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Anxiety

Working Minds UK: Dovey Wilday Consultancy
Contact: 07941 196379

What is Anxiety?

Anxiety is the term that we use to describe a feeling of unease to varying degrees ranging from mild unease to feelings of panic.

Anxiety is experienced when we are in an actual or perceived place of threat or danger, and our bodies' own primitive survival mechanism (*flight or flight*) has become active to assist us in reacting to this threat or danger in order that we can survive.

Sometimes this system can be switched on in error when it's not really needed, and so we experience anxiety in the absence of actual danger. The symptoms that we experience can be intense, as in a panic attack, or can be a background level. The physical symptoms are often very frightening, although they are not harmful, just the side effects of our survival mechanism kicking in at the wrong time.

In this section we will look at:

- 1. Recognising the symptoms of anxiety**
- 2. Presentations of anxiety**
- 3. Fight or flight**
- 4. What maintains anxiety?**
- 5. The role of learning theories**
- 6. Overcoming anxiety**
- 7. Anxiety maintenance cycle**

1: Recognising the Symptoms of Anxiety

The symptoms of anxiety are considered here from a cognitive behavioural perspective using the five areas approach (*see section on the cognitive behavioural approach at the beginning of this booklet*).

Emotion

Anxiety

Irritability

Feeling keyed up

Feelings of wanting to escape

Behaviour

Avoidance of situations

Increased dependency

Restlessness/Jumpiness

Excessive alertness

Drinking

Cognition

Worrying thoughts

Difficulty concentrating

Mind going blank

Over interpretation of threat

View of self as vulnerable

Low self-efficacy

Thoughts of escape

Biology

Fight or flight symptoms (for example: sweating, shaking, dizziness, palpitations, nausea, dry mouth)

Environment

Recent experiences of actual threatening experience

Current actual environment of threat

Perception of threat in the past, present or future

2: Presentations of Anxiety

Anxiety is a term that encompasses a range of different disorders such as:

2:1 Generalised Anxiety Disorder (GAD)

Anxiety can be a long-term disorder where you feel worried most of the time about things that might go wrong. This is called GAD.

2:2 Phobias

A phobia is a fear that is out of proportion to any real danger. For example:

Social phobias (fear of meeting others, worry about how others see you, fear of public speaking)

Agoraphobia (fear of various places and situations, such as crowds or public places, often associated with panic disorder)

2:3 Obsessive-Compulsive Disorder (OCD)

OCD consists of recurring obsessions and/or compulsions. Obsessions are recurring thoughts or images about specific things that trigger feelings of disgust. Common obsessions include fears around germs, dirt or violence. Compulsions are thoughts or actions that people feel they must do or repeat. A compulsion is usually a response to ease the anxiety of an obsession, such as repeatedly washing your hands to deal with an obsession about dirt.

2:4 Panic Disorder

This is often termed having a fear of fear, and involves the experience of panic attacks that are episodes of intense anxiety.

2:5 Post-Traumatic Stress Disorder (PTSD)

PTSD can occur following the witnessing or experience of a traumatic event. It includes the experience of background anxiety, flashbacks to the traumatic event and active avoidance of triggers to the trauma.

3: Fight or Flight

Fight or flight is often referred to as the 'adrenaline reaction'. It is a very primitive survival mechanism that is common to all animals and it is aimed at helping us survive an immediate physical threat to our lives. As such, it is simply a series of changes within our body that occur within a split second to create us extra energy in order that we can fight or run away from (flight) a physical pending danger to our lives, and so survive. You may have experienced this when you have been in a situation such as seeing a car speeding towards you when crossing the road, or a near miss when driving etc.

