

DID YOU KNOW YOU HAVE AN INTERNAL RISK MANAGEMENT PROCESS?

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Introduction

As risk managers we're all familiar with risk management and the risk management process. But did you know you also have an internal risk management process? It's part of your natural survival system and enables you to deal with risks to your physical and/or emotional wellbeing.

It's a highly effective and reliable process, after all it's been in development for hundreds of thousands of years. Its effectiveness is demonstrated by the fact the human race has survived where many other species have become extinct.

Why an understanding of our innate risk management process is essential

Our innate risk management process produces anxiety. Anxiety is the most common mental health issue in the world today. Its impact on us can range from being a silent thrum under the surface of our daily lives to being totally debilitating.

With an understanding of how your risk management process operates you can begin to explore how well your process is functioning, and can make any necessary adjustments, so you avoid unnecessary, unhelpful anxiety. Your wellbeing will improve, and you will enjoy life more.

Our Innate Risk Management Process

Here are the steps in our innate risk management process.



As you can see the first letters of each step in the process spell the word 'STRESS' which makes remembering the six steps easier!

Let's explore each step in a little more detail.

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Step 1: Stimulus – Worry and Imagination

The inputs into our risk management process are our thoughts and the imagined future scenarios those thoughts trigger. It's estimated we have some 60,000 plus thoughts every day. Most of these thoughts are 'automatic', they just pop into our heads. Very often we're not even aware we're experiencing them. Many of these thoughts take the form of worries.

Worry

We live in an uncertain world. There's no escape for us from living with uncertainty. Most people have an intolerance of uncertainty. As far as our brain is concerned uncertainty equals risk.

Faced with uncertainty and the unknown, our mind races to fill in the possibilities and worry is our attempt to reduce uncertainty and gain a sense of control over the future by thinking through what could happen and what might be the consequences. Our worries can be consciously generated but as mentioned earlier, for the most part they just pop into our minds automatically.

Worrying essentially involves asking ourselves some variant of the question "What if...".

What if I get COVID and end up in hospital?

What if there's a traffic jam and miss the important team meeting?

What if I forgot to turn off the stove and there is a fire?

What if I apply for that job, and I don't get an interview?

What if my partner leaves me?

There is no end to the "What if ..." questions we can ask ourselves. And because our mind loves questions it will happily go off searching our memory for the answers. And because we have a natural negativity bias, we spend more time and energy exploring what might go wrong, than what might go well.

Some people seem to worry about everything. You can probably identify people in your life who are constant worriers. They are always expecting or preparing for the worst. When worry is frequent, intense or both or persistent and uncontrollable it can become problematic, overwhelming and can adversely interfere with our enjoyment of life. People who engage in persistent, pervasive, unhelpful worrying for an extended period, may be diagnosed as experiencing Generalised Anxiety Disorder (GAD).

Catastrophising

A common form of worry at this step in the process is 'catastrophising'. Catastrophising is jumping to the worst possible conclusions, however unlikely, and seeing the consequences replayed in the most gruesome detail in the mind. The reality of the situation might be quite insignificant and small.

It can be helpful for us to consider worst-case scenarios so we can identify and analyse significant risks and actively prevent those risks from materialising. However, when we habitually default to imagining the worst-case scenario this can result in unnecessary anxiety.

For example, you get on an aeroplane and catastrophise about it falling from the sky; you go to a restaurant and catastrophise about being killed by food poisoning; you walk to the shops and catastrophise about having left the cooker on and burning the house to a cinder. While all of these are risks are extremely unlikely to occur, they are possible, and they can feel very real at the time we think about and imagine them.

Our imagination

Our brain can't differentiate between what's real and what's imagined. External and internal stimuli are both treated as just data to be processed.

We use our imagination to project ourselves into the future in an attempt to predict the consequences of a future situation that may never occur. Sometimes our brain gets the prediction right but, most of the time it doesn't, and we waste a lot of energy and time imagining risk scenarios that will never occur.

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Step 2: Threat Detection

Our brains have been built over our lifetime based on experience. From the 100 billion neurons the brain contains at birth, a unique network of synaptic connections develops capturing each new experience and our emotional response to it. I call this vast network of synaptic connections our 'memory matrix.'

