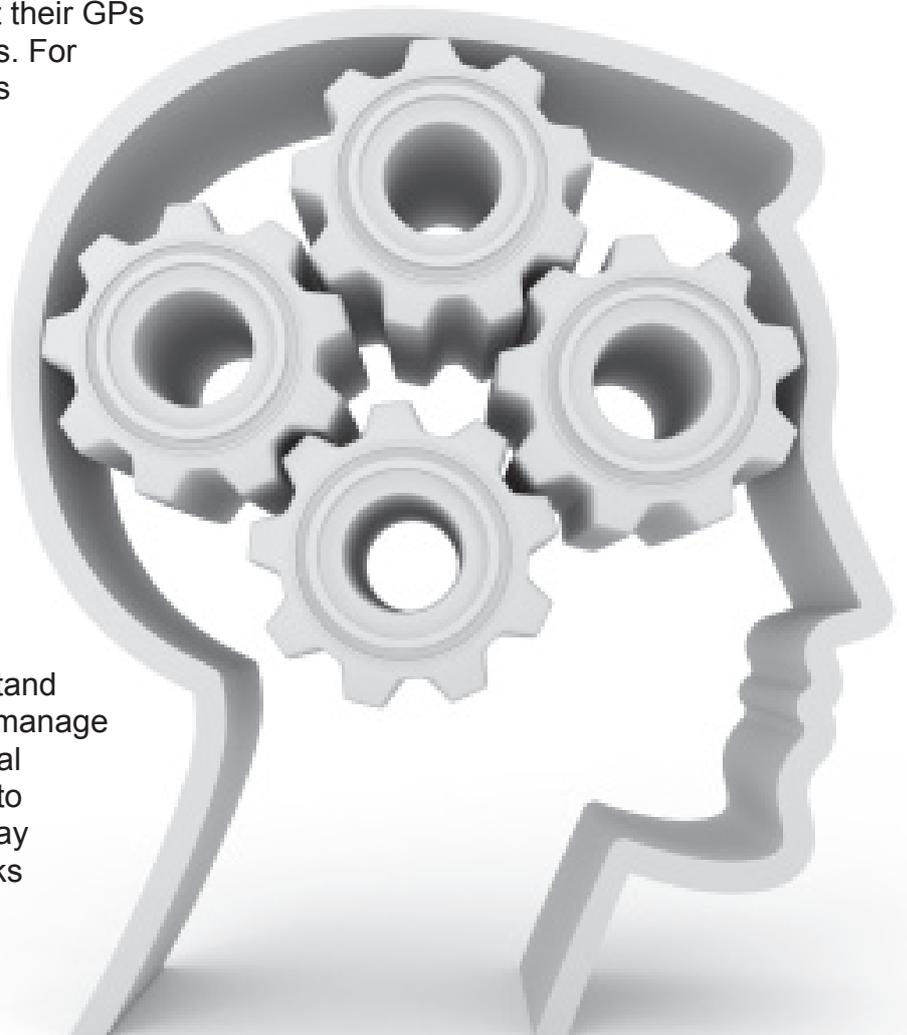


Understanding the mind-body link

Looking at different ways to manage your physical symptoms and emotional well-being

When people come to hospital or visit their GPs it often because of physical symptoms. For some physical problems the diagnosis and treatment is clear. For example, if you have a broken leg your doctor can take an x-ray to confirm the break and put your leg in a cast. However, some health conditions are more complex and are affected by many different factors. For example, we know that the mind and body are closely linked and affect each other. Learning about how they are linked may help you understand your symptoms and manage them more effectively.

This leaflet will try to help you understand this link and look at different ways to manage your physical symptoms and emotional well-being. These ideas may be new to you and seem unusual at first. You may wish to read this leaflet in small chunks or with a friend or family member.



What is the mind-body link?

You may already be familiar with phrases which describe the mind-body connection in day-to-day life such as something being a “pain in the neck”, making your “blood boil”, having a “gut feeling” or being “heart-broken”. These examples all describe the way that the mind can affect the body.

In this leaflet, when we talk about the ‘mind’ we mean the collection of thoughts, feelings, beliefs, attitudes, memories, past experiences and personality that make up a person’s internal world.

Is it all in my head?

It is important to point out that in this leaflet we are not suggesting your physical symptoms are all in your head. The reality of your physical symptoms is not in doubt when we talk about the mind and body being linked. It is important to make this clear because we know that some patients, at one time or another, have felt that their difficulties were dismissed by others, including healthcare professionals, as “all in their head”.

