Understanding Panic Attacks & Panic Disorder
by Dr. Bryan London

Anxiety is an emotional and physiological response to a perceived danger or threat. A panic attack is an anxiety response in which your genetically-endowed fight-or-flight mechanism is activated. The purpose of a panic attack is to prepare you for physical action.

More pointedly: The purpose of a panic attack is to protect your life and/or your safety in circumstances where physical action may assist in doing so.

But what about panic attacks that occur under circumstances that pose no physical risk?

Most commonly, an individual’s first panic attack in a safe setting or under a safe set of circumstances occurs as a result of built-up or rapidly heightened emotional and psychological stress. This “stress overload” triggers panic attack symptoms – for example, rapid heartbeat, difficulty breathing, lightheadedness – in quick succession, and a full blown panic attack ensues. If there were nothing more to it, however, the individual wouldn’t become burdened with panic disorder (recurrent panic attacks associated with a tremendous fear of panic attacks). In order for that to happen, the individual must catastrophize the experience.

And how is that done?

Typically, the individual draws a terrifying conclusion: a life-threatening heart attack is happening; or, my body is running amok (a sure sign that something is seriously wrong with my health); or, I’m losing control of my mind and body (after all, uncomfortable and intense sensations are racing through my body and I can’t think well – I’m dizzy and lightheaded and I don’t know what’s going on).

Ironically, once an individual draws the conclusion that panic attacks must be feared – are nothing short of terrifying – the foundation is set for recurrent panic attacks – for panic disorder.
How does that take shape?

Let’s start with this intriguing issue: Panic disorder sufferers commonly assert that many of their panic attacks materialize “out of the blue.” In other words, nothing triggers them. And so, a person might say, “I was simply waking up from a sound sleep and all of a sudden – boom – I’m struck by a panic attack.” Certainly it seems to many with panic disorder that panic attacks can strike at any time, without warning, for no reason.

Ah, but there is an explanation. In truth, once an individual has decreed panic attacks to be dangerous and terrifying, he or she begins monitoring physiological variables – heart rate, breathing rate, muscle tension, and the like – for shifts that may signal the onset of that dreaded event – another panic attack. This monitoring process is ongoing but does not require constant conscious attention. If it did, the individual would be significantly compromised in his or her ability to carry out normal everyday activities. Instead, this monitoring process is maintained, for the most part, at the subconscious level. And that is why an individual can awaken with a panic attack that seems to have occurred “out of the blue” with no apparent antecedent cause: The physiological shift judged to be so alarming was registered at the subconscious level of awareness.

(Although the idea of subconscious processing may sound esoteric, it’s a commonplace phenomenon. For example, many drivers can cite instances of having arrived safely at various destinations even though conscious thinking may not have been particularly attentive to road conditions. And if you’re a seasoned typist, you know for a fact that keyboard skills have been commandeered by subconscious processing. Quick, which finger do you use to strike the “M” key? You might need to think momentarily in order to provide the correct answer, but when you sit down at the keyboard, you know automatically.)

So, here’s the chain of events: At the subconscious level of awareness, a physiological shift in a variable of interest, heart rate, for example, is noted. It’s interpreted, with lightning speed, as a sign of an impending panic attack – a terrifying development. The perception “I’m in danger” (ironically, to be sure)
summons the very thing which is thought to be the danger – the fight-or-flight response – a panic attack.

(The reason some people have frequent panic attacks, several a day for example, is because physiological shifts in variables such as breathing rate and heart rate occur frequently. And so if one’s tolerance threshold is low for changes in heart rate and respiration rate, or any one of the other physiological variables of interest, then even the slightest shift in one of those variables is deemed dangerous and a panic attack is beckoned.)

Can you explain the process further, and how do I overcome panic disorder?

Let’s begin by building on what we’ve covered so far: This is what happens to your body during a panic attack and why it happens:

*Your heart rate increases.* This is because the perception of danger triggers the sympathetic nervous system to release the “stress hormones” adrenaline and cortisol. Activation of the sympathetic nervous system is the fight-or-flight response. The increased heart rate is to assist you in carrying out strenuous physical activity.

