

The Stress Model

Brendan Lloyd PhD, Psychologist Byron Bay

Stress reduction is a reasonable expectation and it's doable. The starting point is to understand the stress-model. The stress-model makes it clear. Stress reduction is possible if you understand what stress is and how it works.

What stress is and how it works

To understand stress, you need to make a clear distinction between STRESSOR and STRESS. The words "stress" is often misused. For example, people will say that "work is stress". No, it's not. Work is a stressor. People will say that "money problems are stress". No, they are not. Money problems are a stressor. Likewise you'll hear people say something like, "noisy neighbours are stress", or "hot weather is stress". No, these are all stressors.

Stress is a heading for a list of symptoms such as sleep disturbance, feeling keyed-up, irritability, anger, poor concentration, paranoia, gastro intestinal problems, nausea, anxiety, panic, exhaustion, burnout, depression, alcohol and drug abuse, etc (see Figure 1a). If you have any one of these symptoms or all of these symptoms, then you are stressed (Sapolsky, 1994, Selye, 1984).

Another sign of stress is when people say, "I think that I'm going crazy." For example, a client once told me about her irritability and sleep disturbance. She said that over the weeks of experiencing the bullying at work she just got more and more exhausted. But every time she put her head down to sleep at night, it popped up again. She just couldn't settle. The feeling of exhaustion was getting to the point where she thought that she was "going crazy." She said, "if only I could get a decent night's sleep, but I'm just too keyed-up."

That client wasn't actually "going crazy" at all. If she were, she wouldn't be saying that. If she was going crazy, then she would be saying, "I think that **you** (or other people) are going crazy".

A **stressor**, on the other hand, is any challenge, demand, threat, danger, hassles, change, loss, illness, chronic pain, etc. A stressor will represent an emergency of one sort or another (see Figure 1b).

We have a biological response for dealing with emergencies. Usually this event is referred to as the "fight or flight response". Just as a slight diversion, some people refer to "fight or flight or fright". Or some people might say he is in either "fight" or "flight" as a response to a stressor. These are embellishments of the original term; there is no need to mention "fright".

Whether you actually "fight" or "flight" or "freeze" in the face of danger says nothing about stress. People who use these embellishments are demonstrating their poor understanding of stress. The term "fight or flight" is not a description of behaviour, it is however a label for the *sympathetic response in the autonomic nervous system* that **changes the body from neutrality to a state of emergency**. Fight or flight mainly denotes the release of adrenalin and cortisol. These are the chemicals that our body produces to deal with emergencies.

I keep away from the term "fight or flight". I will instead use the term "sympathetic response", or I will use the metaphor of the "Emergency Button". Let's just say, to develop the "Button"

-
- Stress-Symptoms**
 - Sleep Disturbance
 - Irritability
 - Feeling Keyed-up
 - Anger
 - Poor Concentration
 - Paranoia/Suspicion
 - Gastro Intestinal upset
 - Back Pain
 - Hypertension
 - Anxiety/Panic/Burnout
 - Exhaustion/Fatigue
 - Depression
 - "I think I'm going crazy"
 - Alcohol & Drug abuse

Figure 1a: The Stress-Symptoms in The Stress Model

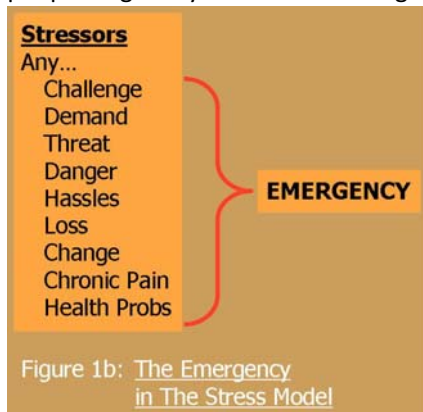


Figure 1b: The Emergency in The Stress Model

metaphor that in our brain there is an Emergency Button. We can say that this is a brain function. Your perception of an emergency is a mind function. The Emergency Button metaphor describes the mind-body connection (see Figure 1c). In other words, The Emergency Button is a metaphor to describe the translation of mental activity into physical actions. The “mental activity” can be conscious or subconscious images, ideas, or head-chatter that contains the meaning “emergency”. The physical action is the release of the adrenalin and cortisol.

Can you tell the difference between your mind and your brain? The kind of difference that makes sense to me is this. If I want to see your brain all I need to do is drill a hole into your skull to peep inside to see your brain. Your brain is part of your body. If I want to see your mind, I have to talk with you. The Emergency Button metaphor describes the mind-body connection.