How does it work?

The brain and the body are constantly sending messages to each other. These messages tell the brain and body to make changes and adjustments to the way they are working. For example, if your eyes told your brain a car was travelling towards you at speed, it would send a very fast message to the body to step back out of harm’s way. Similarly, if your stomach was empty and your body needed fuel, your brain would listen to that message and send you in search of food. So, the mind and the body are in constant communication to keep you healthy.

Summary

The mind and the body are closely linked and affect each other. This is not the same as saying your physical symptoms are ‘all in your head’ or not real. It means that your thoughts and feelings can affect your body and physical symptoms can have an effect on what you think, how you feel and what you do.

‘Fight-Flight’ mechanism

An example of this close relationship between the mind and body is the ‘Fight-Flight’ mechanism. This alarm system developed to keep us safe from danger, like the threat of predators for example. It is triggered when you feel threatened and it makes your body get ready for a fight or for running away (e.g. by making your heart beat faster and your muscles tense up). These physical symptoms are the result of the release of stress hormones in the body, such as cortisol and adrenaline.

This worked really well when there were predators around. Unfortunately, it is less helpful for modern day threats. Things like money worries or fears about the future can trigger this ‘fight or flight’ response, even if it is not that helpful for solving the problem.

Chronic vs. acute stress

Try to eat a well-balanced diet spread across the day. This may help your body fight off infections and When the ‘Fight-Flight’ mechanism is activated occasionally the body can cope and recovers well after the surge of stress hormones. This is sometimes called ‘acute stress’ and we are designed to deal with this.

However, when the 'Fight-Flight' mechanism is activated very often the body has less chance to recover fully before the next stressful event. This is called 'chronic stress' and we are less well adapted to this kind of stress.

Summary

Our fight-flight response helps us identify and respond to threats. This has helped us over many years. However, when it is switched on over and over again, rather than occasionally, it is less helpful and can even work against our health and well-being.

The powerful role of thoughts

"For there is nothing either good or bad, but thinking makes it so."

Shakespeare

Even though we are not faced with sabre-toothed tigers every day, life presents lots of situations which can be perceived as threatening and trigger this stress response. Our thoughts and judgements about situations have a very important role, determining whether this stress response is triggered or not.

For example, if you ran for the bus and immediately afterwards had uncomfortable symptoms like a pounding heart and sweating, you might have the thought, "Gosh, I'm not as fit as I used to be" and continue your journey as usual without any great change in how you feel. However, if you had a family history of heart attacks and had a recent diagnosis of high blood pressure yourself, you might instead have the thought, "I'm having a heart attack", and feel very frightened and call an ambulance. This example shows that the same experience, interpreted differently, can result in very different feelings and choices.

The mind-body link and your health

Some of the body's systems are more affected by the mind-body link more than others. You may recognise some listed below.

Digestive System Changes

It is common to experience an upset stomach (e.g. nausea, diarrhoea, bloating or pain) during times of stress. There are lots of nerve connections between the brain and the gut. In fact, the gut is sometimes called the 'Little Brain' for this reason.

Most people have experienced this type of mind-body connection at one time or another. For example, maybe you have had a churning stomach when you were dreading something or needed the toilet urgently before something important like an interview.

It is well known that the gut is affected by the 'Fight-Flight' reaction. It has even been suggested that having an empty bladder and bowel may have helped our ancestors flee from predators.

Similarly, people who have a diagnosis of Irritable Bowel Syndrome (IBS) say their symptoms are affected by stress. For more information about IBS see the IMPARTS Managing IBS leaflet.

Skin Conditions

People with skin conditions, including eczema or psoriasis, notice that during stressful periods their symptoms can become worse and respond less well to conventional treatments.

These flare ups can in turn increase stress creating a vicious cycle. For example, people may worry about their skin's appearance and how others will view them or be bothered by uncomfortable itching and the urge to scratch. These stresses can pile up, in some cases upsetting the skin further or stopping it calming down as quickly.

Heart Symptoms

Changes in the way the heart works are common in stressful or exciting circumstances. For example, stress or excitement can cause the heart to beat faster and raise blood pressure. This is part of the 'Fight-Flight' response and helps you get ready to run away or fight the threat. Although these heart symptoms can be unpleasant they are not dangerous and always subside by themselves after some time without doing you any harm.

