

# Guide to Our theories so far

My understanding of knitting and stitching as effective therapeutic tools is constantly growing. These are my theories so far...

Stitchlinks has been studying the therapeutic benefits of knitting and stitching since January 2005. Many of you have been asking what my theories are so far, so this article gathers together my current thinking on how knitting and stitching are working to improve quality of life. These ideas are constantly evolving as I talk to patients, doctors and psychologists, so keep visiting the Stitchlinks website to keep up to date.

Let's begin by taking a look at some facts. It's thought that 75% - 90% of visits to doctors are as a

*"Best healthcare PLUS self management offers a relief of symptoms of between 57% - 90%!"*

result of stress; it causes more staff absences from work than the common cold. The American Institute of Stress goes as far as stating that 90% of all health problems are caused by, or exacerbated by stress. It's also known that people suffer most from stress when they feel there is nothing they can do to relieve the situation they find themselves in.

Nearly eight million people live with chronic pain in the UK alone - that's one in seven of us. Research at King's College, London in 2005 found that 60% of UK chronic pain sufferers go untreated. The Pain Coalition in 2007 found that only 14% see a pain specialist. In light of these figures I find it difficult to understand why Pain Management courses and even the Units themselves are being threatened with closure across the UK.

Statistics are equally staggering for depression. One in three women and one in five men in the UK will suffer from depression at some stage in our lives. Recent figures from the Institute of Psychiatry estimate that of those

who are diagnosed as severely depressed only 12.5% report being treated for depressive disorder.

## An urgent need

I believe that there is an urgent need to find an easily accessible, cheap, self-management tool, not just here in the UK, but across the world. Being able to help yourself is empowering and puts you in control of the situation. The Long-term Medical Conditions Alliance found that best healthcare on its own could provide relief of between 40% and 60%. However, if

you combine best healthcare with self management there is relief in symptoms of between 57% and 90%. Your knitting and stitching can complement your medical treatments in a number of ways.

Over the last three years I've been looking at the processes of knitting and stitching and what they entail. From there I've looked at the profound statements made by knitters and stitchers across the world to ascertain whether they could have a medical/scientific explanation. I then looked at whether these crafts can be used in a medical environment; whether they could be used as part of a preventative treatment regime, and could they be used to teach specific skills more easily, making skills such as mindfulness more available to the wider population? I also looked at whether having learnt these skills could they be transferred to other areas of life when you don't have your knitting or stitching to hand? And my answer is YES to all these. Finally I looked at how we could provide ongoing support for those using

therapeutic knitting and stitching as self-management tools. That support network, Stitchlinks, is now in place and is successful and free to everyone.

One of the first questions I'm asked by doctors and healthcare professionals is 'Isn't it like old fashioned occupational therapy (OT)?' or 'Isn't it because you're giving people something they enjoy doing?' The answer is 'Yes' and 'No'. Yes, because it's already known and accepted that occupied people feel less pain and less depression than those who do nothing. And yes, giving someone a sense of purpose is important as are all the other aspects involved in traditional OT, which sadly has been cut back drastically in most clinical areas. The answer is also 'No' as there appears to be much more going on when we knit or stitch. These are some of my theories so far -

## Repetitive movement

The rhythm of the repetitive movement induces a form of meditation and can be utilised to teach mindfulness, making its benefits more accessible to a wider population. Buddhists who knit have told me they enter a similar state of mind as when practising mindful meditation. Some have said that knitting enhances their meditation.

Mindfulness is the state of mind where you are aware of yourself, your surroundings and relationship to those surroundings in the present moment. You are aware of pleasant and unpleasant sensations, which helps to put these feelings into context. Concentrating on the present moment means you're not worrying about the past or fretting about the future. It is being used to successfully manage depression,

stress and chronic pain. It is used on pain management courses to help sufferers put pain in its correct place, taking it away from the forefront of the mind.

However, it's quite difficult to teach, particularly to those who need it the most; the highly stressed, depressed or those in pain. Pain and stressful thoughts tend to overwhelm your mindful state. Using knitting and stitching helps you to stay grounded in the present as well as giving added visual and tactile inputs to focus on, making it easier to learn.

Research by Professor Richard Davidson of Wisconsin University found that practising mindfulness daily over an eight week period has a positive effect on brain function and the immune system.

Mindfulness has also been shown by Professor Herbert Benson of the Mind/Body Medical Institute in the US to evoke the relaxation response. Indeed he mentions knitting as one of the activities that can aid this. He describes the relaxation response as the opposite reaction to the fight-or-flight response and has found that by evoking the relaxation response daily 80% of those who took part in his clinical trials had lower blood pressure. 16% were able to come off medication completely. These results lasted three years or more. 100% of insomnia patients reported improved sleep with 90% being able to eliminate medication; doctor visits by chronic pain patients were down by 36%.

So knitting and possibly stitching could potentially open up the benefits of mindfulness to a wider population who might otherwise find the concepts difficult to grasp.

### The serotonin debate

Returning to the repetitive movements, Dr Barry Jacobs of Princetown University has carried out research on animals which showed that repetitive movements enhance the release of serotonin. Many of us will have heard of serotonin in relation to depression, but it is also an analgesic, it's calming, and if your levels are low your threshold for feeling pain will be lower. Carol Hart, author of the

book *Secrets of Serotonin*, refers to knitting in her book as a repetitive movement likely to enhance the release of this important neurotransmitter. She told me, "I personally share your view that serotonin release is a reasonable hypothesis to explain why people find knitting so calming".