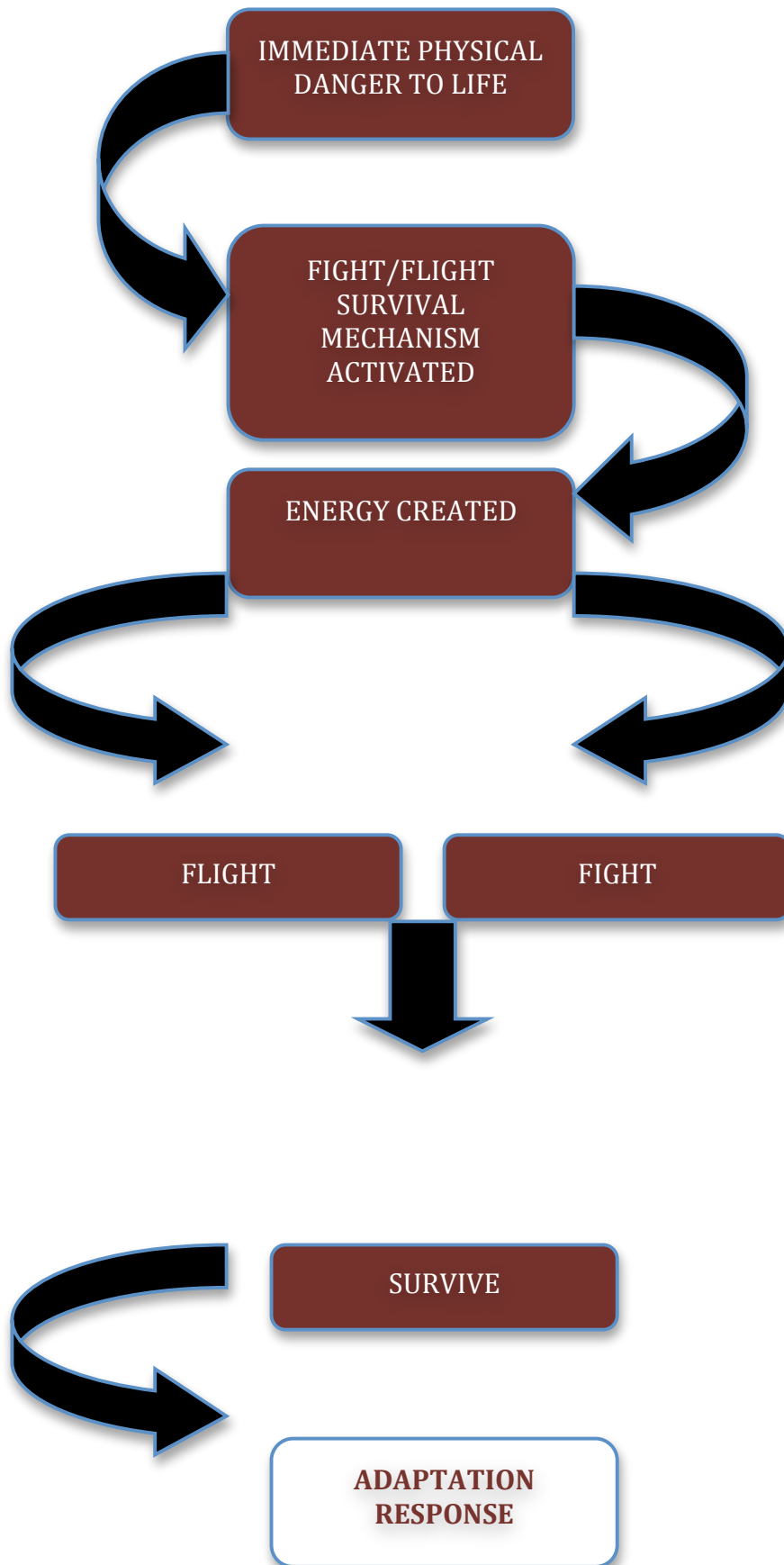
The fight or flight system is designed to be off in day-to-day situations and to turn on when it perceives or senses immediate physical danger.

It is also triggered when you re-enter previous situations where it was triggered. This is to a lower level and is to allow you to learn to adapt if previously safe scenarios become dangerous. This is called our *adaptation process* and is discussed in more detail later on. This process is illustrated in the diagram below (survival process).

3:1 What Happens in Fight or Flight?

The primitive unconscious part of the brain registers danger from either innate learning or previous experiences (either accurate or perceived). As a result, the fight/flight response is triggered in a fraction of a second to co-ordinate a process to create energy very quickly to enable you to survive an immediate physical danger. Adrenaline and other chemicals flood the system to produce a range of changes to allow this to happen. The table below summarises the changes, why they occur and the side effects of them