Experiences that harmed our physical and/or emotional wellbeing, or had the potential to, are tagged in our memory matrix as 'threats'. These experiences do not have to have been life threatening. In fact, many threat memories relate to of interpersonal pain, mistakes, near misses, missed opportunities, minor injuries etc.

The purpose of our memory matrix is to serve as a reference source for our brain, enabling it to interpret what incoming data, real or imagined, means.

Incoming data is routed to a brain area called the 'thalamus' (found roughly at the cross-section of lines projected inward from his eyes and ears). The thalamus operates like a telephone exchange sending the data in two directions for processing - to our limbic system (known as our 'emotional brain') and to our neocortex (known as our 'thinking brain').

The limbic system, being closer to the thalamus, receives the data first and compares it to the information held in our memory matrix in order to identify, and give meaning to, it. What the limbic system is looking to detect is real and present danger, or risks, to our psychological and emotional well-being.

I like to think of this matching process as being akin to a mental game of SNAP! When there's a pattern match, i.e., the incoming data is the same as, or closely matches, a known threat, then electrical signals are sent to other parts of the brain to initiate the Threat Response. This matching process takes place in a matter of milliseconds and we react to the perceived threat before we're even consciously aware we are in danger or at risk.

The identification of threats via this lightning-fast subconscious pattern matching process can result in us feeling anxious without consciously knowing why we're feeling anxious.

Threat Detection is a 'better-safe-than-sorry', process.

The threat detection process sacrifices accuracy for speed. When it comes to our survival, time is of the essence. So, the threat detection process adopts a "better safe than sorry" approach. Our brain would rather be wrong a hundred times than be wrong once. We're not descended from early humans who underestimated danger!

As such, like all good alarm systems the Threat Detection process is guilty of making faulty pattern matches. You don't want a smoke alarm that goes off only when the house is engulfed in flames; so you accept that it goes off occasionally when people are making toast or frying food.

For example, if you're out tramping and you think you see, or hear, a wild pig, you don't want your brain to wait until it's absolutely sure it's a wild pig before triggering the Threat Response. You want the Threat Response triggered immediately so you can get the heck out of there fast, before the pig charges you. Your thinking brain will, via the Risk Appraisal, process (see below), establish whether the emotional brain got the threat detection right, but this takes precious seconds, and if the pig comes charging at you, that extra time may mean the difference between a narrow escape and no escape.

Step 3: Risk Appraisal

A moment after the data arrives in the limbic system it arrives at the neocortex. The neocortex, and in particular the pre-frontal cortex – aka our 'thinking brain', has two roles to play in our risk management process.

It's first role is to identify threats and risks not identified by the limbic system perhaps because the experience we're having is new to us, or we've had the experience before, but it wasn't tagged as a threat.

To identify risks the thinking brain performs a risk appraisal. The risk appraisal process has two stages: primary appraisal and secondary appraisal. Our brain completes this analysis process in less than a second.

In primary appraisal, our brain evaluates whether the real or imagined situation is irrelevant, safe or a risk to our physical and/or emotional wellbeing. Our brain operates according to this rule: "Familiar is safe and comfortable. Unfamiliar is dangerous and uncomfortable."

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If a risk is identified our brain undertakes a secondary appraisal. Secondary appraisal involves asking 'Do I have the resources to mitigate this risk or deal with the consequences should it materialise?'

Some of the key things our brain evaluates are, our previous experience dealing with a similar threat/risk, how much control we have over the situation, our level of tolerance with uncertainty, how healthy we are, how much energy we have, our beliefs about ourselves, the world, other people and things, our relevant skillsets, our level of self-esteem, what support we have from family, friends, and the community.

If we appraise that we lack the necessary abilities/resources to deal with the risk, the Threat Response will be activated. Conversely, if we believe we have the necessary abilities/resources, the situation may instead be perceived as a challenge rather than a risk and our Challenge Response will be activated.

The second role of the thinking brain is to check whether the emotional brain got its threat detection right or whether it's guilty of raising a false alarm. When the thinking brain detects a false alarm, it sends a signal back to the limbic region to switch off the Threat Response.

Our thinking brain can, and does, get the risk appraisal process wrong.

