to diseases or disorders such as:

- depression
- feeling apathetic and low self-worth
- crying spells
- anxiety, increased tension and fearfulness
- mood changes, constant negativity, over-reaction and irrational behaviour
- inability to concentrate and finish tasks
- paranoia
- social isolation and withdrawal
- suicidal thoughts

For example, a common effect is blaming ourselves for our stressed state. We take things out on others and ourselves. Outside work, we are more likely to:

- turn to drugs and alcohol to “cope”
- have conflict with family and friends
- become violent
- stop participating in family, sports and community activities

At work, it's common to “see” those reactions and:

- anger
- frustration
- envy
- mistrust
- fights with co-workers and supervisors
- blaming others, including “the union”
- isolation from co-workers
- job dissatisfaction

The hand-out *Workplace stressors have toxic effects* summarises many of these effects.

Stressors linked to aches and pains/RSIs/ musculoskeletal disorders

Being stressed or strained also causes other problems or makes them worse. One of the most common, and important for workers, is a synergistic effect between stressors and musculoskeletal disorders, also known as repetitive strain injuries (RSIs).

More and more, studies show that stressors are connected to these aches and pains:

- stressors set us up for aches and pains, particularly in the neck, shoulders and back; and
- it's often hard to sort out the effects of poor physical design of work from those of poor work organisation (the hazard category for stressors).

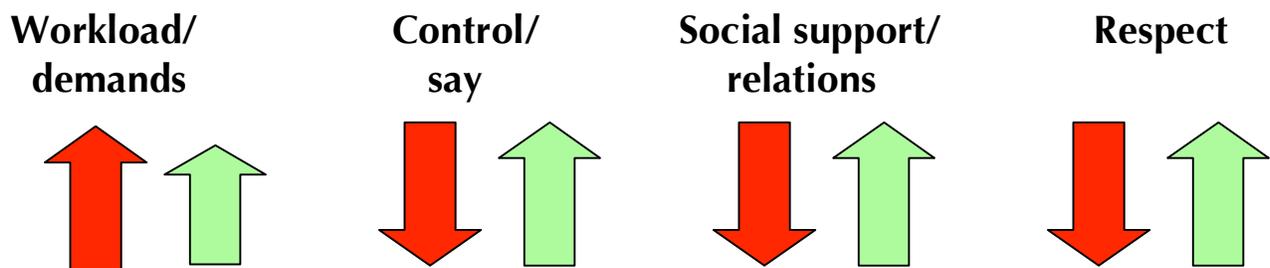
For example, a 2004 Canadian study found that people with depression, a common outcome of strain, are more likely to have intense or disabling pain in the neck or lower back.

3. What causes the stress and strain?

Some researchers use the term “job strain” to describe work-related toxic stress. They often put stressors or work organisation hazards into four categories. These are based on studies done around the world, for many jobs.

For more information about this stress theory, look at the general resources list for these sessions or search on the internet (look at www.workhealth.org and Google books first).

Job strain is in the red arrows (■).
Active and “stress-free” jobs are in green (■).



4. Who is affected by stressors?

In general, “ordinary” workers are much more affected by stressors than the CEOs and upper management of their companies or organisations.

A 2001 Canadian Policy Research Networks (CPRN) study found workplace stress had doubled. Twenty-seven per cent of workers in 2001 compared to 13 per cent of workers ten years earlier reported high job stress. The study further reported a decrease in job satisfaction over the same time period, from 62 per cent of workers reporting high job satisfaction to a drop of 45 per cent.

As stress levels increased in Canadian workplaces, job satisfaction declined – the two seem to go hand-in-hand.

Women experience more stress than men, according to the CPRN study. Sixty-two percent of female non-professional workers

and 59 per cent of female professional workers reported high-perceived stress levels, compared to 54 per cent of male non-professional workers and 43 per cent of male professional workers.

Female workers also reported higher levels of role overload. Canadian non-professional female workers experienced a 15 per cent increase in high job stress, an eight per cent increase in high role overload and a 13 per cent drop in high job satisfaction from 1991 to 2001.

From: CUPE’s ***Enough workplace stress: Organizing for change.***

Available at cupe.ca/updir/stress_guideline.pdf

5. *What makes stressors different from other work-related hazards?*

Stressors ARE different from other work-related hazards. We know that:

- ❑ most job-related stressors are designed into a workplace, they're not "your fault";
- ❑ how they are designed into a system is not always obvious, so these kinds of hazards often seem "invisible";
- ❑ work organisation hazards or stressors are behind or the root cause of many other types of hazards (ask: "Is the hazard there by design or chance?")
- ❑ workplace stressors first take their toll outside the workplace and show up as symptoms on the job long afterwards, says Bob Sass, a former Saskatchewan (Canada) government health and safety official.

6. *How can you find these stressors?*

Asking questions is one way to find these hazards. Here are some that are based on the four categories of problems that combine to cause strain or toxic stress. [They are adapted from *The anti-stress guide* by the Hospital Employees Union (2000). Available by going to [http://www.heu.org/antistress_guide/.](http://www.heu.org/antistress_guide/)]

Workload/demands:

What are the physical demands and hazards of the job?

How fast and hard do people work?

What hours do people work? Is there mandatory overtime? shiftwork?

Control/say

Who has the power, authority and responsibility for what aspects of the work?

How much control and decision-making do workers have about their job? (what they do, why, how and with whom)

Who decides the physical arrangements of work, including the machinery, equipment and tools used, and the space in which they are used?

Is the work challenging or meaningful? Or is it repetitive, divided into small jobs, rather than having one person responsible from start to finish?

Social support/relations:

How well do co-workers, managers, supervisors and others get along? Are employees well-managed and supported in general?

How much opportunity is there to learn? get training for current and new jobs?

How easy is it for workers to deal with non-work activities and responsibilities? (e.g. family, community, medical appointments)

Respect:

Is this a good place to work?

Do employees feel respected and valued?