SURVIVAL PROCESS



Summary of Fight/Flight Response

What Happens?	Why?	Side Effects?
Breathing Rate Increases	To pull in oxygen for energy for the muscles to enable you to fight/run	Short, shallow breathing
Heart Rate Increases	To pump the oxygenated blood around to the muscles	Heart pumping faster
Blood Flow Changes	<ul style="list-style-type: none"> To gorge more blood in the blood vessels in the neck/ shoulders and back/legs to get ready for fight/flight To pull blood away from the extremities (e.g. hands and feet, to help survival as extremities are more vulnerable to loss and this can reduce blood loss) To bring blood into the trunk of the body to protect vital organs 	<ul style="list-style-type: none"> Tension in neck/shoulders. Headaches. Tension in legs and back Numb/cold extremities, tingling in them as blood returns
Digestion shuts down	To save energy for the survival mechanism	Dry mouth Difficulty swallowing Churning stomach
Impulse to remove weight and obstruction from body	To prevent choking by intense activity in case you have just eaten. To reduce weight to assist with running/fighting	Feeling sick Feeling like you need to go to the toilet
Shut Down Sleep Centre	To maintain alertness during danger	Unable to sleep Delayed onset of sleep Broken Sleep. Light/un-refreshing sleep
Move Brain activity to more primitive region	The priority in an immediate physical danger is speed. Our logic is slow and would put us in danger. The move to the more primitive area of the brain enables speedier although more rudimentary decisions	Poor concentration Poor memory Poor higher motor skills Poor reasoning and problem solving Difficulty with new learning
Restores Body Temperature Return of blood to extremities	To enable bodily functions within the body to function normally	Sweating, pins and needles, Tiredness (as a result of energy being produced but unable to be utilised as not needed now)

2:3 Fight or Flight Adaptation Responses

Another time the survival mechanism is designed to switch on is when it thinks something may be a potential danger, for example following an event when it did switch on (in a car accident). The survival system kicks in as a precautionary measure to ensure that this past situation where you have been safe (e.g. driving safely for 20 years) has now not become dangerous (based on recent accident). It may also be triggered in new situations where the brain has little or no information as to the safety of the new scenario.

This adaptation process enables us to adapt to a changing environment. The fight or flight process switches on to enable us to take additional care in case this new or previously safe scenario is or has become dangerous.

If the scenario is experienced *without* actual immediate physical threat, the brain area associated with our survival can learn that the situation is not one that will always be dangerous to us. With each learning experience the brain has of associating the scenario (e.g. driving) with us getting out alive, it is learning and becoming more confident that it is not necessary for it to be switched on here. This reduces the association of the scenario with danger, and, so the need for the fight or flight process from switching on. Gradually, with each exposure, the association (and the level of fight/flight triggered) is reduced until after a handful of times it does not need to switch on anymore, that is to say, it learns that it's not a scenario that will always lead to us being in immediate physical danger.

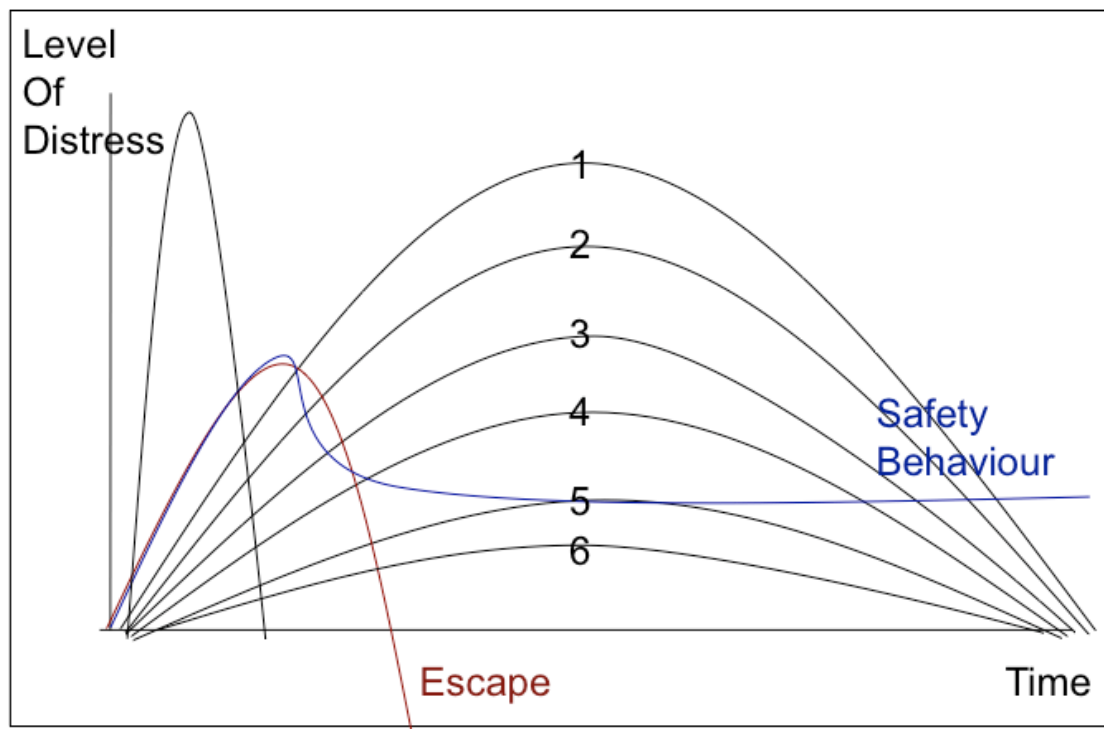
The survival process of **fight or flight** and adaptation are normal processes that will occur in all of us.