Research has shown repeatedly that most people who experience anxiety overestimate the likelihood of the risk materialising and underestimate their ability to cope. In addition, research has shown that:

- people consider events over which they have some control of their own fate to be less likely to have adverse outcomes (e.g., driving to work, solo parachute jumping) than events over which they have no control (e.g., a passenger in an aeroplane, tandem skydiving).
- Dread of consequences leads people to over-estimate the likelihood of an event.
- People over-estimate the likelihood of unusual but high-profile events (e.g., a single plane crash) compared to more usual but less notable ones (e.g., car crashes).
- People's answers to questions about risk can differ enormously according to how those questions are framed (e.g., surgery with a 70% survival rate vs. a 30% chance of death).

Step 4: Emotions created

"Emotions that seem to happen to you, are made by you." ~ Lisa Feldman Barrett (2017). *How Emotions Are Made: The Secret Life of the Brain*

Psychologist and neuroscientist, Feldman Barrett research suggests emotions are a response to the meaning our brain attributes to a situation. They are complex neurochemical constructions built in the moment, as you need them and are recipes for what response our sympathetic nervous system should activate. For example, fear triggers the Threat Response and excitement triggers the Challenge Response.

When triggered by pattern matching, during the Threat Detection step, fear occurs with no associated thoughts and we can feel it before we are even consciously aware we are under threat or at risk.

The intensity of the emotion determines the intensity of the response. In the case of a risk the level of fear can range from mild apprehension to outright terror.

These chemical signals travel rapidly all over your body and last for about six seconds. The effect of an emotion can, however, have a longer lasting effect.

Step 5: Sympathetic Nervous System Activation

Our autonomic nervous system has two branches the sympathetic nervous system (SNS) and the parasympathetic nervous system (PNS). One way of thinking of these two sub-systems is that the SNS is the accelerator pedal (it gets us moving) and the PNS is the brake pedal (it slows us down and puts us into neutral).

The SNS can trigger many responses, of which the Threat Response (more commonly referred to as the "Stress Response") is just one.

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The Threat Response unfolds in two stages, a fast initial stage employing electrical impulses, and secondary stage employing hormones.

When the Threat Response is activated our body immediately begins to adapt to be able to either fight off the threat/risk or escape from it. For the first few minutes the adaption is fuelled by adrenaline. During this phase of the response, adrenaline switches on certain responses in the body, such as sweating, quicker breathing, accelerated heart rate and so forth, gearing you up for the action you need to take to fight off or escape from danger. It also shuts down long-term and metabolically expensive functions of the body like digestion and reproduction.

This initial electrical response is lightning fast, and when successful carries us clear of danger. But it is metabolically draining and if exposure to the threat lasts longer than a few minutes, then the adrenaline becomes exhausted and a hormonal response takes over.

Our adrenal glands begin to secrete ever increasing amounts of stress hormones, the most well-known of which is cortisol. Cortisol is crucial in supplying us with energy and supports us in a more sustained effort against the threat/risk and can continue to be released over the course of minutes to hours, even days.

It is the continued release and build-up of cortisol that is the main cause of the feelings we experience as chronic stress.

Step 6: State – Acute Anxiety

"Anxiety is nature's way of telling us that key emotional needs have not been met in our lives." ~ Ezra Hewing, head of mental health education at Suffolk Mind in the UK

Acute anxiety is a red flag from your unconscious that it has noticed or is anticipating trouble ahead and something needs your attention. Consciously you may know what the risk is, or you may have no idea what the risk is, you just sense there's a risk out there.

Acute anxiety is a temporary state of being - once you have satisfactorily mitigated the risk, the anxiety related to that risk will dissipate.

Acute anxiety is experienced as a complex blend of uncomfortable feelings (physiological sensations and emotions). The feeling is intense enough not to be ignored, but not intense enough to be debilitating.

Describing what anxiety is like can be hard since the experience varies for everyone. However, common physiological symptoms include butterflies in the stomach, sweating, heavy, rapid shallow breathing, an elevated heart rate, muscle tension, a tight chest; gastric discomfort; restlessness, headache, nausea.

Anxiety can also cause sleep problems: such as having a hard time falling asleep, waking up frequently during the night, having a restless night and unsatisfying sleep.

Emotional symptoms include a diffuse, unpleasant, vague sense of apprehension, unease, nervousness, being on-edge, dread, fear.

