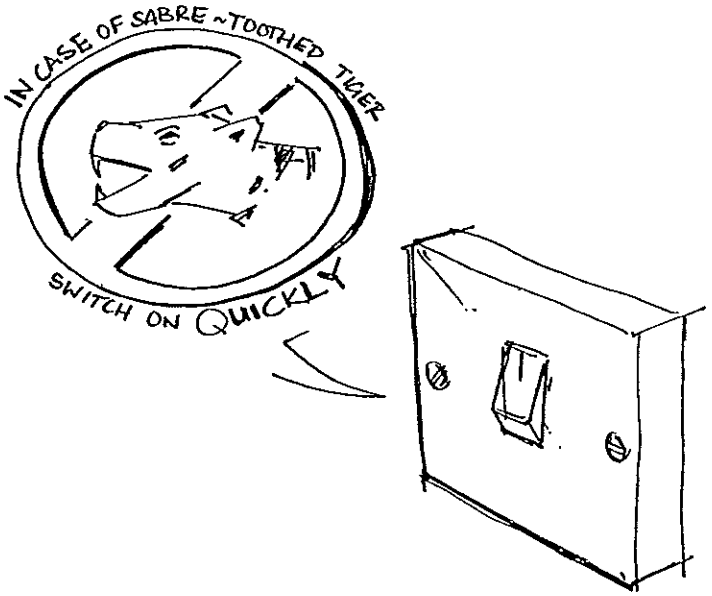
Supplement 5a

stresscontrol™
Face your fears; be more active; boost your wellbeing

Fight / Flight (Faint / Freeze)



Fight/flight is built into all of us. Its role is to protect us from threat. Understanding how it works lets us make sense why stress affects us in the way it does.

Instinct

Instincts are there to help us survive. A new born baby will turn to its mother's breast and suck to feed. A six month old baby will show a fear of heights. A mother who hears any baby cry will often want to pick up that baby and nurse it. We pull our hands away from fire. We drink when we are thirsty.

We do not have to learn these things. They are built into us to protect us; to keep us alive. We have had them for many thousands of years. Fear is also an instinct and closely linked to stress. It is there to protect us from ***threat***. It does this by using a range of mechanisms. The most common are:

Fight/Flight

The basic role of stress is to protect us from danger

- Stress makes us vigilant to potential threats.
- Stress puts our bodies and minds on "red alert" to face these threats.
- Stress then makes us focus on the threat (and to see everything else as a potential threat).
- It fills us with power and energy to fight the threat or run from it.
- Stress keeps us alert until the threat has passed.
- At times, if we feel we are in danger of being overwhelmed, stress tells us to retreat and lick our wounds.

We call this **'FIGHT / FLIGHT'** as it puts us in our best shape to run away from threat - **flight** - or to hit the threat head on - **fight.** This is why, when you feel stress, you often want to run/escape from the place you feel threat (flight) and why anger is common (fight). It is an ancient response. We are born with it and will have it all through our life. As a *very* rough rule of thumb, men are more prone to 'fight', e.g. get angry or argue; women are more prone to 'flight', to turn to others for help or try to defuse the situation.

We may also **freeze** or even **faint** when under threat.

It is like a switch in our brain. As soon as the brain detects something, it thinks –

'There is something out there. Is it a threat to me?

At this point, we may 'freeze' while the brain quickly gathers information about it. If it decides:

'Yes, it is a threat, prepare to deal with it', Freeze ends and Flight/Flight switches on to protect us.

Physical vs mental threat

Fight / Flight works best when we face a clear physical threat. As soldiers prepare for battle, they will all have the Fight / Flight switch on. If you get caught in a burning building, you will have the Fight / Flight switch on. In this case, the changes in your body and mind will help ***protect you***. You will see why later.

But the big word here is ***threat***. Fight / Flight is dealt with by the part of the brain that deals with emotion. This part of the brain sees no difference between a fear of, e.g. being attacked and a fear of making a fool of yourself. Both involve threat. One is physical threat. The other is a mental or social threat. But the response is the same – Fight / Flight is switched on. This is a simply black and white thing – think of a smoke alarm – it can't tell the difference between steam from the shower and the house burning down – it bleeps just the same for both.

