

The Stress of Life

Its recognition and management

Dr. Sarah Myhill is a General Practitioner, Secretary to the British Society for Ecological Medicine and has a special interest in fatigue. In this article, written for CABA, Dr Myhill looks at the problems of stress, and provides some easy and practical suggestions for its recognition and management.

Stress is an inevitable and essential part of life. Most people believe that to tackle stress one has to reduce one's work load but are not in a position to be able to do this!

The key is to get the balance right between pressure, sometimes referred to as 'good stress', and bad stress and put those things in place that will optimise or even increase one's output.

The first person to study the effects of stress on the human body was a German physiologist Hans Selye who established the adrenal gland as the main controller and regulator of stress in the body. In a famous experiment he took some rats and he put them under physical stress. He then observed that the adrenal gland swelled up and enlarged to deal with this stress. In a second experiment he put the rats under the same stress, but then allowed them to have a rest after and found that the adrenal glands reduced back to their normal size. In the third experiment he took rats and he stressed them unremittingly without a break. Clinically the rats appeared to be fine – they did not lose weight or change their behaviour very much, but then for no apparent reason they suddenly died. Examination of the adrenal glands showed that they had shrivelled and atrophied and were much smaller than their original size.

This experiment illustrates the first rule of stress management, which is to get the balance right between work and rest. The adrenal gland is a little bit like the gear box of one's car; it allows you to move up into another gear and, if necessary, into overdrive in order to cope with what life is throwing at you. Many people can sustain overdrive for months and even years, but if

Most people consume food or drinks in order to give themselves a temporary boost of physical or mental energy. The most common addiction is to sugar and fast carbohydrates (white bread, refined cereals, crisps, etc.), then caffeine, chocolate nicotine, alcohol, cannabis and so on. Fast carbohydrates are addictive because they are rapidly digested into simple sugars which are quickly absorbed so having a similar metabolic effect to eating sugar.

they do not get the balance right then catastrophe awaits them either in the form of physical illness or mental illness. The second aspect to look at is optimising one's output.



Stress causes excitement for some, for others the same stress causes anxiety. 'Team Chasing' might frighten the pants off one person, but for me I get an adrenaline rush that fires me up for a week!

(Sarah Myhill and Maggie clear a seven foot hedge with a twelve foot spread as part of a team chasing course)

There are five areas to pay attention to in order to get the best out of one's body. With age the system becomes less efficient and so one has to work harder at these five essentials in order to optimise performance, but if you are prepared to put in the effort then mental and physical levels of performance and activity can be maintained at a high level right up to retirement, and quite likely beyond. That is to say that in paying attention to these areas one can slow the ageing process and substantially postpone the onset of disease as well as coping admirably with stress. Indeed, the fastest growing medical society in America is the Anti-Ageing Society made up of medical doctors who have realised that much can be done now to achieve this.

FIVE KEY AREAS TO ADDRESS TO PUSH THE BALANCE IN YOUR FAVOUR!

So, in addition to getting the right balance between work and recovery look at: diet, exercise, sleep, micronutrients, sunshine and detoxing. The essence of these should be as follows:

DIET

Humans evolved over hundreds of thousands of years eating a 'stoneage' diet based on meat, fish, eggs, nuts, seeds, vegetables, fruit when in season and water. This is the evolutionary correct diet and most diseases from which we die result when we deviate from this basic diet. The commonest problems that I see clinically with diet are carbohydrate addiction, food allergies and addictions (caffeine, chocolate, alcohol

One of the bonuses is that proteins and fats have a generally stimulating effect and carbohydrates a soporific one, so this diet often results in improved sleep, which further improves symptoms of fatigue in the day.

etc). We should aim to eat a high protein/fat breakfast (such as bacon and eggs), a good lunch with supper being the lightest meal of the day. This follows the old Chinese proverb: "Breakfast like an Emperor, lunch like a King and supper like a pauper"!