Cognitively anxiety causes our mind to zero-in on the environment around us and we become more vigilant as we seek to find the source of the risk(s). This hyper alertness compromises our ability to see the bigger picture, to concentrate, to make clear, rational decisions, or to plan.

Chronic Anxiety

Anxiety like stress can be acute (short-term) or chronic (long-term). Chronic anxiety is driven by a persistent state of worry. When chronic anxiety has a debilitating impact on a person's daily life they may be medically diagnosed as having an anxiety disorder. Anxiety disorders are the most common mental health problem in the world today with the World Health Organisation suggesting that 1 in 13 people globally suffer from an anxiety disorder.

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Step 7: Behaviour

"Check out the alarm, but don't mistake it for reality; the smoke alarm is not the fire. Most of the time, it signals caution, not danger." ~ Steven Stosny, Ph.D.

Remember, anxiety is a call to action to mitigate a perceived risk. Its job is to keep bugging you, until you pay attention and start taking action.

The benefits of anxiety are lost when we interpret it as a stop signal - a red light - rather than an amber (caution) light. When that happens, we can be discouraged from taking any action at all, or as is often the case, we may engage in maladaptive behaviours such as avoidance behaviours, escape behaviours and safety behaviours, that only serve to reinforce our perception of the particular risk and gradually disrupt our ability to live normal lives.

Avoidance Behaviours: When we feel anxiety, we have a natural reaction to retreat, find safety and isolate ourselves. We often seek to prevent the feeling by avoiding the situations we believe cause the anxiety. For example, we might just stay in bed, call in sick to work, decline an invitation to a social outing or event.

Escape Behaviours: Although we may start something or attend things, we might not follow through or cut something short if we're feeling anxious. Examples of escape behaviours include: - leaving the party early, getting off the bus/train before your stop as you cannot cope with the crowds, asking a co-worker to finish a task for you, declining a promotion.

Safety Behaviours: When we're anxious we may engage in "safety" behaviours to try and feel safer or to prevent feared outcomes from occurring. Examples of common safety behaviours include only going to places with a trusted companion, sitting near exits, engaging in excessive research prior to taking a trip, repeatedly rechecking things to make sure they were done correctly.

Positive behaviours in response to anxiety include contingency planning, problem solving, building up our resources to withstand risk, and enhancing our skills and knowledge. By taking action such as these we can successfully mitigate the risk as well as reassure ourselves we are sufficiently resilient should the risk materialise.

The risk management process has a built-in feedback loop.

The risk management process has an inbuilt feedback loop such that our anxiety and the consequences of our behaviours are fed back into Step 1: Stimuli – Worry and Imagination. This means it's possible to get trapped in an anxiety cycle. For example, in the case of panic the feelings a person experiences, racing heart, shortness of breath et cetera can cause the person to believe they are having a heart attack. The thought that they are having a heart attack is perceived by their brain as a new threat and so the threat response is activated, heightening the existing feelings, which get interpreted as an even greater threat. In this way anxiety and panic can quickly escalate.

An example of the Risk Management Process in action

Here's a simple example of how our innate risk management process operates in practice.

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Process Step	Scenario
Stimulus – Worry and Imagination	Your boss tells you the company is struggling to survive due to the impact of COVID and there will have to be some redundancies. You think 'what if ...' that happens and imagine a future in which you are one of those made redundant.
Threat Detection	Your limbic system ('emotional brain') processes the imagined scenario and, even though you haven't previously experienced redundancy, matches it to a memory that 'redundancy = threat'.
Risk Analysis	Your neocortex (thinking brain) performs its primary risk analysis and identifies redundancy as being a significant threat to the continued satisfaction of one or more of your emotional needs. It performs a secondary appraisal and determines your current resources are inadequate and the impact on your emotional wellbeing, should the risk materialise, will be significant.
Emotions Created	Your brain creates fear at a level commensurate with the perceived risk.
Sympathetic Nervous System Activation – Threat Response	Your Threat Response is activated, and your body instantly begins to adapt to prepare itself to enable you to take physical action to mitigate the risk.
State – Anxiety	You experience the physical sensations and fear as a high degree of acute anxiety. You recognise the feeling as a signal that you need to take action to mitigate the risk.
Behaviours	<p>In response to the acute anxiety, you begin updating your resume and start contacting people in your network about possible openings. You identify which of your skills need updating to facilitate finding a new role and sign up for a night class. You review your household expenditure to see where savings can be made.</p> <p>As you complete more of these actions your risk appraisal changes because your brain appraises you are now able to manage the risk and as a result your anxiety level drops.</p>