So you are primed to fight or flee. This will help soldiers fight. But in the case of a fear of making a fool of yourself, these changes in your body and mind will just make things worse.

Let's look at three scenes. Each involves a sense of ***threat***:

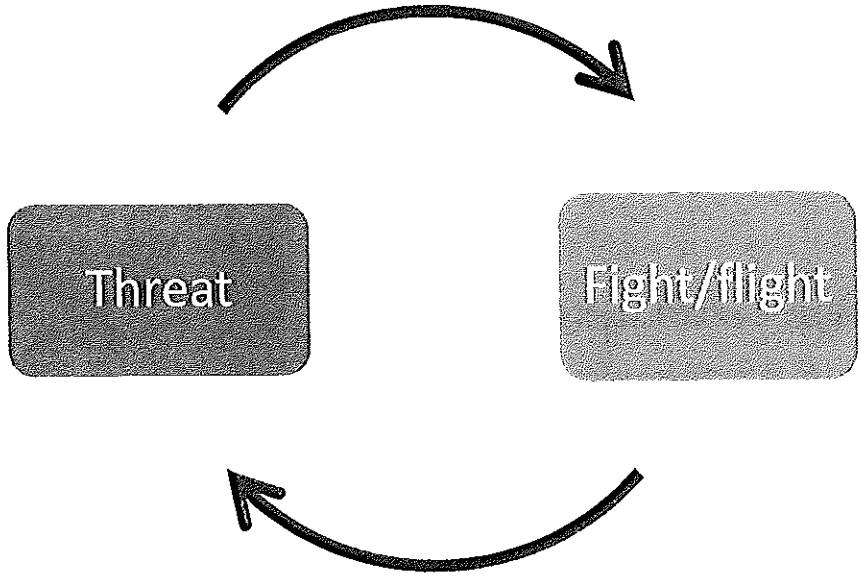
Kirsty is walking through a forest in Canada. She is sure there is a grizzly bear ahead of her. She freezes while her brain works out if there is really a bear and if it is a threat to her. It is. The brain quickly switches on fight/flight. She can now fight better or run faster and for longer if she needs to. Fight/flight makes her act on her instincts as her brain limits her ability to think – it wants her just to 'do', i.e. run as fast as she can in the other direction without thinking about it.

David is walking alone through a tough part of town late on a Friday night. There are two young men sitting on a wall just ahead of him. They seem to be drunk or on drugs. He freezes while his brain works out if the men are a threat. Maybe. It makes sense for him to be on his guard in case something happens. Fight/flight kicks in. He can now fight better or run faster and for longer if he needs to.

Sue is uptight about a mistake she thinks she has made at work. She is sure she will be pulled up by her boss in front of her co-workers. She will feel humiliated. She freezes while her brain works out if this is a real threat. As she is so stressed, she thinks it is. Fight/flight kicks in. She can now fight better or run faster and for longer if she needs to.

Who is helped here by fight/flight? Running fast could save Kirsty's life – bears kill. It might help David but it might make him get things out of proportion – he might start a fight when the boys may not be looking for trouble. But if they are and David fights then his chances of surviving improve. In each case, Kirsty and David will use up all this extra energy fight/flight gives them and, after a time, their bodies will return to normal. As they will be too busy focusing on the bear and the boys, they will not even notice what is happening to their bodies.

But what happens to Sue – fight/flight has filled her with energy but running or fighting isn't right for her. So all this pent-up energy stays inside her. Unlike Kirsty and David, she will be very aware of how her body is reacting and this may be scary. We call this the 'fear of fear'. So Fight/Flight just makes things worse for Sue. Her sense of threat triggers Fight/Flight; the body and mind changes are scary so she has a 'fear of fear'; this makes her sense of threat worse and so, a vicious circle builds:



How the body and mind react to threat

Think of how the Fight / Flight changes noted below would help protect Kirsty and, maybe, David. The exact same changes would happen to Sue. Would they help her, facing the threat of humiliation? Would they help you when you feel threat due to stress? The problem for Sue is that, as she can't burn off the energy, she will get ***side effects*** (as she can't run or fight):

The problem with side effects

Fight / Flight quickly fills the body with energy. As long as you use up this energy, e.g. if you run from the bear or fight the boys, you do not get any side-effects. But if you don't use up the energy, it gets trapped inside you. David would not get side effects as he would use up the energy if he runs or fights.