These normal changes in heart rate and blood pressure as a result of stress can be concerning for people with or without heart conditions. Worrying that your symptoms may be a sign of something serious can be very frightening. These worries, and the stress and anxiety that go with them, can increase these 'Fight-Flight'-related heart symptoms, creating a vicious cycle.

Breathing Difficulties

Shortness of breath is an unpleasant symptom which most people have experienced. For example, you may be short of breath after running for the bus, particularly if you are not used to running. Shortness of breath can also be connected to health conditions like asthma or chronic obstructive pulmonary disease. This shortness of breath can be a very frightening experience, particularly if you fear something awful might happen like passing out or not being able to get your next breath.

These thoughts, and the fear and anxiety associated with them, can bring on more physical symptoms, including more shortness of breath. These symptoms can make it seem even more likely that something awful is about to happen. For some people, this can even lead to a panic attack.

While avoiding situations which trigger breathlessness, e.g. activity, often seems like a logical solution, it is usually unhelpful physically and emotionally in the long run. For further information, see the IMPARTS Managing Breathlessness leaflet.

Pain

Pain is a complex symptom which can sometimes be difficult to understand and treat. This is because it is a very personal and subjective experience. It cannot be seen on a scan or measured by a blood test. Pain is both a physical and emotional experience and is affected by the mind and the body. For example, the experience of pain can be affected by stress, anxiety and depression. Some pain conditions, like migraine and other headaches, can be triggered in some individuals by physical and emotional stress.

Fatigue

Fatigue is another complex physical symptom which, like pain, is affected by physical and mental factors. Commonly, fatigue follows physical activity, lack of sleep or long periods of wakefulness. Fatigue can also be a symptom of certain health conditions as well as being a side-effect of some medications.

However, fatigue can also be affected by how we think and feel. For example, boredom can lead to feeling fatigued and sleepy whereas an unexpected piece of good news could give you a burst of energy. Fatigue can also be present as part of mood problems such as depression and anxiety. People who experience health problems may struggle with fatigue which is a combination of physical and emotional factors.

Summary

Some of the body's systems are well known to be affected by the mind-body link. Most people will have experienced changes in these body systems in response to stress or excitement at some time in their life. Commonly affected are the digestive system, the skin, heart and breathing rate, pain intensity and fatigue.

How do the mind and body affect each other?

Physical Factors

The way physical changes in the body occur in response to our thoughts, feelings and reactions is not fully understood. However, below are some possible mechanisms.

Stress Hormones and their Effects

The body's stress hormones, which include adrenaline and cortisol, are designed to have a short term effect, giving us enough physical energy and strength to get out of dangerous situations. This surge of 'Fight-Flight' hormones can have temporary effects such as a raised heart rate, sweating, shaking, shortness of breath etc.

However, when these hormones are released frequently, they are thought to have a longer term effect on the body, affecting how it works as a whole. This may make it harder for the body to keep all of its organs and systems working as they should, for example:

- **The immune system** may be less effective when stress hormones are released regularly, i.e. chronic stress. This may be because the body focuses on the task it sees as most important, avoiding the threat, rather than using energy to detect infections, for example, and keep them under control.
- **Healing** is slowed down. Like the immune system, when the body believes it is under attack it puts tasks that are not immediately essential, like repairing damaged cells, on the back-burner. While this is OK in the short-term, in the long term it can cause physical problems by slowing down recovery.
- **Digestion**, like healing, is also put on the back burner during times of stress which can lead to digestive discomfort such as abdominal pain, nausea, constipation, diarrhoea and bloating, for example.

Psychological Factors

Thinking styles can affect how you feel emotionally and physically. Some common thinking styles make it seem very likely that something bad is going to happen. This can lead to feeling worried, sad or upset regardless of whether the thought is true or not. You may recognise some of the examples on the next page.

■ Thinking Styles

How you think – your ‘thinking style’ – can affect how you feel emotionally and physically. Some common thinking styles make it seem very likely that something bad is going to happen. This can make you feel worried, sad or upset even though the thought is not true. You may recognise some of the examples below.

Thinking style	What you may think when you feel anxious or worried
Thinking the worst	These symptoms must be a sign of a very serious illness
Mind reading	They think I’m exaggerating. They probably think it is all in my head
Predicting the future	These difficulties will get worse and worse so I won’t be able to return to work as I had hoped
Overgeneralising	I’ve had one bad flare-up so far since my diagnosis. That means I’ll get lots of flare-ups
Jumping to conclusions	This new dose of medication won’t work.