The release of a brain chemical ties in with the many stories sent to me. In them, knitters and stitchers often describe a feeling of instantaneous calm. Teachers who deal with disruptive or violent children and teenagers describe the effect of knitting and stitching as being of 'overwhelming,

*"The rhythmic movements immediately instill a feeling of familiarity that gives you great comfort"*

instantaneous calm'. When you pick up your knitting and stitching these rhythmic movements immediately instill a feeling of familiarity and this familiarity gives you a great sense of comfort. It's a bit like a comfort blanket you can take anywhere!

Another interesting question that needs an answer is whether these repetitive movements open up new neural pathways and what would be the implications? Could this have a knock on effect in other areas of the brain, for example in areas of memory and cognition? People who have suffered strokes, who are physically able to knit, report an improvement in their memory and concentration. MS sufferers report similar affects and of also having a functional capacity greater than their brain scans suggest they should have. Some neurologists in the US are suggesting to them that this may be down to their knitting.

Physiotherapists have routinely used repetitive movements in neurological treatments with the specific aim of bypassing damaged areas in the brain to regain function.

Research in neuroscience and neurogenesis has shown that not only can new neural pathways be opened up, but new brain cells can be born and a leading neuroscientist working in the field of neurogenesis (birth of new brain cells) told me that "It's likely that learning in the

motor cortex has a knock on effect in areas of cognition and memory." So this is really exciting.

This could have implications for those suffering early memory problems as some researchers believe that the more neural pathways you have working the more reserve you'll have and therefore the more protection you'll have against symptoms of diseases such as Alzheimer's.

MRI scans have shown that musicians' brains can be slightly different and it's also been shown that playing music can improve verbal memory. Knitting is in many ways like playing a musical instrument; you read the

instructions, which are often in symbol form, and then you process these to form a specific pattern of bilateral hand movements. Scans of jugglers' brains have also shown changes in brain structure. These changes were shown in adults who had learnt juggling and are exciting because they show that your brain can change (neuroplasticity) even in adulthood.

Certain memories are dependent on links between the hemispheres of the brain, so knitting, being a bilateral activity, could be working to improve this too. Many report that their short term memory has improved since taking up knitting, so this could be an explanation. Of course this is all hypothesis on my part at the moment, but it is logical and it is very exciting!

### Comfort and calm

Going back to the familiarity of the rhythmical movements, as I mentioned, they evoke a sense of immediate comfort and calm. This is already being used by many people across the world to manage and cure panic attacks and conditions such as anxiety, agoraphobia and other phobias.

Teachers are using knitting and stitching in the classroom to calm disruptive or violent behaviour and deal with students with ADHD. Even those suffering from asthma are able to manage the panic

associated with attacks and thereby successfully cope with less medication than they might otherwise have needed.

Interestingly those suffering from bipolar disorder (manic depression) tell me that knitting and stitching help to even out their moods. Sufferers can learn to recognise the onset of a manic phase and use their knitting and stitching to induce calm and slow down their thought processes. Similarly during episodes of low mood or depression their crafts help them to feel better.

I think the automatic nature of the movements when knitting and stitching is important, too. The activity appears to occupy certain areas of the brain at just the right level, enabling others to stay free and unencumbered.

Many knitters and stitchers report being able to escape into the sanctuary of a quiet mind. This is another form of meditation and it gives your mind a mini-break from the problems of day-to-day life and worry.

Reports from teachers and other group leaders also suggest that communication is improved when knitting in groups. I think this could be down to the automatic nature of knitting. Being occupied at a certain level appears to prevent the brain from applying its normal prejudices and limitations, which helps to lower barriers making it easier to talk more intimately. Knitting is also one of the few activities that enables eye contact as you talk and knit. This could have implications for developing future therapies for those who find it difficult to talk.

The automatic nature of knitting in particular means that often those suffering from dementia remember the process of knitting. They may not be able to follow or process a pattern but they'll often remember how to knit.

### Slowing thoughts

Downward, negative thoughts get stuck in automatic cycles that are difficult to break. A pilot study at Cardiff University has been looking at whether the automatic movements of knitting push out negative thought cycles and we're awaiting those results. Keep an eye

open for these on the Research pages of the Stitchlinks website.

Many of the stories sent to me talk of how knitting and stitching slow down the thought processes. Racing thoughts that happen as a result of stress, anxiety or panic can be slowed and brought under control whilst knitting or stitching. Sufferers of post traumatic stress (PTS) have told me that knitting and stitching enable them to sort and process their thoughts. Others have said that it enables them to examine thoughts that might otherwise be too dark to contemplate. Sometimes they use this state of mind to think through therapy sessions.

If I use the analogy of your brain as a large filing cabinet where your thoughts and memories get filed away in drawers for retrieval at a later date, it makes it easier to understand. It's believed that in PTS troubling thoughts and memories cannot be filed away securely and, as a result, remain

*"It's thought that the dual attention component of EMDR facilitates the processing of information"*

vivid in the sufferer's brain causing torment and flashbacks. Knitters who suffer from PTS tell me that the act of knitting slows down these cycles and enables them to process their troubling thoughts – to file them away.

Research by Dr Emily Holmes at University College Hospital, London in 2002, found that people who performed a repetitive visuo-spatial task during a traumatic event experienced significantly fewer flashbacks than those who performed no activity. The report went on to recommend that knitting and worry beads should be studied. She hypothesised that 'Women who knitted by the guillotine in the French Revolution didn't suffer any flashbacks'.

You can try out this effect for yourself. If you find your thoughts are racing, or perhaps you're 'going around in circles' and not achieving anything, or maybe you can't get to sleep because your thoughts are racing around in your head, try a little knitting.