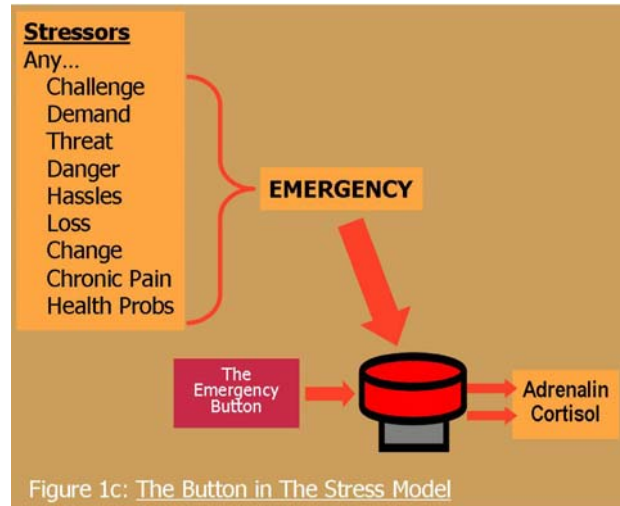


Figure 1c: The Button in The Stress Model

Getting on The Emergency Button in response to a stressor is not necessarily a bad thing. If you were faced with real danger then you would need the adrenalin to deal with the emergency. The adrenalin gives your muscles the ability to burn energy quickly. It is like fanning the flames of a fire. Also, your body will need the cortisol for two reasons. One reason is to help prevent inflammation that could slow you down and secondly to provide the muscles in use with extra fuel.

So as a mental exercise, imagine that you are crossing the road and you notice a bus coming at you. You will hit the Emergency Button and leap to the pavement. Once you land on the pavement, hopefully you will thank the fact that you have an Emergency Button to hit in such emergencies. Hopefully you will just dust yourself off and go about your business. If you do this, then your Emergency Button will pop back up and your adrenalin and cortisol levels will return to normal. There will be no stress.

An emergency hopefully is brief with a distinct beginning, middle and end. The “end” bit of an emergency is often referred to as “closure”. So if you hit The Emergency Button and you keep on hitting it, or you jam it in the on-position, then stress will quite probably be the end result. By maintaining a state of emergency

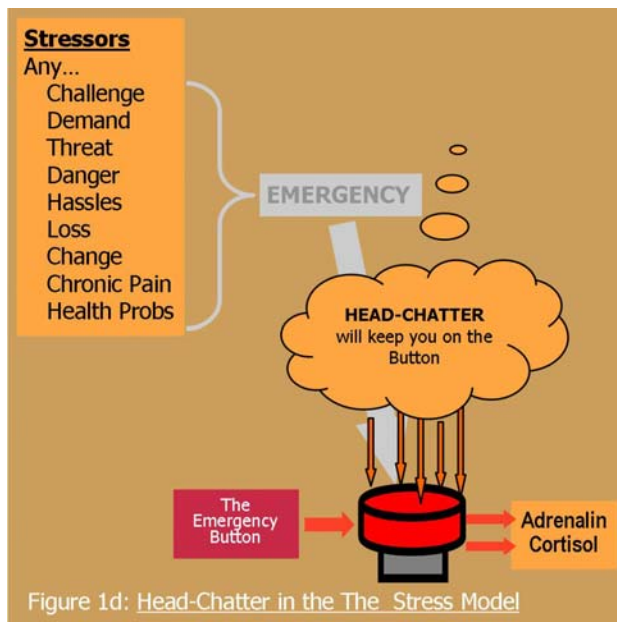


Figure 1d: Head-Chatter in the The Stress Model

in our body we eventually create stress. Stress will occur after a time of elevated levels of adrenalin and cortisol. These emergency chemicals are not meant to be in our bodies at elevated levels for an extended period of time.

For example, let’s say that you do leap out of the way from the bus. You land on the pavement and instead of just dusting yourself off, you fire up the head-chatter about the bus driver and his incompetence (see Figure 1d)? “The prick tried to kill me,” you mutter to yourself.

“What’s his number?”

“Where did he get his licence?”

“Is he blind?”

“What’s the bus company’s number?”

“I’m going to write them a letter.”

“I’m going to ring them up.”

“I’m going to get that driver sacked.”

“Blah blah blah.” On and on.