Thinking style	What you may think when you feel anxious or worried
Discounting the positive	Today was a better day but it’s bound to be a one-off
Self-criticism and labelling	I can’t do anything right. I’m a failure
Pressuring language: shoulds, musts, oughts	I should be able to cope with this and I ought to be doing more around the house.

■ Making sense of your condition

When you have a health problem, it is normal to try to make sense of it by working out what it means for you and your life. The way you feel about the problem and how you deal with it may depend on the answers to some important questions, such as:

- What kind of problem am I facing? Is it minor or serious?
- How do I feel about it? Am I worried, stressed or down about it?
- Can I cope with this problem and with how I feel about it?
- Are the things I’m doing to try to cope working?

Your answers will affect how you feel physically and emotionally. They will also have an effect on what you feel able to do day to day. In the long-term, they may even affect how limited you are by your condition.

Think about these two examples:

Dave has been diagnosed with high blood pressure. Dave believes this is a very serious and dangerous diagnosis because his father died from a heart attack. He feels very worried about

it and doubts whether he can cope. He has tried to look after himself by exercising, like the doctor advised, but this seemed to make him feel worse, making him more worried, so he stopped. He struggled to stick to the tough exercise regime he set himself so feels guilty and ashamed as well.

Brian also has high blood pressure. Brian knows it is not something he can ignore but he believes it is common and treatable so he is not very worried about it. He spoke to his GP who prescribed some medication and gave him advice about his diet and exercise. He goes out and exercises, even though he often doesn't feel like it. But if he misses his gym session or run, he tries not to beat himself up about it and gets straight back into it the next day.

These examples show that your thoughts and beliefs about your condition and your coping skills are important and can affect how you manage your symptoms.

■ Expectations

Our expectations about what is about to happen can affect the kind of experience we have. For example, studies have shown that people expecting to feel pain report stronger pain when given a harmless electric shock compared with those not expecting pain given the same shock. This could mean that expecting examinations or procedures to be painful and unpleasant, and thinking about the pain you expect to feel, could actually make the experience worse.

Physical Factors

■ Feeling down

Feeling down or depressed can have effects on your body. Fatigue, poor sleep, changes in appetite as well as increased aches and pains are all associated with feeling down and depression. It can be difficult to tell these physical symptoms apart from the other symptoms you may be having.

■ Anxiety

When you are frightened or anxious you can also get lots of physical symptoms such as a racing heart, sweating, shaking, feeling dizzy and feeling sick. Although these symptoms are not dangerous, they are often unpleasant and you can wrongly think they are signs of a more serious condition.

■ Anger

The changes that happen in your body when you are angry are similar to those that happen when you are anxious. Your heart may beat faster, you may start to sweat and feel hot and tense. Others may notice you becoming quite flushed and red in the face.

Your choices and responses

■ The things you do

Some things you do will have a good effect on your body and mind such as eating a good diet, exercising and having a good sleep routine. Making time for enjoyable things such as hobbies and getting out and meeting people can also help (see page nine).

Other things such as smoking, using drugs or drinking too much alcohol can have a bad long-term effect on your physical and emotional well-being even though they seem to help in the short term.

■ The things you do not do

Avoiding things because of fear, feeling down or physical discomfort can make life easier in the short term. This is because you do not have to face the thing you fear, overcome the feeling that you cannot be bothered, or have more unpleasant physical symptoms.

But in the long term this can be unhelpful. For example, you can become more anxious because you never find out if your fears would come true. It can mean that you keep feeling down or feel even worse because you never get a chance to have fun, pleasure and a sense of achievement. It can also make you sure that you cannot have a full and vibrant life without unpleasant physical symptoms, which may not be true.

Summary

While we do not fully understand how your thoughts, feelings and reactions cause physical changes in your body, it is believed to be affected by a range of factors. These include:

- ***Physical changes such as surges of hormones.***
- ***What you think about, your beliefs and what you think is happening.***
- ***Your emotions, such as anxiety, anger and feeling down.***
- ***The things you choose to do – or not do – in order to cope.***

Positive links between your mind and body

The mind-body link does not only have bad effects on our physical and emotional state. It can also have good effects. You may recognise some of the examples below.

■ Relaxation

When you get a chance to relax, such as having a bath, sitting in the sun, listening to a calming piece of music or practising meditation, you may notice changes in your emotional state such as feeling less tense and more at ease. There are also changes that happen in your body such as your heart beating slower, your breathing slowing down and your blood pressure going down.