If the problem is getting to sleep at night, try knitting or

stitching for 20 minutes or so before going to sleep and you'll find it slows down those racing thoughts to calm your mind. Similarly if you're stressed at work or have a particular problem that's difficult to solve, use your knitting or stitching at lunch time. Not only can it ease the pressure, but it can enable you to look at problems from a different perspective.

### Dual attention stimulus

Psychologists often mention a possible link between Eye Movement Desensitisation and Reprocessing therapy (EMDR) and knitting. It's a controversial therapy and psychologists are very much divided in their opinions about it.

EMDR is used by some psychologists to successfully manage PTS and schizophrenia. Very basically the patient follows the therapist's finger from side to side with their eyes whilst talking about their problems. This appears

to help PTS sufferers to file away their disruptive thoughts. The eye movements are used to engage the patient's attention to an external stimulus. Some psychologists use tapping or an auditory stimulus too. These external stimuli are usually applied in an alternating bilateral fashion, while the patient and therapist talk.

It's thought that this dual attention component of EMDR facilitates the processing of information. A rhythmic, alternating, bilateral, external stimulus is thought to facilitate the processing of any traumatic thoughts. We can see many similarities with knitting here so this could be an explanation for how knitting is helping those suffering from PTS.

EMDR therapy has more recently been used in the management of chronic pain. Pain is often associated with stressful thoughts and also may have originated from a traumatic injury. EMDR is thought to facilitate the reprocessing of the distressing feelings and thoughts that are

associated with chronic pain. Although it's a controversial therapy, many psychologists claim EMDR is highly effective and use it regularly with their patients.

These are just some of the issues that raise the therapeutic value of knitting and stitching above other activities as effective self-management tools. However, you can have the best self-help tool in the world, but if you don't have it with you when you need it, it's as good as useless.

One of the major advantages of knitting and stitching is their complete portability. They can be at hand any time and in any situation, including of course, in hospital, in bed or at night. They can be done quietly, without stigma or mess in most situations. As an interesting aside from the stigma point of view, I've heard from women living in abusive

*"Even the most demotivated people can become inspired again when they begin to knit or stitch!"*

relationships, who use their knitting and stitching as sanctuaries to escape to. It appears that they are 'allowed' to knit or stitch because they are seen as harmless, feminine activities.

The portability is important in helping to prevent loneliness and isolation. As a society we're not very good about looking after people who become ill, have panic/anxiety attacks or pain spasms whilst out and about. This can often make those who manage long-term medical conditions begin to fear leaving the house, so they venture outside less frequently. As a result their social confidence declines further and often they lose friendships.

### **Making the difference**

It all becomes a downward cycle resulting in loneliness, isolation, depression and conditions such as social anxiety disorder and agoraphobia. Having an effective self-help tool with you at all times can make all the difference. I've received countless stories from knitters and stitchers around the world who use their knitting and stitching to manage potentially difficult situations when out and

about. Some of you have cured agoraphobia, panic/anxiety attacks while others use your portable crafts as a way of managing symptoms should they occur. In fact you tell me that the perception of you by others is turned on its head when you take out your knitting or stitching in public - you're no longer seen as someone who's having difficulties, but rather as someone who has a wonderful skill; no longer disabled, but able.

Many have also said that this opens up communication channels, so strangers become allies and friends. Simply the reassurance that you have an effective tool at hand can give you enough confidence to face the world without even having to use it.

Becoming trapped in negative thought cycles is demotivating so it becomes more difficult to find

the energy for all aspects of life. The accessibility of knitting and stitching and the lack of mess, preparation or clearing up means they can be picked up or dropped at will. This makes them ideal motivational tools for those who find themselves merely existing from day-to-day.

There's no doubt that knitting and stitching are addictive, but they are constructive addictions. This works in a positive way because they stimulate and motivate. New knitters and stitchers soon get hooked and this begins to open up the world.

One of the biggest problems I saw as a physiotherapist working on the community was that many of my patients had become deeply demotivated to the extent they did little more than exist. It was very difficult to persuade them out of this state of mind to carry out an exercise program. Their medical treatment was often excellent but almost always failed to treat the whole person - the body and mind. Their quality of life was poor.

Work I've done over the last three years has shown that even the most demotivated people can become inspired again when they

begin to knit or stitch. Suddenly there is a purpose to each day, they find something they can succeed at. They begin to look forward to finishing a project and then onto the next. They find themselves looking forward to tomorrow and waking up next morning - in some cases this has prevented suicide.

Reinforcing these positive feelings motivates them to try other activities, seek out other healthcare options and become more proactive in all aspects of life. It's been described by some like a switch that has flicked in their minds. And this appears to happen surprisingly quickly after taking up knitting or stitching.

### **Breaking addictions**

The addictive nature of knitting and stitching can also be used to break destructive addictions, such as smoking, alcohol, binge eating and drugs. A constructive addiction that occupies your hands and mind is an ideal activity to replace a destructive one. Knitting and stitching are effective because they also help you to deal with the associated behaviours and social environments linked to your addiction, giving you enjoyable alternatives as replacements.

If you've tried to stop smoking you'll know that breaking an addiction is a lot more complicated than simply stopping the cigarettes. Knitting and stitching fill the space and time created when you stop an addiction but also provide a vital distraction by occupying your hands and mind. In addition they raise self esteem. Low self esteem is a big problem in addicts, so raising feelings of self-worth and helping those with destructive addictions to value themselves can go a long way to supporting their resolve in breaking their habits. Knitting and stitching also give a means of social interaction away from the normal environment that more often than not will have emerged and developed around their addictive behaviour.