If you face a mental or social threat, you would not fight or run so the energy gets trapped. You would then get side effects. You may also focus on these side effects and worry about them (the 'fear of fear'). As soon as any threat is detected, this is what happens to your mind and body (these changes all happen at once). Think whether something like this happens to you when you feel stressed:

YOUR HEART BEATS FASTER AND STRONGER

This helps take blood to where we need it most:

- legs - so that we can run fast ***(flight)***or kick ***(fight)***
- arms - so that we can hit out ***(fight)***
- lungs - to improve stamina.

At the same time, blood is taken from places where it is not needed e.g. fingers, toes and skin (if you are wounded, you lose less blood as a result).

Side effects (brought on when you don't use up the energy): These changes may cause a numb or tingly feeling. At first, it may cause pallor to come across your face.

BREATHING QUICKENS AND DEEPENS

This takes oxygen to the lungs, arms and legs via the blood stream. This gives you more power.

Side effects: Chest pain, feeling breathless and a choking feeling. There is a slight drop in the amount of oxygen and blood sent to the brain. So you may feel dizzy, confused and have blurred vision. This is not harmful.

MUSCLES TENSE

The more power you have in e.g. shoulders, arms and legs, the better you can punch, kick and run.

Side effects: After a while, this may cause muscle aches and pain and/or shaking.

SWEATING INCREASES

Sweat helps cool the muscles and body. In hand-to-hand combat, the other fighter will be less able to hold onto you.

Side effects: You will be self-conscious about the sweat.

BOWELS AND BLADDER LOOSEN

As we prepare to face threat, we may want to empty our bowels and bladder. As a result, we will be in better shape to fight or run.

Side effects: this may happen far too often and lead to a fear you will lose control.

PUPILS DILATE

This lets more light into our eyes so we can see much better. We can see people creeping up on us from the side. This also makes us look fiercer to our opponents.

Side effects: Lights appear brighter.

DIGESTION AND SALIVATION SLOW DOWN

These are slowed down when you feel under threat. The saved energy goes to where it is most needed.

Side effects: You may feel sick. You may have a heavy feeling in your stomach. You may have a dry mouth.

VIGILANCE IMPROVES

We scan for signs of danger. When we find it, we focus on it and ignore all else. In stress, this means we pick up on things that we may not have noticed if we were calm. We see threats everywhere.

Side effects: Feeling keyed up, easily startled, poor concentration, mind going blank, feeling irritable.

ANTICIPATION IMPROVES

We try to work out what will happen next.

Side effects: Feeling on edge. This is the basis of the way we worry (the 'what ifs').

THE REACTION DOESN'T STOP ONCE DANGER PASSES

We can't calm down until the threat has clearly gone.

Side effects: As we use up a lot of energy, we may feel hot, flushed and tired.

These changes can be powerful. In Kirsty's and David's case, they would not have been aware of the changes as they were too busy looking for, and dealing with, the threat. Even if they had, they would not have worried about them as they would see why they could help them. Most of all, as they could see *exactly* what the threat was (the bear, the chance of being attacked), they would have a reason for why they reacted in the way they did. And of course, because they would run or fight, they would have no side effects to worry about.

Fight/Flight in the present day

Physical threat

Say you are crossing a road when you see a car speeding towards you out of control. You have to get out of its way or you could die. Fight / Flight switches on. Your body and mind are put on 'action stations'. Your brain will decide on Flight (fighting a car is not a great idea). You will focus on the car; work out where it is going to go. You will work out the best way to get out of its way. You will have the energy in your legs and lungs to run fast.

You will not be aware of doing this. You may feel your mind is blank the whole time. Yet this ancient survival mechanism Fight / Flight may just save your life.