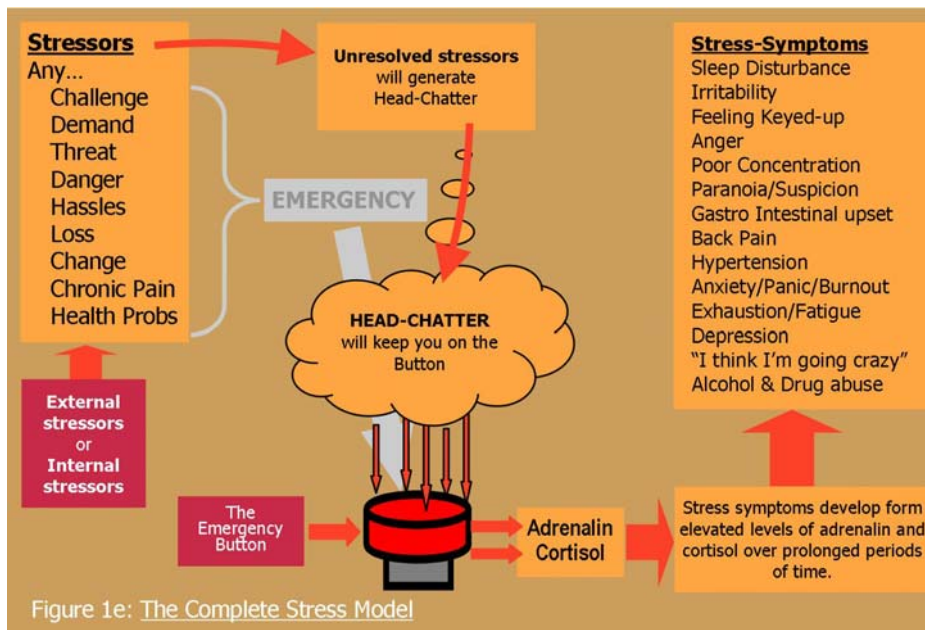
Head-chatter emphatically and absolutely is not thinking. Often, the internal dialogue, as in the example above, is referred to as “thinking”. This is an inaccurate use of the word. Thinking is useful and will lead to a useful adaptation, or resolution of the stressor. This important point is developed in the sessions beyond.

With head-chatter like this, and depending upon how much you keep it going and to what level you are prepared to take it, chances are that by the time you get home, you’ll have a headache. By keeping the head-chatter going perhaps you’ll have a disturbed sleep that night. You might even have to take the next day off, call in sick.

Under the heading for Stress in Figure 1a, note the symptoms of sleep disturbance, irritability, anxiety and panic. These symptoms are obvious signs of elevated levels of adrenalin in your body. Take the feeling of anxiety/butterflies as an example. How do you feel anxiety? Where do you feel it in your body? Chances are that you feel it in your gut. You might say that you feel nauseous or that you have a knot in your stomach. Or you might say that you have a welling up inside your chest. You might say that anxiety makes you feel tight in your chest. You might notice that you hold your breath, the baited breath. Or you feel agitated or just uneasy. These feelings are the presence of adrenalin at elevated levels. What you *feel* is the adrenalin. The *anxiety* is your interpretation of that feeling.

Under normal conditions, after getting on the Emergency Button, adrenalin is quick to release and quick to disperse. In other words, it’s released then it quickly goes away. So for you to actually feel anxiety, you have clearly gotten onto the Emergency Button and stayed on it. To develop the metaphor even further I ask you, “What have you done to your Button? Have you jammed it in the on-position? Have you hammered it through the floor? Have you nailed it down? Have you stacked a fridge on it? Are you continually banging on it? Have you taken a swan-dive on to it? Are you sitting on it?” I find that individuals have their own ideas about what they have done to their Emergency Button.

Elevated levels of cortisol over time are far more damaging to our bodies than we care to imagine. As I mentioned, cortisol is an anti-inflammatory steroid. Many people know about cortisone creams and injections. These creams or injections are usually medical treatments for inflammation of one kind or another. Cortisol is produced by our adrenal glands.



Cortisol at elevated levels in our body over extended periods of time is quite destructive (Sapolsky, 1994, Selye, 1984). It will damage your immune system. It will cause a build-up of bad cholesterol in your body. It will compromise your body’s ability to process salt. All these lead to long-term health risks. But more importantly, it will muck around with your blood-sugar levels. It can cause

you to feel continuously exhausted and drained of energy. Burnout can be the final straw.