I've received many stories from people who have successfully beaten addictions with knitting and stitching. I've even heard from a few who have used the counting of

cross stitching to successfully break the hold of obsessive compulsive disorder.

## Kick starting the brain

Most stories I receive mention the colour and texture of threads and yarn – how they make you feel happy, how they stimulate and give a sense of wellbeing. This is often what first impacts a person when they begin to knit and stitch. Simply looking at vibrantly coloured yarn and stroking different textures can make that first chink in the desensitised armour of depression and demotivation. Some of you have described the introduction of colour into a grey world as a kick-start to your brain that begins the process of recovery. So even before you pick up your needles the effects are positive.

Science has barely begun to think about the effects of colour on our minds and yet instinctively we all know that it can affect us profoundly – you only have to visualise a stunning sunset. The ancient Egyptians used solariums with coloured glass to ‘heal’ people. When the sun shone through the coloured panels the person inside was bathed in coloured light. Perhaps in our modern, high-tech world we have become too engrossed in complicated solutions so the simpler ones go uninvestigated.

As I mentioned earlier, the colour and texture of thread and yarn provide visual and tactile stimulation that can also be used to facilitate mindful meditation making it more accessible to a wider population. They can provide an anchor to help you to remain grounded in the present moment.

When I first took my ideas to psychologists, one of the fascinating issues we discussed was the Mind’s Eye. I learnt that those suffering from depression have problems visualising. As knitters and stitchers we’re constantly referring back to pictures of the finished project, visualising these and imagining the praise and reaction of others on the completed item. We’re using our imagination all the time. So the question arose, “Could knitting and stitching be reawakening the

Mind’s Eye?” And “Is reawakening this ability to visualise, and to look forwards, crucial to recovering from depression?”

When we knit and stitch we often escape into a sanctuary of a quiet mind away from the problems of the world. This is another form of meditation or daydreaming in which we can use visualisation to get completely lost in our thoughts. It’s important as it gives your mind a break from worry, problems and pain. I think that stimulating visualisation and the creative side of the brain is an important aspect in managing depression and perhaps other long-term medical conditions.

*“Knitting and stitching provide an easy way of belonging and participating, giving back identity”*

I’m also interested in whether encouraging creativity results in more ‘balanced’ individuals.

I’m often asked at this point how I explain why many creative geniuses suffer from mental illness, in particular bipolar disorder. My understanding of this is that the altered states of mind and variety of profound emotions experienced in the hypomanic state of this illness facilitates the formation of original ideas leading to enhanced creativity. In addition they have the ability to think sharply with little sleep, so productivity increases too. Drugs used to treat bipolar disorder work by dampening down the extremes, which explains why some stop taking the medication.

Getting back to visualisation. Even your movements are subconsciously planned and visualised beforehand so, for example, you know exactly how far away a door is and how much pressure will be needed to push it open. Very recent research at the Royal National Hospital for Rheumatic Diseases in Bath has shown that conditions such as complex regional pain syndrome and perhaps fibromyalgia may have something to do with the motor and sensory systems getting out of sync with each other. An important part of the motor process is the planning and visualisation of movement, so the

ability to visualise is important in many aspects of life.

As I mentioned earlier, knitting and stitching produce an end product that requires no artistic talent or expensive tools. They’re not messy, can be given as gifts and to charity and can be done from an armchair, wheelchair, bed, workplace or school. This provides a means by which people can contribute to their families and society. They feel useful and worthwhile once more – it takes away the guilt of dependency. Praise for a completed project raises self esteem further. All of which enable people to keep on top of managing long-term medical

conditions and life in general.

Researchers at the National Institute of Neurological Disorders and Stroke in Maryland, USA (2006) found that giving to a worthy cause activated two separate areas of the brain; the mesolimbic area, stimulating the release of dopamine through the reward system and the subgenual area with the release of the hormone oxytocin. Dopamine is an important neurotransmitter associated with feelings of pleasure and pain relief. Oxytocin is a hormone and neurotransmitter that plays a role in the bonding behaviour between mother and child.

## Improving hand function

Another important basic benefit of knitting and stitching that we mustn’t lose sight of is that they are wonderful hand exercises for a range of conditions. One lady who suffers from cerebral palsy had a 50% increase in hand function with cross stitching. The reality for her personally is that she’s now able to pick up a full mug of tea and use a computer key board so is no longer completely dependent on her carer and is able to work.

We’ve received stories from many people who use knitting and stitching to maintain and improve hand function and coordination. Conditions range from arthritis and fibromyalgia to strokes, MS and other neurological conditions.

Those with hand problems will find they need to pace their knitting and take regular breaks to stretch. Many also find that bamboo or other wooden needles are kinder on the hands than the metal variety as they are warmer and have more 'give'.

I've often said that knitting and stitching can be used as universal tools. They're easily learned from pictures or DVDs which makes their benefits available to children, the elderly or those with learning disabilities. Most countries have a history of handicrafts and embroidery woven into their culture and this enables knitting and stitching to cross cultural, class and language barriers.

Here in the UK in inner city

*"Being able to 'switch off' your pain through distraction gives you back a feeling of control!"*

areas there are many women isolated by their lack of English. Knitting and stitching groups could be used to integrate them into their surroundings more gently, to encourage communication and give them a sense of belonging.

## Belonging

Having a sense of belonging somewhere is important. I would argue it's essential to feelings of wellbeing and self worth. Feelings of loneliness or becoming isolated for whatever reason can be highly destructive resulting in a poor quality of life and increased symptoms of pain and depression. Not only does it have a dramatic effect on the individual, but it also costs healthcare systems dearly. You don't have to be ill to feel lonely, though. New motherhood, moving house, high rise living and old age all contribute. Crowded inner cities can feel like the loneliest places on earth.