Mental threat

Neil is at home in front of the TV. He is not going to be attacked by people or bears or run over by a car. But he is tense about how he will cope with the meeting at work the next day. He thinks of all the things that could go wrong. All the things he has not prepared. All the ways he could screw up. In other words, the meeting is a ***threat*** to him - he fears bad things could happen at it. The part of the brain that deals with emotion picks up the threat and it reacts in the only way it can - by switching on the Fight / Flight system.

All the things that happened to David crossing the road now happen to Neil. He is being made ready to fight or run. As he does neither, he does not use up the energy. Thus, he gets all the side effects I just noted. It will not be at all clear to Neil why his body and mind have changed. He has no clear link between his sense of threat and the reaction to it. He may not even be aware that he is worrying about the meeting. But he will be aware of all these changes. This will make him worse. The vicious circle is now in play.

How we interpret these changes

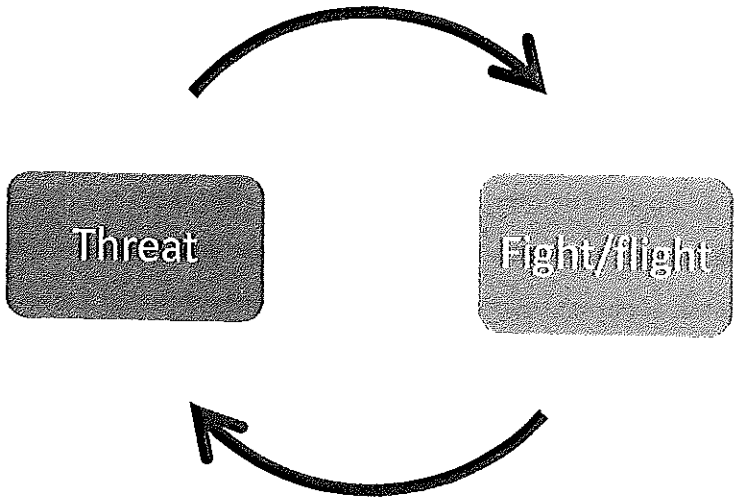
We always want to know why things happen. As the triggers of stress are often not all that clear, you may not see why you are reacting in this way. If there is no clear reason for your stress - a snake in front of you, a mugger holding you up, a car heading towards you - you will try to find a reason. Nine times out of ten, you will come up with the wrong one. You may ***interpret*** the Fight / Flight signs or the side-effects as dangerous:

"I feel really dizzy, what if I'm having a stroke?"
"Why am I so full of worry? I must be having a breakdown"
"I'm sweating like a pig. They can all see how bad I am"
"What if I lose control of my bowels when I'm out?"
"Why can't I get a grip of myself? No-one else acts like this"

Hair triggers

Once you start this, you have a vicious circle - you feel threat due to thinking like this - your Fight / Flight reaction stays switched on - you worry more..... and so on. So your Fight / Flight switch ends up on a hair trigger.

Think of a car alarm. If it is set properly, it will not go off unless someone tries to break into the car. If it is on a hair trigger, it can be set off by someone brushing against the car. This is what happens with stress. Minor things can trigger a reaction due to the hair trigger. Thus, you can feel threat when none exists.



This is important. Once stress gets a grip of you, you can feel threat in so many ways. Think of Neil talking to a group of work-mates after the meeting. He thinks he made a mess of it. He is still up tight. One of them says 'Did you enjoy the meeting?' Neil, hyper-vigilant and looking for threats, interprets the remark as meaning:

'She knows I screwed up in there. They all must be talking about it. They all think it is funny'

Think back to the vicious circles in the 'What is stress?' booklet. These thoughts will now affect his Actions and Body. They will feed his stress. So just when his Fight / Flight might have died down, it is set-off again. And all this from an ***interpretation*** that may be wrong. His work mate may just have wanted to know how the meeting went.