Intervening in your risk management process

I mentioned at the start of this article that with an understanding of how our innate risk management process operates we can explore how our own process is functioning and make any necessary enhancements with the aim of avoiding unnecessary, unhelpful anxiety.

In the table below I've provided some examples of possible interventions. Many of these you can make yourself, but some are best undertaken with the help of an anxiety solutions coach or anxiety therapist.

Process Step	What can go wrong	Examples of possible interventions
Stimulus - Worry and Imagination	Worrying becomes obsessive, irrational, chronic. Misuse of the imagination.	Worrying well is a skill anyone can learn. To experience less anxiety, you need to identify, control and/or change your unhelpful thinking habits. There are many techniques available to help you create this habit change. You can train yourself to stop misusing your imagination. You can practice visualising what you want to happen rather than defaulting to imagining unfavourable outcomes.
Threat Detection	Threat memories are no longer relevant.	You can reduce the effect of unhelpful threat memories using neural recoding techniques to 'reprogram' your brain. Through mindfulness practice you can de-sensitise your limbic system to threats (metaphorically turn down your smoke alarm's sensitivity).
Risk Analysis	Overestimating the likelihood or consequences of risks.	Consciously and rationally appraise the risk. Develop more helpful mindsets such as: optimistic mindset, challenge mindset, growth mindset. Learn to become more comfortable with uncertainty. Build your skills, such as: problem solving, time management, delegation, assertiveness. Build your resilience - Take action to meet our physical and emotional needs in balance. Acquire more resources e.g., social support, business networks, savings, disaster emergency kit.
Emotions Created	Inappropriate level of emotional intensity	Emotion is the neon flashing light that says: "look at me". Without the emotional flashing light there's no compulsion to continue to worry about the situation. You can use dissociative techniques to put some space between you and the emotion which has the effect of reducing its intensity.
Sympathetic Nervous System Arousal	Constant activation of the Threat Response	Use breathing exercises to switch on the Parasympathetic Nervous System (Rest and Digest) and switch off the Sympathetic Nervous System.
State – Anxiety	Anxiety impacts on your daily life.	Use coping skills such as exercise, relaxation techniques, mindfulness, self-hypnosis.
Behaviours	Avoidance, escape, safety, behaviours.	Desensitize yourself to the risk through gradual exposure (physical and or imagined).

Final thoughts

My aim in writing this article was to provide an understanding of how and where our experience of anxiety comes from. Anxiety isn't something that's done to us, it's an experience we create ourselves as a product of our incredible, inborn risk management system. The fact that we create our experience of anxiety is significant because it means, we can also stop experiencing unnecessary, unhelpful, and potentially harmful anxiety. The good news is there are plenty of evidence based, proven ways to rapidly create the changes to our risk management system we need to make.

Finally, if you are experiencing anxiety, I recommend you, in the first instance, consult with your medical or health practitioner for advice, diagnosis, and recommendations as to treatment.

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Tony Yuile is a certified life coach, clinical hypnotherapist, and the author of 7 Ways to Reduce Anxiety in 7 Minutes or Less. He is a coach and instructor with YourlifeLiveit an international coaching and training company. Tony is passionate about helping people develop the life skills they need to minimise the stress and anxiety in their lives and enhance their resilience.

Tony spent 30 years in senior financial and risk management roles across the private and public sectors. He was secure and happy in his career until thrown a curve ball – redundancy, something he was totally unprepared for. Suddenly he found himself in the vicious grip of stress and anxiety. When he finally emerged from beneath the black cloud, he promised himself that he would never feel so dreadful again. He set out to discover as much as he could about stress and anxiety and to share what he learned with others. Based in Wellington, Tony works with clients within New Zealand and globally.

Tony served on the RiskNZ board for seven years and, as was the organisation's Treasurer for 11 years. He is a life member.

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