The knitting and stitching community is wide-ranging and global and enables each individual to communicate and make friends, both on the internet and in local groups. Those managing long-term illness often feel they don't belong anywhere, particularly if they've had to give up work or are unable to participate in what they see as 'normal' life. Knitting and stitching

provide them with an easily achievable way to belong and participate once more, giving back their sense of identity.

Having a sense of purpose and structure to each day is important. It motivates people to get out of bed and be active, it gives a sense of achievement when tasks are completed or new skills learnt.

Feeling in control is important for wellbeing, too. If we feel out of control of events then we feel stressed and sometimes overwhelmed. Many with long-term illnesses feel out of control of their lives – they feel controlled by symptoms, doctor appointments, drugs and their side effects. So it's highly important to feel in control of at least some aspects of life.

Many have told me that discovering knitting and stitching has given them back control over one area of life; something they can plan and be sure of the outcome. For some this is the only thing they have control over, for others it shows them how to regain control over other areas by motivating them to become proactive in treatment plans and outcomes.

When people are unable to participate, earn a living or care for their family through ill health, feelings of failure are often overwhelming. They can feel failures in everything they do. Becoming involved in simple stitching projects can be the first step to finding activities they can do and do well. The beauty of knitting and stitching is that you can grow and develop your skills at your own speed in your own time, but with each new project you learn something new, achieve something different and progress forwards each time.

Enforced rest periods can be highly frustrating, particularly in conditions such as chronic pain, fibromyalgia or ME. Knitting and stitching are excellent self-help tools because they can be used during flare-ups or periods of low energy. They can prevent the frustration of enforced rest periods by enabling you to be productive

during these times. By teaching patience and perseverance they can also be used to teach the principles of pacing to those managing pain and low energy.

When illness or isolation takes over it's easy for your world to close down. You have less contact with the outside world and this is self-perpetuating. As a result you will begin to focus in on and worry about every little detail of life and lose the sense of the 'bigger picture'. This distorts facts and perspective so that small problems begin to dominate and loom large. Knitting and stitching help to open up the world and keep it open. You have to make contact to buy supplies. You are motivated to research new projects and pick up the phone, communicate by email or get out to a shop. All this has a knock on effect in helping to maintain the openness of your world and thus more easily maintain the correct perspective.

## Refocussing attention

My recent work has led me to believe the distraction that occurs is part of a longer lasting refocussing and lifestyle change that occurs as a result of becoming engrossed in knitting and stitching projects. This shifting of attention has really exciting implications for those living with persistent pain. So let's take a look at distraction and the other important benefits that occur while you knit and stitch, but can also happen during other activities. Combining these with the elements that make knitting and stitching different gives you a powerful therapy at your fingertips, any time, anywhere!

One of the questions I often discuss with doctors and healthcare workers is whether the benefits of knitting and stitching revolve solely around distraction. As you know I think there's more going on. However, distraction is important. It's already known and accepted that busy, occupied people feel less pain and depression than those who do nothing. One researcher told us that distraction is the most powerful analgesic we know of. Work done by Professor Irene Tracy and her team at the Oxford Centre for Functional Magnetic Resonance

Imaging has shown with MRI scans that distraction really does work to literally take your mind off pain. Scans also showed that during distraction, centres responsible for the release of the brain's natural pain killers were stimulated. So what exactly is distraction? Let's take a look...

Your brain is unable to concentrate on more than one thing at a time. Every second it is bombarded by millions of signals about the state of every part of your body, your sensations and the environment around you. Imagine it a bit like a bustling, noisy market place. Your brain can't possibly deal with all the information that bombards it, so it tunes down the routine ones in order to deal with the ones it perceives as important at that particular moment.

When danger signals enter the brain they do so a bit like loud sirens coming into that market place. They grab the brain's attention immediately because it perceives that the situation is dangerous to you. It processes them as a matter of priority and you feel pain. So pain is an output of your brain not of your muscles, joints or tissues.

### Acute v chronic

We've all learnt that acute pain is a signal to act immediately. Being able to experience acute pain is essential to our survival and vital to life. Those born unable to feel this pain often don't live long. For example, pain from a hot iron tells you to remove your hand, that from a broken leg tells you not to walk on it. Acute pain prevents further damage and urges you to seek medical help.

However, chronic pain or persistent pain is different. It's pain that lasts more than three to six months, or beyond the normal expected healing period and serves no useful purpose. This means you don't have to pay attention to it in the same way as you do with acute pain.

Distraction occurs while you knit and stitch because when you are totally absorbed in your project your brain's attention is diverted away from those danger signals. This prevents the brain from

processing them, so you will feel less pain or none at all during the actual process of knitting or stitching. In addition, making you feel good sends signals down from the brain to close or partially close the Pain Gate in the spinal column, modulating the danger signals travelling upwards to your brain in the first place.

Mindfulness helps you learn to tune up signals from your senses and the environment. This means there is less attention paid to the

*"What is happening is much more of an overall refocussing of attention and lifestyle change!"*

danger signals, taking pain away from the forefront of the mind, putting it in its place.

This is by no means trivialising pain – the pain you actually feel is very real. However, it is a lot more complex than was originally thought and the brain's involvement is enormous. This is exciting because it opens up new, potentially more effective, avenues for managing chronic pain.

Distraction doesn't just work for pain however. It works effectively to take your mind off depressive thoughts and other problems such as cravings, nausea, tinnitus or unpleasant feelings and procedures.