How this system works

When something happens (e.g. the work mate asks Neil how the meeting went), the part of the brain that deals with emotions (the limbic system) decides if it is a threat. If it thinks it is, it sends out the message to switch on Fight / Flight. The message is picked up by another part of the brain (the hypothalamus). It sends the threat warning to the rest of the body. The hypothalamus does four things very quickly:

1) It sends a message to the adrenal glands (just above the kidneys) to release two hormones:

- ***Adrenaline*** and ***noradrenaline*** race through your bloodstream. Their job is to help put your body on the alert. They speed up your body organs to prepare for fight or flight (e.g. they get your heart rate up).

2) It sends a message to the pituitary gland (in your brain). This gland then sends a message to the adrenal glands to release another two hormones

- ***Cortisol*** supplies your body with greater energy. It does this in a range of ways, e.g. it gets your liver to release cholesterol, fats, protein and glucose. It takes energy away from your immune system. This shuts your immune system down for a short time.

- ***Aldosterone*** raises your blood pressure. This helps you get ready for action.

3) It sends a message to the pituitary gland to release another two hormones:

- **Oxytocin and vasopressin** keep your blood pressure raised. This lets the heart, brain and muscles get the extra oxygen they need to cope with the threat. These hormones help your blood to clot more easily. So if you are wounded, you will lose less blood. Thus, you are more likely to survive. They also can cause your mouth to dry up as fluids are diverted to your brain and muscles.

4) It sends a message to the thyroid gland (in your neck) to release two hormones:

- **Thyroxine and triiodothyronine** speed up your metabolism. So they speed up blood pressure, breathing, heart rate, thinking processes and sweating. Your liver releases sugar into the bloodstream to give you more energy.

Other hormone effects

- **Endorphins** are the 'feel good' hormones. They act as a natural painkiller. But when stress goes on and on, your endorphin levels can drop. This can mean that you can feel pain more easily and your mood may drop.

The stress may get worse due to the effect of the hormones staying in the body. This may lead to fears that the stress may spiral out of control. This will not happen. These hormones have only a certain life span. After a while, they will die out and their effects will die out with them. In any case, a part of the nervous system (the Parasympathetic system) watches what is going on. As soon as it feels the threat has passed, it clicks on to calm down the body. It is there to protect the body.

Other survival reactions

Freezing

At times, the best way for you to survive danger is for you to keep very still. This could be if you are being hunted. You are less easy to spot if you don't move. So you may feel rooted to the spot (freeze) when you feel stressed. Even if you want to move, you find you cannot do so. There are other reasons for freezing to protect yourself.

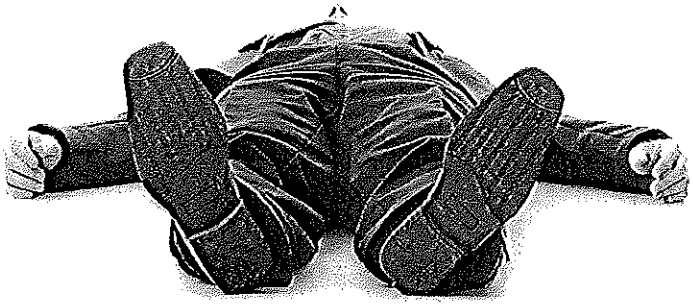
The rabbit caught in the headlights is doing the right thing – if the threat was a fox, the fox is less likely to see the rabbit if the rabbit keeps still. And, so, by freezing, the rabbit increases its chances of surviving. Sadly, cars don't act like foxes so, if it is safe, stop the car, switch off your lights and engine until the rabbit doesn't feel threat and so will 'unfreeze' and run off.

Just like the rabbit, when this happens to us, it means that the ancient mechanism switched on automatically without you being able to make the decision.

Fainting

Though not common, some of us may faint when stressed. This is more common in people who are prone to fainting for non-stress reasons. It is also common in those who have a blood, illness or injury phobia. In this phobia, unlike all the others, your blood pressure drops quickly when, e.g. you see blood, watch surgery on TV, etc.

Why should this happen? If the blood you see is yours, your blood pressure drops to stop you losing more. This may keep you alive. If you have fainted, you will be still and blood loss will slow right down. Again, it boosts your survival chances.