Food allergies are remarkably common affecting about a third of the population and most commonly cause Irritable Bowel Syndrome, headaches and migraine or irritability and depression. The foods which most commonly cause allergy are the grains (wheat, rye), dairy products and yeast but one can be allergic to anything! If left unrecognised sufferers eventually develop fatigue.

EXERCISE

If you don't use it you lose it! Some people love sport and exercise, in which case no problem. For the couch potatoes, it is actually remarkable how little you need to do to maintain a reasonable level of fitness – one just has to discipline oneself to do it.

There are two types of exercise required – firstly simple movement exercises to put ones joints through the full range of movements and the 'best value for effort' exercises would be Pilates or Yoga. One then needs

Exercise has all sorts of metabolic benefits, but most importantly it raises levels of happy neurotransmitters in the brain. Ask any athlete or any jogger and he will tell you.

exercises to maintain stamina, and as little as 20 minutes of brisk walking three times a week is sufficient to maintain an acceptable level of fitness.

A good reason to exercise is that this slightly stresses the body and any symptoms which arise during exercise are early warnings that not all is well. Some people never exercise and only find they have heart disease when it is much advanced. Exercise releases

the happy hormones, (endorphins – one's own personal supply of morphine like hormones), which greatly help one to cope with unpleasant stress. Some people get quite addicted to this effect and absolutely have to exercise daily!

SLEEP

The normal sleep requirement is for nine hours sleep between 9.30pm and 6.30am with a little less in the summer and a little more during the winter.

After the First World War an epidemic of Spanish flu killed roughly 50 million people and many of the survivors sustained neurological damage. For some, that damage was to the sleep centre of the brain and as a result they were completely unable to sleep. For those unfortunates they were all dead within two weeks and this was the first solid bit of evidence that sleep is

The hours of sleep before midnight are more important than the hours afterwards, partly because of melatonin production and partly because this is when growth hormone is produced, i.e. during the hours of sleep before midnight. Growth hormone is an important anti-ageing hormone and essential for normal immune function.

an absolute necessity for life. On average Westerners lose about 1½ hours of sleep in every 24 hours – that is to say we are all chronically sleep deprived.

If one arbitrarily divides the day up into 12 hours of activity and 12 hours of rest and sleep, one can see the disastrous effects of just one hours overtime at work; it creates a 13 hour day and reduces recovery time to 11 hours - so in the balance one has 'lost' an hour.

Staying up late with artificial light destroys our normal melatonin production and interferes with sleep. Sleep is a physiological necessity, just like food and water: lack of sleep alone will cause pathologies such as depression, heart disease and possibly cancer.

SUNSHINE

Sunshine is an essential element of good health. Since primitive man evolved running naked under the African sun, sunshine was a commodity freely available that the body made full use of in its efficient metabolism.

Full spectrum light from sunshine has a direct effect on neurotransmitters to improve mood. Sunshine on the skin converts cholesterol in the skin to vitamin D, so high cholesterol may be a symptom of vitamin D deficiency.

Vitamin D is highly protective against cancer, heart disease, autoimmunity and osteoporosis. The key is not so much that you burn the skin – this is the risk factor for cancer and, incidentally, can be protected against by taking vitamin C. As a Nation we are sunshine deficient and during the winter months one should take a vitamin D supplement 1,000iu daily to compensate for this loss.

MICRONUTRIENTS

We have a major problem with modern food supply because there is a one way movement of minerals from the soil into plants, animals, humans and then discarded. We do not re-cycle minerals anymore and as a result of which food that we eat is becoming progressively deficient in minerals. If vegetables do not have the necessary minerals they cannot make adequate levels of vitamins and so we become vitamin-deficient as well. When I do nutritional tests it is very unusual to find anyone with normal levels of vitamins

We tend to eat foods which have been processed, so many nutrients are lost, and these losses are accelerated by sugars, caffeine, alcohol and other such social poisons (delightful though they may be!).

and minerals unless they are taking supplements. Because of our food supply everyone should be taking a good multi-vitamin, together with multi-minerals, essential fatty acids and vitamin C. Furthermore when one is stressed one's requirement for micronutrients increases.