■ Exercise

Many runners and other athletes talk about feelings of physical and emotional well-being during and after exercise. You can feel this after lots of other activities as well, such as walking, going up the stairs or going to exercise classes. It is thought that chemicals called endorphins, which your body produces when you exercise, are what make you feel happier.

■ Positive events, pleasure and achievement

When positive things happen such as getting good news, laughing with friends or being meeting with friends or family after a time apart, you usually feel happier and more at ease. During these times, you may also feel more physically alert and active rather than sleepy and sluggish. The same can happen when you do activities you enjoy or something that gives you a sense of achievement. These examples show the powerful effect of positive experiences on both your mind and body.

Summary

The mind-body link can also have positive effects and make you feel happier. Things such as relaxation and exercise are known to have a good effect on your mind and body, and positive events can quickly make you feel better both physically and emotionally.

Using the mind-body link to help you manage your health

■ Look after yourself physically

Try to eat a well-balanced diet. Take regular exercise if you can. Think of an activity which you can manage and might enjoy. If you have not been active for a while, you might need to take any exercise quite slowly. Eating well and keeping active can help to make you less stressed and tense.

Allow yourself enough time for sleep and rest, but try not to worry if you are not sleeping well. Having a regular bedtime, and allowing yourself time to wind down before bed, can help. Try not to have any alcoholic drinks just before bed or to rely on caffeine during the day. These will only make you feel worse in the long run.

■ Learn to relax

Learning how to relax can help your mind and body. You can try different things until you find one that works for you. For example:

- Listen to relaxing music or 'white noise' such as the sound of waves crashing. You can download free white noise apps to your smartphone or use Google to find audio files to download to your PC or MP3 player, or buy a CD.
- Spend five minutes focusing on the rhythm of your breath.
- Try using prayer or meditation to relax.
- Imagine being in a peaceful scene, such as a beach or woodland. Notice what you can see, hear, touch, taste and smell.
- Gently tensing and relaxing different muscle in your body until you feel physically relaxed. Try not to rush around during the day. Leave plenty of time for your planned activities.

■ Balance your awareness

Being aware of your body can help you to make wise choices. But being too aware can make it hard for you to focus on other things. This means you can miss out on fully enjoying the good things in life. Being too aware can also cause you unnecessary worry and distress, which can make your symptoms feel worse.

It can help to put your feet flat on the ground and simply notice how it feels. You can also try focusing on what you can see and hear in the world around you.

■ Talk to someone

When you are feeling stressed, anxious or down you might not feel like talking. You might even want to avoid talking about things such as your health and symptoms that make you feel anxious or down. But talking to someone you trust about how you are feeling can really help. You might want to let them know that they can help you just by spending some time with you and listening.

They may also be able to help you put some of the other ideas in this booklet into practice. Your healthcare professionals can also give you support and information.

■ Understand your thinking

Understanding what sets off your fight or flight response is a good first step. Sometimes it is a powerful thought that pops into your mind after something upsetting or stressful. When this happens, try to note down the answers to these questions:

“What was happening just before I became stressed?

“What happened in my body?”

“What was running through my mind?”

Once you know what sets off your stress and understand how it affects you, you can start working out how to manage them better. When you notice thoughts that make you feel bad, try asking yourself some of the questions below.

■ Useful questions to ask yourself

How likely is it that this thought is true?

Not all of the thoughts our mind comes up with are facts. It can be easy to think that some thoughts, such as ‘I can’t cope’, are facts because they make you feel so bad emotionally.

Is there any evidence against this thought?

When you feel very bad, physically or emotionally, it is easy to imagine that the worst will happen or that you will not be able to cope. But you might remember times in the past when you coped during hard times. Reminding yourself of these times might help you think of things you can do that will help you to manage.

Is there another way of thinking about what is happening?

For example, while unusual symptoms may be a sign of serious illness it is also possible that they are normal. Remind yourself of any information or advice you have been given by your healthcare professional, family or friends that may help you to come up with a different reason. For example: “Although these symptoms are unpleasant, my doctor explained that they are not likely to be serious and they may be a sign I am feeling stressed.”

What would you say to a friend?

If a friend was worried that their health would get so bad that they would end up getting stuck at home, what would you do? Would you focus on the worst things that could happen? Or would you help them to think about times in the past when things got better or when they coped even though times were hard? Try to talk to yourself in the same way as you would a friend you really cared about.