The role of depression

So far, we are talking mainly about fear. This fits in well with anxiety, panic, and anger. But what about depression? Is there any survival value in being depressed? It is hard, at first glance, to see any. But think about what happens when you are depressed. One of the most common things you do is ***withdraw***.

Withdrawal

Withdrawal is a way to protect yourself. The survival value is that if you are really up against it, when you feel overwhelmed by life, it makes sense to retire to lick your wounds. Once you are back on your feet, you can get back into the fray.

The problem with this, as with Fight / Flight, is that it might have worked well for us in the past but now it just makes us worse. When you feel depressed, you may think 'I don't have the energy to face this' so you withdraw. But instead of returning to the fray, you stay withdrawn.

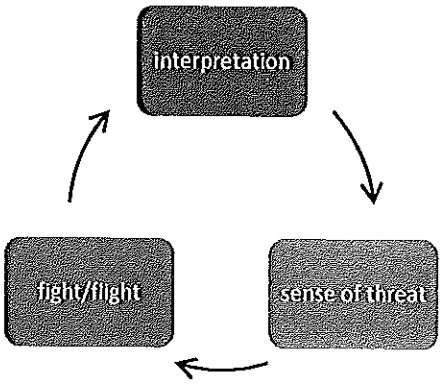
And because you stay withdrawn, you get worse.

This is because any kind of stress feeds itself. In this case, your self-confidence can't be fed so you don't feel better. Your energy does not come back, so you don't get better, and so on. As with fear, you must learn ways to face up to the things you have withdrawn from. You will learn to do this on the course.

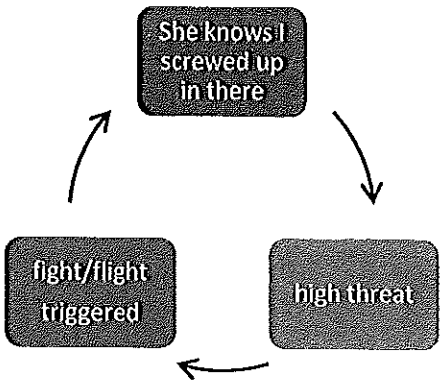
Shutting down the Fight / Flight / faint / freeze systems

You may now be thinking, 'Can I not just get a tablet to stop these effects?' After all, in the long run, it isn't good for you to have these hormones released into your body. But there is nothing wrong with this system. Due to the stress, your Fight / Flight reaction is on a hair trigger.

The best way to control Fight / Flight is to control stress. Bear in mind that the system is being set off due to the way you interpret what happens in your world. If the interpretation is scary, it produces a sense of threat. Threat then triggers Fight/Flight.

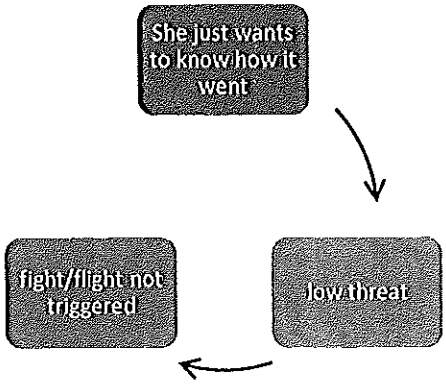


So if you change the way you handle stress, you will change the way you react. Once you learn to relax and take control, it will take a lot to make you feel threat. Controlling your thoughts then helps ensure the system is only triggered when there is real threat present. Neil could have stayed in control by changing the way he ***interpreted*** what his work mate said after the meeting. So, in response to 'Did you enjoy the meeting?" Neil has two options in the way he interprets the remark. Watch what happens, first of all, with a scary interpretation:



Anyone who thought a workmate thought this about you would feel threat. Threat triggers Fight/flight. This makes Neil more likely to interpret things in a scary way and, so, he feeds his vicious circle

Compare that to Neil altering his interpretation:



The threat is now much lower. The brain does not feel it has to trigger Fight/Flight. So the vicious circle is not fed and will weaken and die.

Session 2 will teach you to relax the body, reducing your vigilance and, therefore, less likely to detect false threats.

Session 3 will teach you how to challenge thoughts and alter interpretations.