Cortisol is a complex chemical and apart from its anti-inflammatory properties, it will provide fuel for muscles in use during the emergency. So if you're running like the clappers from the lion, then your legs get the fuel. If, on the other hand you are sitting on your couch, stressed but doing nothing much, none of your muscles get the fuel. Your adrenalin is fanning the flames and burning up the fuel and it's not being replaced.

Elevated adrenalin and cortisol together lead to a strange feeling in our bodies. On one hand we are ready to go, because of the adrenalin. On the other hand we feel exhausted, because the cortisol will only fuel active muscles. This is the feeling of being keyed-up. As you are probably only too well aware, this is a very uncomfortable feeling.

This feeling of exhaustion can also lead to the development of depressive behaviours such as hiding away and withdrawal. This often develops further into avoidance behaviour as a coping strategy. Avoidance as coping can perpetuate and maintain feelings of anxiety. Quite often a person who is exhausted or keyed-up is saying "just leave me alone, I just don't want to know". Clinical depression can then develop.

Ok, here's a question to see if you've been paying attention. In Figure 1e, do stressors *cause* stress?

It's tempting to answer "yes". But here's a thought experiment to do before you commit to an answer. Can you ever eliminate stressors from your life (see Figure 1e)? That is to say, can you ever rid yourself of challenges, demands, threats, dangers, hassles, change, loss, illness, or even chronic pain if you have it? You might like to think that perhaps you can avoid, escape, suppress, blame or deny your way out of some specific examples of some stressors. But in reality, you would know that we cannot eliminate stressors from our lives. **Stressors are life happening.**

Can we eliminate stress from our lives? Well we'd hope so. It certainly seems like a good aim to have. It may not be possible in an absolute sense. But why shouldn't we work on it. We don't need sleep disturbance, feeling keyed-up, irritability, anger, poor concentration, paranoia, gastro intestinal problems, nausea, anxiety, panic, exhaustion, burnout, depression, etc. We don't need stress, so why not work on *stress-reduction*?

So there cannot be a direct causal link between stressors and stress, because we are unable to eliminate stressors from our lives, and we are able to significantly reduce stress. This is important to understand. Stressors are to be resolved not eliminated, avoided, suppressed, denied, forgotten, etc.

What causes stress-symptoms? Follow the process seen in the full Stress Model in Figure 1e.

1. Stress-symptoms are caused by having the emergency chemicals, adrenalin and cortisol, in our bodies, at elevated levels, over an extended period of time. That is what causes stress-symptoms.
2. What causes the emergency chemicals to be in our bodies at elevated levels over an extended period of time? To develop the metaphor, "jamming the Emergency Button in the on-position", that's what.
3. What "jams the Emergency Button in the on-position"? Head-chatter, that's what.
4. What causes head-chatter? Having *unresolved stressors* is what causes head-chatter.

Stress-symptoms are caused by the Emergency Button's continued use without giving your body the chance to recover. In the case of the bus story, if you allow your mind to drift into obsessional head-chatter about what might have happened, then your body will remain in a state of emergency and you will become stressed, you will suffer. If you live your life like this, you will experience stress-symptoms as chronic anxiety and/or panic attacks, and/or depression, or as any of the other stress symptoms seen in Figure 1e.

The answer should be clear by taking a good look at Figure 1e. The answer is in two parts.

1. One is to work on resolving stressors.
2. The other part is to take control of the head-chatter.

It is true that if you resolve your stressors, then the head-chatter will evaporate. But we need to be realistic here. It's probably the case that we will never have all our stressors resolved at one time, so taking control of the head-chatter is also essential. There will always be stressors that are at different levels of resolution. Not only that, there are stressors that we will not identify immediately. Some stressors are not so obvious.

There are two types of stressors, *external* and *internal*.

External stressors are the demands, threats, challenges, etc, that come from the issues of living. Chronic pain and illness are in this category. In other words, external stressors require us to adapt in some way. The good thing about external stressors is that they are usually obvious and easily identified.

Internal stressors come from within. These are our unworkable/maladaptive beliefs that reside in our personality. In this sense, we are our worst enemy. Internal stressors are our entrenched beliefs and attitudes that are in conflict with the world around us. They are too close for us to see them without help. It's like not being able to tell the forest from the trees, because we don't even know that we are one of the trees.

References:

Sapolsky, R. M. (1994). *Why Zebras Don't Get Ulcers*. W.H. Freeman: New York

Selye, H. (1984). *The Stress of Life*. McGraw-Hill: New York