DETOX

I regularly do fat biopsies to measure levels of chemicals and heavy metals and I invariably find a range of pesticides, volatile organic compounds and heavy metals. This is an inevitable result of living in a polluted world – these chemicals bio-accumulate in fat where they accelerate the normal ageing process and are a known cause of cancer, neurodegenerative disorders and other such problems. They are impossible to avoid, but one can keep the levels as low as possible by doing sweating regimes. As much as is reasonably possible try to avoid toxins or keep them in proportion. The most obvious one is smoking and really there is nothing good about smoking. Alcohol, chocolate and caffeine are all fine in moderation.

Sweating is a good way of detoxing because sweat essentially is blood, but without the cellular and protein content – that is to say all toxins are eliminated through sweat. The most physiological way to sweat is exercise, but failing this the sauna is a well tried form of detoxing and has certainly stood the test of time!

If all the above measures are put in place, together with the right balance between work and rest, one can maximise one's output physically and mentally and not suffer the consequences.

The young can get away with blue murder – they can eat junk food, stay up all night, generally abuse their bodies and still look gorgeous and have lots of energy. As one gets older you can stay just as fit and just as well, but you have to work harder at it!

HOW TO RECOGNISE WHEN THINGS ARE GOING WRONG

Things start to go wrong when the demands of the system exceed the system's ability to supply sufficient energy to cover them. That is to say you start to stress the system. In the short term the body is well able to rise to the occasion and produce the necessary adrenalin and cortisol to increase output in the short

term. Life does not arrive in small manageable packages and when a major crisis arises, and the above rules are observed, then we are better able to rise to the occasion, maybe renege on sleep, increase our physical, mental and emotional output and deal with the situation. Problems arise when this becomes the norm and one becomes chronically stressed. The body's ability to rise to the occasion starts to fail and we wonder why. We then start to use props to get us through and the use of props is the first sign of stress. The commonest props are:

CARBOHYDRATE ADDICTION.

Stress causes an outpouring of stress hormones including insulin. Insulin allows cells to push out more energy by shunting sugar into the bloodstream and into the cells so that they can perform. The problem with this is that it drops the blood sugar and one suffers from low blood sugar which, in turn, makes one feel weak, shaky, faint, tired, foggy brained and so on. The body's response to this is to eat sugar or fast carbohydrates. Going for sweet drinks, snacking on carbohydrates, biscuits, cakes, crisps and junk food is an early sign of stress. A longer term sign of stress is weight gain. A typical sign of carbohydrate addiction is disturbed sleep – when blood sugar levels fall during the night, this causes an out-pouring of adrenalin which wakes up the sleeper.

People become very skilful at juggling caffeine, sugar, alcohol and nicotine to put their brain and bodies in the nest shape for them to perform a particular task that is required.

OTHER ADDICTIONS.

One then starts to use psycho-active substances to fire one up in order to perform, and again to calm one down in order to chill out. The commonest addiction in the day of course is caffeine – in modest amounts this is very acceptable, but more than three or four cups of strong coffee or tea a day may suggest stress. If this is combined with the use of alcohol in the evening in order to relax and chill out this again suggests a stressed individual.

Chocolate is an interesting combination of addictions – sugar in chocolate is part of the carbohydrate addiction, there is some caffeine in chocolate which has a mild stimulating effect and chocolate shares some receptors with cannabis to have a calming effect. Again in moderation chocolate is very acceptable, but it should be avoided as an addiction.

Another common addiction is nicotine, which again has mixed effects; it is quite good at bringing blood sugar levels up and nicotine has a calming effect on the brain. Again, an increase in smoking would be another sign of stress.