Problems can arise when we prevent this normal process from happening. This can be really common and certainly not intentional, but because the symptoms of anxiety (side effects of the fight or flight process being on when it shouldn't be) are distressing, we can often find that we attempt to avoid or reduce the symptoms by avoiding or over-compensating in some way. Cognitive and behavioural responses to threat reflect plans to protect us against danger. However, many can be counterproductive, as they are avoidant in nature.

If we take the car accident example, this would happen if we never drove again, or if we always had others in the car with us. This would

lead to an initial reduction in symptoms but would also prevent the adaptation process from gaining the evidence it needs to switch off/ or not switch on in those situations. As such, the threat remains with us and ultimately maintains our symptoms rather than allowing them to be extinguished. The graph below shows how this works:

PROCESS OF ADAPTATION AND MAINTENANCE OF ANXIETY



The black curves in the diagram above represents what should happen when our fight or flight response switches on in situations where we are not in immediate physical danger, the red and blue curves represent the types of coping that although offering us some initial reduction in the symptoms of anxiety/distress actually maintain anxiety in the longer term.

The gradually reducing distress curves represent each time we are exposed to the feared scenario and show a process of **habituation** in which the body learns to break the association between the exposed event and danger. The red line represents what happens to our anxiety/distress when we **escape** a currently feared situation, and the blue line represents what happens to our anxiety/distress when we adopt **safety behaviour**. Both options, as well as actual **avoidance**, in the first instance give us less anxiety/distress in the short term but actually prevent the process of habituation. As such, when we **AVOID, ESCAPE** or use **SAFETY BEHAVIOURS**, we are actually maintaining the link between the feared situation and danger, thus serving to reinforce anxiety.

The Role of Safety Behaviours:

Safety Behaviours:

- a) Exacerbate bodily symptoms. For example, controlling breathing to prevent the onset of anxiety symptoms may lead to hyperventilation (which leads to anxiety symptoms). Also suppressing thoughts can lead to the rebound effect and the paradoxical effect of increasing the thought.
- b) The non-occurrence of the feared outcome can be attributed to the use of the safety behaviour rather than correctly attributed to the fact that the catastrophe would not occur.
- c) Particular safety behaviours, such as increased vigilance for threat and reassurance seeking, can enhance exposure to danger related information and can strengthen threat appraisals further
- d) Safety behaviours may contaminate social situations and affect interactions in a manner consistent with the negative appraisals. For example the social phobic fearing the risk of negative appraisals from others may avoid eye contact and is unlikely to receive interaction from others and be excluded from conversations.

There are many things that function in these ways such as alcohol use (which serves an avoidant function), rumination over threat (which can serve as a safety behaviour) and distraction (which can serve as a form of cognitive escape).

5: The Role of Learning Theories

CBT is underpinned by theories of learning such as *classical conditioning* and *operant conditioning*. These theories further explain why anxiety can become so pervasive in our lives and also why we have a tendency to keep avoiding anxiety. Classical conditioning can explain why we can develop so many anxiety triggers and operant conditioning can further explain why we tend to maintain anxiety.

Classical Conditioning

As humans we have many automatic responses that take place on an unconscious level. One example would be the salivation response that is triggered in association with food. The food would be described as an unconditioned stimulus and the salivation would be described as the unconditioned response. That is to say they are designed to be associated together automatically. Classical conditioning explains the process where by things that don't usually cause a certain response can be conditioned to trigger that response.

A scientist called Pavlov discovered this; he paired the presentation of food with the ringing of a bell in a series of experiments with dogs. When food was presented the dogs naturally salivated. However, after a series of presentations of the food with the bell, soon the bell alone would cause the dogs to salivate. Thus the bell had become a trigger for salivation and Pavlov called this a conditioned response. Eventually this process would extinguish as the dogs learned that the bell did not lead to the presence of food. This unlearning would only occur however if the dogs were presented regularly with the bell and no food.