■ Try paying attention in a different way

When you are upset or feeling unwell physically, you can start thinking about the past, and how things were better or worse. Or you can think about the future and all the worrying things that might still happen. Being stuck in the past or the future in this way can be very draining physically and emotionally and can make it hard for you to live fully in the here and now.

One way around this is to try taking a curious attitude towards whatever is happening right now, including your thoughts, feelings and sensations, without judging them or trying to change them. This approach is called ‘mindfulness’. Try these simple steps:

- Focus first on your breath. Pay attention to its natural rhythm.
- Notice the rise and fall of your chest and stomach.
- Notice how the breath feels coming in and out of your nose.
- Do not worry if you notice your mind has wandered off. This is normal.
- Just briefly note what grabbed your attention.
- Then bring your focus back to your breathing.

Being mindful of your experiences is a very different way of paying attention and it takes practice. If you think mindfulness might help you and want to learn more, there are lots of books and CDs about the approach and how to use it in your everyday life.

■ Be guided by your values

When you are having a hard time, physically or emotionally, it can make you feel like opting out of doing things such as exercise or meeting with friends, for example. Not doing these things may seem to help in the short term but you can miss out on the things that really matter to you in the long term, such as close relationships or good health.

Try to ask yourself what things matter to you most. For example, perhaps it is your family, friends, health, work or hobbies. Try to do something most days that keeps you in touch with your values. Usually, there is more than one way of living your life guided by your values. You might need to try out new approaches if your old strategies no longer work.

Samantha's main value was being a good parent. This used to mean running around with her children and carrying all their heavy things for them. But since being diagnosed with arthritis, she has had to find new ways of being a good parent even though there are days when she cannot run or carry. On these days she makes more time to read to her children and help them with their homework.

■ Do things you enjoy

Summary

- ***Look after yourself physically. Eat and sleep well. Try to find time for exercise***
- ***Learn to relax***
- ***Balance your awareness. Try not to spend too much time thinking about your body or ignore what it is telling you***
- ***Talk to someone who will listen to you and try to understand.***
- ***Understand your thinking. If you are bothered by unhelpful thoughts, you may be able to find other ways of thinking about your situation.***
- ***Practise paying attention in a different way, an approach called 'mindfulness'***
- ***Do what matters to you. Be guided by your values if you decide to make changes.***
- ***Look out for chances for fun and pleasure.***

Look out for chances for fun, laughter and pleasure. This could mean meeting a friend who makes you laugh, watching a repeat of a comedy show you like or making time for things you really like doing such as an afternoon of watching football or a soak in the bath. Also, try to do things that will give you sense of satisfaction. Try to notice whether these affect how you feel in your mind and body.

What if I can't find out what is causing my symptoms?

Sometimes the cause of symptoms is clear and you can be prescribed a treatment that stops them. But sometimes their cause is not clear. If so, you may have been told by your healthcare professionals that your symptoms are unexplained.

The stress and worry of trying to find out what is behind these symptoms can make you feel worse physically and emotionally. Trying to find a reason for them can make you miserable and frustrated.

Instead, you could try to accept that these symptoms are part of your experience. Use mindfulness to notice any thoughts that judge these experiences, then let them go as if you were watching leaves float by on a stream.

You can then choose to shift your focus and energy to living a rich, vital and meaningful life even though the symptoms are still there in the background. This is not an easy approach at first and not everybody will be ready to try it out.

It is important to say that accepting that you have these symptoms does not mean you should not seek medical treatment when you need it. Visit your GP if your symptoms change and become unusual for you.

Next steps

- Plan a time to use the ideas in this leaflet.
- Share the ideas with someone who can support you.
- If you have tried the ideas in this leaflet and they have not helped, talk to your healthcare professional about getting more support.

More reading

- *Manage Your Mind: The Mental Fitness Guide*, by Gillian Butler and Tony Hope
- *Mindfulness: A Practical Guide to Finding Peace in a Frantic World*, by Mark Williams and Danny Penman.

King's Patient Advice and Liaison Service (PALS)

This is a service that offers support, information and assistance to patients, relatives and visitors. They can also provide help and advice if you have a concern or complaint that staff have not been able to resolve for you. The PALS office is located on the ground floor of the Hambleton Wing, near the main entrance on Bessemer - staff will be happy to direct you.

Tel: 020 3299 3601 Fax: 020 3299 3626 Email: kch-tr.PALS@nhs.net

Written by Dr Claire Doyle, Clinical Psychologist, and Dr Jane Hutton, Consultant Clinical Psychologist.