Very often people recognise that they are addicted and go through the day swapping from one addiction to another to get the desired effect. Such a person might graze on carbohydrates, regularly drink tea and coffee, use cigarettes to have a calming effect during the day, and alcohol and maybe cannabis to chill out in the evening. It is remarkable how long one can last and

how much one can achieve on these addictions. However, eventually it will lead to problems for various reasons. The first of these reasons is that when one misses one's addictions one gets withdrawal symptoms. Usually this manifests as loss of sleep. If one is topping up with addictions regularly throughout the day then at night one gets withdrawal symptoms which cause an adrenaline response and one wakes in the small hours unable to get back to sleep again. This is often a major problem with alcohol – in the short term it helps one to drop off to sleep easily, but typically there is waking at 2 or 3am. Loss of sleep means the body loses the ability to heal and repair and this compounds all the other problems.

The problem with addictions is coming off them. Most people have exchanged one addiction for another – for example, the heavy smoker may swap nicotine for sugar addiction, but puts on weight and pays a different metabolic price.

The major symptom that results when all these things start to fall apart is fatigue. This is a disaster because one then lacks the energy to tackle the stresses that are causing the problem in the first place, and also the energy to put in place all those interventions which are necessary to correct the situation. This often triggers a vicious spiral down into ill health.

This fatigue can be physical, mental, or emotional. With **physical fatigue** one simply does not have the energy to exercise and one prefers to catch up with sleep at weekends rather than go out and do something active.

Mental fatigue results in difficulty multi-tasking, difficulty problem solving, poor ability to think clearly and poor short term memory.

Emotional fatigue means that one does not have the energy to be jolly and have fun and therefore one comes in from work grumpy, irritable and short tempered.

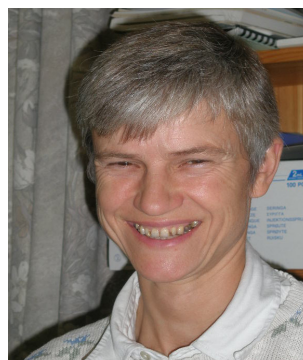
In the longer term this can result in a '**chronic fatigue syndrome**' which is characterised by very poor stamina and delayed fatigue – that is to say when you overdo things one day you pay for it the next.

TREATMENT

The treatment, therefore, of fatigue and the stress which induces it, is to go back to basics with respect to diet, micronutrient supplements, sleep, exercise, detoxification and to ensure the right balance between work and recovery time. This should be done before disaster strikes. If attention is paid to the above factors then one's physical, mental and emotional energies can be much improved and life lived to the full.

THE OTHER KEY POINT TO REMEMBER IS THAT IF THE ABOVE REGIMES ARE NOT EFFECTIVE YOU SHOULD CONSIDER THE POSSIBILITY OF SOME DISEASE PROCESS AND CONSULT YOUR GENERAL PRACTITIONER WITHOUT DELAY.

DR SARAH MYHILL



Dr Myhill has spent 20 years in National Health Service General Practice and Private Practice, and more recently just the latter.

Dr Myhill says of her approach to medicine 'I always ask the question 'why', and this has led me to a whole new view of medicine. We should not be suppressing symptoms with drugs which may give short term gain, but long term pain. It is my belief that the majority of long term degenerative illnesses can be prevented and treated by the ecological approach epitomised in this article.' This belief is shared by members of the British Society for Ecological Medicine, a medical society of which Dr Myhill is the Secretary. The BSEM runs regular training courses for General Practitioners at the Royal College of General Practitioners, together with scientific meetings twice yearly. In addition the BSEM publishes the journal of Nutritional & Environmental Medicine to which Dr Myhill is a regular contributor.

Dr Myhill lives in Wales, has two grown up daughters and her special interests are hunting, team chasing, point to point, dressage, together with organic gardening and self sufficiency.

Dr Myhill maintains an extensive and very helpful web site at www.drmyhill.co.uk