This learning theory is very relevant in the development of anxiety, as it explains why we can become anxious (i.e. the fight/flight survival mechanisms triggered) when we are not in a life-threatening situation. It represents the development of a conditioned response to something that would not naturally be associated with danger. This conditioning would be naturally unlearned where the conditioned stimulus repeatedly failed to produce the conditioned response (actual danger). As with Pavlov's dogs, after repeated presentation of the bell in the absence of the food, the strength of the association reduced. This explains how avoidance behaviours maintain anxiety as they prevent the unlearning of conditioned stimulus.

Operant Conditioning

Unlike classical conditioning, operant conditioning involves conscious learning that is to say non-automatic learning. Operant conditioning involves a conscious change in behaviour that is made in order to achieve the desired goals. This process reinforces our behaviour change by the expected outcome.

When a given behaviour is followed by a consequence, we learn to increase or decrease the behaviour according to whether the consequences are good or bad. Consequences can be giving or taking away of something positive, or giving or taking away of something negative. Taking away something negative is termed negative reinforcement and leads to an increase in the behaviour that triggers it. This is the part of operant conditioning that is important in the maintenance of anxiety, in that it reinforces avoidant coping.

When we do something that triggers anxiety for example, avoidant coping will initially take away this negative set of feelings and symptoms and, as such, we are more likely to use this coping in the future.

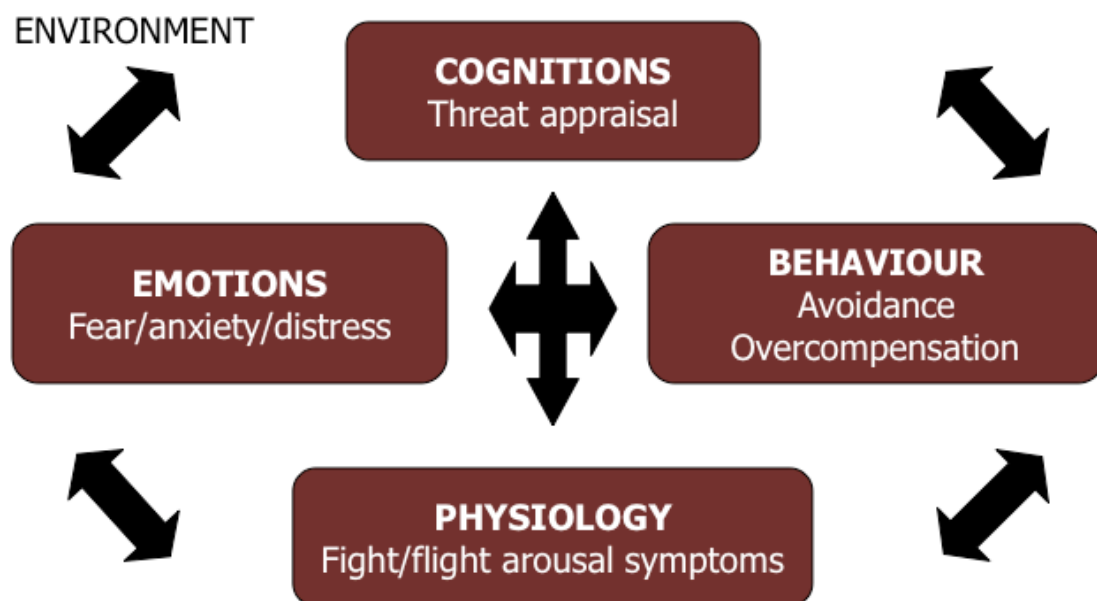
6: Overcoming Anxiety

In order to overcome and break this cycle of anxiety and enable our normal processes of habituation to occur, we need to *expose* to the perceived threat in the absence of these *maintenance behaviours*. See the section on *exposure*.

Summary

Anxiety is made up of the cognitions of *threat*, the biology of *fight or flight*, and the emotion of *anxiety* in the *absence of an actual immediate physical threat*. The normal processes that are in place for us to learn that fight or flight is being triggered inappropriately are prevented by the presence of behaviours that function as **AVOIDANCE, ESCAPE or SAFETY BEHAVIOURS** (Maintenance behaviours). The anxiety maintenance model on page 12 highlights this.

ANXIETY MAINTENANCE MODEL



The diagram highlights the cyclic nature of anxiety, where the role of avoidance, escape and safety behaviours serve as a short term release from symptoms but prevent our biological systems from exposure to the feared event thus maintaining the belief in the threat and the associated emotional and biological symptoms of anxiety.

Exercise:

Over the next few days think about what you do both cognitively and behaviourally when you feel anxious and check out any ways in which you might be unintentionally maintaining your anxiety. Once you have done this have a look at the section on graded exposure planning to help develop a plan to overcome your anxiety.