There is however disagreement about the use of distraction in chronic pain and long-term conditions. Professionals are divided in their opinions because in the real world you can't distract yourself all the time. To do this would prevent you living a normal life. However, what your stories tell me is that being able to 'switch off' your pain through distraction, even if it's for a very short time, gives you back a feeling of control. Having this feeling of control can significantly change your outlook on life. Changing your outlook to a more positive one enables you to manage your pain more effectively.

It also helps you to cut down on medication and to make the period of time when drugs are wearing off more bearable. Stitchlinks forum discussions show high levels of medication and their side effects are a common source of worry.

Distraction also works to take your mind off worry, to give it a

break. Worry can make all medical conditions worse and if left to fester can develop into downward spiralling cycles that become very difficult to break.

More recently I've come to believe that not only is this distraction occurring while you actually knit and stitch, but between sessions too. What is happening is much more of an overall refocussing of attention and lifestyle change, which is exciting. Between sessions of

knitting and stitching you are reporting that you are planning future projects, thinking about yarn, anticipating and getting excited; baskets of yarn are baskets of potential. These positive thoughts and feelings reinforce the positive connections within your brain. They take the place of thoughts that previously revolved around ill health and failure.

It's known that focussing in on your pain, depression or problems makes them worse. For example, the pain you actually feel will increase the more you focus your attention on it. And, as we've heard before, focussing in on worry also intensifies these feelings which can then get locked into cycles of downward negative thoughts, reinforcing negativity. So you worry about every detail of life and lose perspective of the bigger picture. Taking the brain's attention away from YOU and refocussing it on an absorbing, exciting, lifestyle change is important in all sorts of ways.

### Ease the tension

Relaxation is difficult when you're stressed, in pain or depressed. And those who need to relax the most find it the most difficult. In fact your brain will soon learn that your state of constant high tension is the 'norm' and you can forget what it 'feels' like to be in a truly relaxed state. Relaxation is also difficult to teach, particularly to the highly stressed who would benefit from its effects the most.

High levels of stress hormones circulating in the body can be

destructive. Unlike with the automatic fight-or-flight response, we need to make a conscious decision to relax on a daily basis to enable levels of stress hormones to fall. However, providing you're not tackling a project well above your ability, relaxation occurs naturally while you knit or stitch, so they can be used as effective stress management tools.

Knitting and stitching can also be used to teach relaxation, so those who have forgotten the feeling can re-experience it. It's then possible to remember and recall that feeling in situations of high stress or when you don't have your knitting and stitching at hand.

Stress causes physiological and psychological changes in the body. The American Institute for Stress states that up to 90% of illnesses are either caused by or exacerbated by stress. It is thought to be responsible for between 75% and 90% of visits to doctors. Importantly,

*"The powerful effect of a mind that's absorbed in a constructive, positive way can work wonders!"*

stress is worse when you feel there is nothing you can do about it. Well now you can!

Knitting and stitching are highly effective, portable stress management tools that enable them to be used in the healthcare environment, in education and in your workplace. This means that your knitting and stitching can also be effective as tools in a preventative approach to health.

In our modern, fast-paced world the nature of stress has changed from the instantaneous need to stand and fight, or fly from danger to a more prolonged, corrosive nature. We need to be making that conscious decision to relax on a regular basis. Daily knitting or stitching can be perfect for this, so it makes sense to incorporate it into your day.

As we've heard before, Dr Herbert Benson of the Mind/Body Institute in the USA describes the opposite state to the fight-or-flight response as the relaxation response. This is a physical state of deep rest that changes the physical and emotional responses to stress. He describes knitting as

one of the activities that is capable of evoking this response.

### Attitudes change

We've also heard that negative attitudes, thought cycles and feelings of failure can quickly take root. These are self-perpetuating and difficult to break. They pose a significant problem to doctors and healthcare workers when dealing with patients with long-term illness. If you're demotivated and thinking negatively then the chances of you carrying out an exercise regime or becoming involved in your healthcare are low. As I mentioned before, this was the main problem I faced as a physiotherapist working in the community. In addition, it's known that those who take a proactive approach to their treatment have a greater reduction of symptoms, so it's important to change these negative attitudes.

Your attitude and involvement

are crucial to your wellbeing. A person's attitude is more important in how they deal with pain than the extent of the original injury or condition and this applies to most situations in life. From the stories we've received, knitting and stitching appear to be changing attitudes. Thought processes change, negative thoughts are replaced by more positive, constructive ones; people begin to move forwards and look forwards to tomorrow. They become motivated and mood improves.

Attitudes also change because knitting and stitching calm the 'why me' anger often felt by those who are in pain or ill long term. Self-esteem is raised; you succeed and you're praised for the end product. This raises mood and confidence; it makes you feel worthwhile and valid in society once more. It gives you back your identity as an individual. You begin to feel in control and there is structure and purpose to the day and a sense of achievement when you reach your goals.

Finding something you can do and do well changes your outlook

on life. The world begins to open up once more, reversing those downward spirals into that closed world where every detail of life is a worry. Success challenges those negative thought patterns and feelings of failure. After all how can you be a failure when you've created a beautiful piece of work? How can you be worthless when you give so much to others through gifts and charity?

Feeling motivated again is such an important experience. You have to be motivated to help yourself; to begin to take responsibility for your own health; to ask for help; to seek alternative options in order to live your life to the fullest possible. Once motivated it leads to seeking out new skills and experiences so options open up even more.

With every single stitch you make you move forward towards your goal. It's almost as if knitting and stitching are retraining the brain to move forwards.