*Your breathing becomes more rapid and shallow.* Again, if you’re about to become physically active, fight or run, or engage in a combination of those actions, this will assist you. You will need more oxygen.

However, if you don’t become physically active, then you’ll be taking in too much oxygen for the expenditure of energy. As a result, *you may feel lightheaded or dizzy.* *You may experience a choking sensation or tightness in your chest.* *You may begin to feel as if you can’t breathe,* when, in actuality, you are overbreathing – you are taking in too much oxygen for someone who is simply sitting, standing, or lying down.

Other symptoms commonly experienced during panic attacks accompany overbreathing as well, including blurred vision, hot flushes, and a sense of
unreality. These are experienced because overbreathing leads to a slight – but not at all dangerous – decrease in blood supply to the head.

Your hands and feet may begin to feel numb or have a tingling sensation. This is because blood flow has been redirected via the tightening of blood vessels in your extremities. At the same time, there is an expansion of blood vessels in areas such as your thighs and biceps. Why is this happening? Again, to better protect you from a physical threat. Less blood in hands and feet means that if your extremities are cut (for example, an attacking animal), you will bleed more slowly. More blood to thighs and biceps better prepares you for physical action.

Your muscles tense up. After all, your body is preparing for physical action.

You may begin to sweat. Another effect generated by the sympathetic nervous system. And, again, it’s part of the fight-or-flight mechanism to assist physical action. Dogs pant in order to prevent their bodies from overheating. Humans sweat.

The bottom line?

Although panic attacks may feel strange when you don’t need to fight or run, they are not dangerous. In fact, their purpose is to protect you in the face of a physical threat. However, if you have developed a conditioned-in or automatically occurring fear response to the sensations of panic (and that is precisely the mechanism underlying panic disorder), the solution is to engage in frequent controlled exposure to those very sensations (rapid shallow breathing, lightheadedness, etc.). Said another way, panic disorder is a phobia of the physical sensations of panic. The solution is to exposure yourself to those sensations repeatedly in a controlled way so that you prove to yourself – unequivocally – that they do not need to be feared.

In order to break an association of fear to panic attack sensations, you might run in place and experience and attend to rapid heart rate and shortness of breath; noting that these sensations do not threaten you. You could intentionally
hyperventilate by taking in short rapid breaths (panting) while sitting still and experience and attend to the lightheadedness this generates and the numbness and tingling in hands and feet. You could intentionally tense your muscles, hold the tension, and simply note the sensation generated by contracted muscles without branding it dangerous.

Repeating these types of exercises with sufficient frequency will, over time, lead you to form a new and essentially neutral conditioned-in response to sensations such as increased heart rate, shortness of breath, lightheadedness, numbness and tingling in extremities, and muscle tension. You will have taught yourself that these sensations are not to be feared, are nothing to panic about; and you can return your genetically-endowed ability to panic to its proper place in your life.

(As an example of proper, well-placed panic: After a long day’s drive well into the evening, you’ve taken a room at an old, somewhat dilapidated roadside motel. While showering, the curtain is pulled back and you’re confronted with a knife-wielding Norman Bates, decked out in a gray wig and his mother’s dress. A sense of panic grips you, compelling you to forcefully shove him aside and run away with lightning speed.)

And there are still other actions you can take in response to unwanted, inappropriate panic attacks. Short-circuit them. Characterize them correctly: “It’s just a panic attack,” as opposed to “Oh, my god this is terrifying! This must not be happening!” Put a stop to overbreathing/hyperventilation as soon as you notice it – slow your breathing down by significantly extending your exhalations. If conditions permit, breathe into a brown paper lunch bag. If possible, begin exercising on the spot – jumping jacks, running in place (to compensate for the overbreathing). Finally, learn to effectively manage the stress in your life and learn to cope effectively.

To be sure, recovery from panic disorder is a process but by heeding these recommendations and putting in consistent effort you can indeed return to a time when – as nature intended it – full blown panic attacks only occur when they’re truly needed.