### Better behaved!

Knitting and stitching also change behaviour. Not only are they calming in situations of anxiety and panic, but they can calm disruptive, violent behaviour in children and teenagers. This effect is increasingly being used by teachers and youth workers and in some prisons in the USA. Knitting and stitching can also teach skills such as planning and goal setting and forgotten emotions such as excitement and anticipation. All of which can be lost in the mire of long-term illness.

Perseverance and patience are important skills in our modern world of instant gratification and these too are learnt through knitting and stitching projects. You also learn that it's not the end of the world to fail – you can simply analyse your mistakes, unravel and start again. Successful end results are not only possible, but often better if you've had a few failures along the way! All these valuable life skills can be transferred into healthcare, education and work.

Social confidence can be lost very easily, but knitting and stitching encourage social contact. Groups stimulate communication and interaction and are a good way of meeting new people from



different backgrounds who often become firm friends. In the workplace, groups provide an opportunity to meet employees from different departments and levels who you might otherwise not have the opportunity of meeting. It's much easier to talk to a stranger when you have something in common, particularly if your social confidence is low. As I mentioned previously conversations appear to become intimate more quickly if you're knitting in a group. You tell me that people are more accepting and open.

### Education and learning

Moving into the area of learning and education, teachers in special schools use knitting and stitching to change violent behaviour – the calming effect was described by one head teacher as 'instantaneous and overwhelming'. I've heard from teachers at two special in the UK, who are successfully using cross stitching to change the violent behaviour of their pupils.

Knitting groups are being used to raise self esteem and teach communication skills to disruptive teenagers here in the UK and in the USA. Teachers report that these previously aggressive teenagers soon begin to communicate and improvement in subjects such as maths and English have been noted. In addition self esteem is raised in individuals who may previously have lived with constant criticism. A channel for communication between student and teacher is opened up.

Knitting is also being used to occupy students who are

hyperactive, enabling teachers to teach otherwise disruptive pupils and kinaesthetic learners. One teacher told me 'It opens up a window for education and appears to facilitate learning'.

The bilateral movements needed in knitting may help those with dyslexia and dyspraxia to improve their coordination. Dyslexics report that knitting also helps them to become more organised by helping them to sort out their thought processes.

Improved concentration and skills of perseverance and patience are assets in all areas of life as are better communication skills and confidence. In the workplace, those who are fit and healthy report not only using knitting and stitching as stress management tools, but also as tools for development within their personal and working lives. In fact these versatile crafts can complement all aspects of life.

Medical treatment plans invariably fail to account for quality of life issues; those of isolation and loneliness, low self esteem, stress/fear/anxiety/worry and lack of rewarding, purposeful occupation. Although actual medical treatments are advancing, treatment plans don't take into account the destructive power of the above issues and their negative impact on health.

Knitting and stitching can complement medical treatments to help improve these issues. The powerful effect of a mind that's absorbed in a constructive, positive way can work wonders!

As you can see there are many intriguing questions that lie

unanswered. For example does knitting put you more in touch with your emotions? Is being creative instinctive in situations that we find distressing or difficult? Does it fulfil a nurturing instinct in women? Many knit for those more needy, thus transforming themselves from being the needy to helping those in need, but is this part of a nurturing instinct boosted by the symbolism of keeping someone warm and protected?

It's all fascinating stuff, but what we do know for certain is that knitting and stitching are already working to help large numbers across the world.

As I mentioned this work is evolving as our knowledge grows, but we need your help too. Part of the research involves collecting your stories, so please fill in the Stitchlinks online questionnaire to tell me your story.

### Stitchlinks

Stitchlinks is the support network that ties it all together and the only place you can keep up-to-date with what's going on in the world of therapeutic knitting and stitching. Use it for information, ideas, inspiration and friendship.

The Forum is a place where you can chat to people who are going through, or have been through, similar experiences, so you'll find you're not alone. Many have made firm friendships and have experience increased confidence in social situations as a result. So why not login and meet new friends in an environment in which you are totally in control?

### Some quotes

- *"Knitting means I can subjugate pain to the status of discomfort. The movement needed by knitting seems to create a state of mind in which I'm more able to downgrade pain to a background feature."*
- *"Knitting has enabled me to challenge my own stereotypes about myself. I can't be useless if I can knit even a simple scarf. My concentration can't be that bad if I can knit lace and socks and complicated patterns."*
- *"I have recently begun knitting and have completed several projects and have had a wonderful change in my mental attitude since finding the benefits of this craft."*
- *"When I'm lonely I knit and feel better."*

## More quotes

- *"I found that knitting helped calm my thoughts and while I was knitting and putting stitches in order it was easier to put my own mind in order."*
- *"Knitting requires me to think creatively, to plan, prepare, organise, co-ordinate and control just one small aspect of my life. Then any other changes are manageable."*
- *"If you sit all day doing nothing the pain is unbearable, but if you have your hands busy and your mind off the pain then it is easier to deal with."*
- *"It's something that I can do and have control over. A lot of days I don't feel I have control over anything."*
- *"Keeping your fingers busy somehow seems to free up the mind to wander, imagine, dream, fantasise."*
- *"There are many times when I feel like I serve no purpose to anyone, and then I am reminded of the blankets, sweaters, and stitched pieces I have made for others."*
- *"It is so meditative. I sit and knit and am lost in my own quiet world. It brings me an enormous boost in self esteem, making beautiful garments, bags and shawls that people praise!"*
- *"Even when I feel absolutely exhausted and am in terrible pain I know I can sit and knit even if I can only manage a few knit and pearl rows and this helps me to forget the pain for a while. When I feel low because that day I am housebound I know I have knitting to do which lifts my spirits and gives me a 'raison d'être'."*
- *"Stitching stopped me from going over to somewhere that I may not have returned from, I don't really understand why but the focus of each cross stitch and the repetition of each stitch back and forward across the canvas rocked and soothed my soul. Knitting has given me hope and a true belief in me, even though others have always believed me to be capable of doing anything I wanted, I have always doubted that and the 'stitching' has somehow encouraged me otherwise."*
- *"The knitting itself helps to train your mind because your mind is occupied concentrating on what you're doing, so no negative thoughts can get through."*
- *"Knitting is calming, it helps with concentration and calms, the benefits are like meditation or prayer I feel that if I hadn't been able to knit and cross stitch over the last year I would have lost my sanity totally. To still be able to feel vaguely useful and to produce items that bring pleasure (and warmth) to others is a life-saver."*
- *"My specialist noticed that the knitting has kept my hands mobile as he was expecting me to lose my fine motor movement by now. Knitting has saved my fine motor movements and my sanity. Knitting has meant that I can carefully cook, work on the computer or do limited housework. I would be lost without it."*
- *"My neurologist has never treated a knitter before but he tells me to keep knitting as much as I want every day because he thinks that somehow this has helped form new pathways in my brain to replace damaged ones. He told me that most people with the level of damage that I have are now bedridden. He credits the knitting with helping with the relief of most of those symptoms. I would have to agree with him."*
- *"I firmly believe that having my knitting to get out of bed for, and take my mind off things, saved my life - I cannot imagine surviving how bad I felt otherwise."*
- *"It kept me engaged with pleasure, texture, colour and the belief that I was still an able person, even though most bits of me didn't work well."*
- *"As an OCD sufferer, I count things and recheck things, well, compulsively. While the medication does help control some of the worst of the symptoms, I have discovered completely on my own that doing my counted cross-stitch is very soothing and calming for me, in large part, because of the necessity of counting, the repetition, the checking and rechecking. It has been the best therapy!"*

## More quotes

- *"If I couldn't knit I would be in a ball rocking to cope. Knitting is a great way to ease the pain, the stress, reduce medication and has a wonderful side effect of losing weight. Knitting is what gets me through the day! "*
- *"If I hadn't kept myself occupied with stitching, I would have hibernated to the point of death. It gave me something else to think about and at the end of the day I had something to show for the effort of staying alive."*
- *"Knitting made me see that I could do something on my own."*
- *"Cross stitching is extremely therapeutic and more beneficial than any tablet in alleviating pain and discomfort. I become so absorbed that all else is forgotten."*
- *"As I have got better over the past two years my stitching has become integral to my recovery. Whether I am physically tired or feeling mental strain my stitching has not once failed to improve my situation. I have tried to list below all the ways in which I feel my stitching has benefitted me:  
Confidence and Achievement – from feeling hopeless and helpless (when I physical could not 'do' and when my self-esteem was at a low) stitching reminds me of what I can do.  
Enjoyment – the dangerous thing about illness, especially mental, is that you start to get used to feeling bad; you forget what it's like to enjoy yourself or it just feels so far away from where you are. Stitching brings me so much enjoyment that at one point I thought I'd never feel. I keep my stitching things out in full view to remind me to do some and have some fun.  
Calm – there is something really special about the time when your hands are busy but your head isn't – for an anxious depressive still working through her therapy my stitching was a Godsend. The rest of the time you're worrying, catastrophising, mulling over every bad thing you can think of but when stitching it's as if that part is switched off. The calm feeling also lasts beyond my stitching time – it gets rid of the nastiness that can fly round in your mind so you can just be yourself. I think anything that helps me be the best version of me and the happiest is pretty good!  
Stimuli – this might sound odd, and this was more obvious when I was very ill, but I definitely want to mention it. I used to find the colours and the textures of my stitching really enchanting; it would always make me smile. When you suffer from depression the whole world – your life – is dull and upsetting when you go through therapy and the problems causing your depression are worked on you start to see the world like you never have – I became more attentive more interested since I was no longer weighed down or enslaved by problems. When I started to get better I noticed that this 'colour' or 'outlook' I was seeing everywhere I had seen in my stitching. Whatever it was that provided me with fresh eyes and a better perspective in therapy, my stitching had also helped me gain earlier on – on a smaller scale, but whilst life wasn't so good my stitching became my sanctuary. Aside from prayer, I have yet to find anything that has such positive effects on my mental health."*
- *"When the pain is bad it gives me something to concentrate on it gets me through the 'waiting for the tablets to kick in' time. At three in the morning it's saved my life."*
- *"I had many sleepless nights which needlework helped to fill not only from the practical view point but also it gave my mind something to be distracted by as I missed the morphine."*
- *"As you stitch you can feel your entire mind and body at peace and relaxation."*
- *"The repetition was soothing and I felt like I was achieving something. The results were instant and only needed my approval."*
- *"I used sewing as a way of feeling valuable. My mind needed something but nothing which required rational thinking."*
- *"Stitching has helped me with concentration and re-focusing negative thoughts to more constructive ones. It has also helped get my world back in balance after being upside-down and rather terrifying."*
- *"The single thing which has helped me to survive the events of the past years has been stitching."*
- *"I could do it well. It made it easier to face a world where it seemed I could do nothing right."*

This booklet will be updated as our understanding of the power of therapeutic knitting and stitching grow, so please keep checking the website ([www.stitchlinks.com](http://www.stitchlinks.com)) for more news.

I continue to collect stories from knitters and stitchers across the world, so why not tell me yours?

You'll find links to our online questionnaire on most pages of the website. [www.stitchlinks.com/questionnaire.html](http://www.stitchlinks.com/questionnaire.html)

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