Stress is so common these days that it is almost accepted as normal. In fact, the term “stress” is so overused that it has lost any real meaning, yet the list of diseases and health problems associated with stress reads longer than those caused by cigarette smoking and alcohol: heart disease, high blood pressure, high cholesterol, depression, anxiety, insomnia, headaches, hormonal problems such as irregular periods & PMS, hair loss, skin problems, digestive problems, cancer and a suppressed immune system resulting in increased infections and allergies.

Add to this list the fact that stressed people tend to indulge in unhealthy behaviour such as smoking, drinking, drug abuse and over-eating and it’s obvious that stress is seriously bad for your health and wellbeing. So exactly what is stress and how can it possibly make you so sick and unhappy?

For your caveman ancestors, stress was caused by an immediate fight-or-flight situation, such as the appearance of a sabre-tooth tiger or a run-in with a rival caveman resulting in either a fight to the death or running like crazy in the opposite direction. In either case, the stress was over within a few hours (for better or worse). Your body’s response to stress has not changed much since then, but the types of stress it must respond to have changed significantly. It’s common now to spend days, weeks, months and years in a state of stress, battling work deadlines, family crises, mortgage repayments, study and exams.

When you consider that your body reacts to peak-hour traffic in the same way your ancestors reacted to being stalked by the sabre-tooth tiger it’s easy to see why road rage is such a common phenomenon or why you feel so tense and edgy by the time you finally get to work each morning. The end result is your body is continually flooded with chemicals and hormones designed purely for short-term life-or-death situations. These fight-and-flight hormones are adrenaline and cortisol.

YOUR ADRENAL SYSTEM

Your adrenal system consists of two small glands: the adrenal glands that sit on top of your kidneys and produce your fight-and-flight hormones, adrenaline and cortisol. Your adrenal glands also produce small amounts of testosterone, oestrogen and hormones responsible for salt and water regulation. DHEA is also produced in your adrenal glands and is the building block for oestrogen and testosterone and also has a protective action on your immune system and brain. High levels of cortisol are associated with lowered levels of DHEA, which may produce further hormonal imbalance in oestrogen and testosterone.

Adrenaline, also known as epinephrine, is a short-acting hormone released in response to any threat. Very fast-acting nerves from your brain trigger the release of adrenaline into your bloodstream. Loud noises, bright lights and excitement can also trigger the release of adrenaline. Adrenaline is also used as a drug to treat cardiac arrest and anaphylactic shock from life-threatening allergies to peanuts, bee stings etc.

Adrenaline prepares your body for action by increasing oxygen and fuel to your brain and muscles while switching off non-essential functions such as digestion and your immune system until the emergency is over. It reduces blood supply to your skin in order to help prevent blood loss if you’re injured.

Too much adrenaline over a long period of time literally wears your body out. If you’re not using your adrenaline for fighting or running you’ll be left feeling tense, jittery, nervous and jumpy with a hair-trigger nervous system. If the stress continues, a secondary hormone, cortisol, is released to help your body cope with the increased demands of prolonged fight and flight. Cortisol release is controlled by your pituitary gland, making it slower to kick in, but its effects are much longer-acting and include reducing the ability to feel pain and increasing blood pressure and blood sugar.

Caffeine, sleep deprivation, prolonged exercise, skipping meals and commuting to work have all been shown to increase cortisol levels. The class of medicines known by most people as steroids, such as cortisone, are based on cortisol. Used long-term or in high doses, steroids suppress the function of your adrenal glands.

Adrenaline and cortisol prepare your body for survival by enhancing your ability to fight or run and switching off organs and systems concerned with long-term survival in order to conserve energy until the crisis is over. Body systems suppressed by stress include:

- Circulation to your skin, hands and feet
- Immune system
- Digestion
- Reproductive system

ADRENAL FATIGUE AND CORTISOL

While we think of cortisol as purely a stress hormone, it’s also essential for maintaining day-to-day health. However, problems can occur when your adrenal glands produce too much or too little of the hormone. Your cortisol should be at its highest peak at around 6am to help energise your body and brain for the day. It then slowly decreases over the day and is at its lowest ebb by 10pm at night to allow you to sleep restfully and your body to heal and regenerate during sleep. This rhythms cycle is easily...

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it’s helpful to separate all the different stressors in your life into different categories.

Causes of adrenal fatigue
According to Dr James Wilson, it’s not just emotional stress that causes adrenal fatigue. Other contributing factors include:
- Lack of sleep
- Using stimulants such as caffeine, sugar and cigarettes to keep going when tired
- Poor food choices (lack of fruit and vegetables, high sugar, low fibre, white flour and too many processed foods)
- Skipping meals
- Nutritional deficiencies
- Lack of time and not prioritising time for relaxation and rest
- Shift work
- Major surgery
- Severe burns, including sunburn
- Head trauma
- Repeated or excessive exposure to toxins and chemicals
- Chronic pain

Underactive adrenal glands, but are not sensitive enough for mild deviations from normal. The disadvantage with blood tests is that around 95 per cent of cortisol in your blood is attached to proteins that render it inactive. Most cells respond only to free cortisol and this is where salivary cortisol testing has the advantage over blood tests. Hormones in your saliva are typically bioavailable or active hormones, giving a better indication of true hormonal balance. Another advantage over a single blood test is that a salivary sample is taken four times over the day, starting at 7am and finishing at 10pm, giving you a cleaner picture of your cortisol levels over the whole day.

YOUR STRESS LOAD
Your body cannot tell the difference between stress caused by worry about bills or relationship woes and that caused by toxic chemicals, lack of sleep or poor food choices. The end result is the same: activation of your fight-and-flight hormones and the health consequences that follow.

Paul Chek, holistic personal trainer, lifestyle coach and author of How to Eat, Move and Be Healthy, also believes exercise can be a significant source of stress to the body. Excessive exercise or the wrong type can stimulate those very same stress hormones induced by a charging sabre-tooth tiger. Chek believes that before embarking on any exercise program an individual should take into account their cumulative stress load from all sources — physical, mental, emotional and spiritual.

Imagine you’ve had a hard day at the office or at home with the kids. You ran out of time, so you skipped lunch or grabbed a coffee and a muffin to keep yourself fuelled; you then popped a few painkillers to silence that nagging pain in your lower back caused by poor posture, weak tummy muscles and too many hours at the computer, before rushing out the door to get to the gym. So you could exercise under harsh fluorescent lighting to blaring music. Your body was already stressed and your adrenal glands whipped into overdrive before you even got to the gym.

Forcing your body into intensive exercise in spite of poor posture, muscular weakness and existing pain and injury combined with bright lights and loud noise pushes your already over-stressed body closer towards adrenal fatigue and the myriad health problems associated with stress.

When your stress load is high, Chek recommends a work-in as opposed to a work-out. A work-in is simply a form of exercise that creates energy for your body instead of expending it. Examples of work-ins include walking meditation, tai chi, gentle stretching and yoga.

Hypoglycaemia, or low blood sugar, probably has the single largest dietary influence on how well you cope with stress.

Holistic Stress Management
Stress is an unavoidable part of life and it need not be all bad. As with all things, it comes down to balance. Before you begin to tackle your stress levels, you first need to add up your total stress burden. It’s helpful to separate all the different stressors in your life into different categories so you can view them objectively, prioritise and begin to make changes. If your stress load in one particular area is high and it’s difficult or not practical to make changes, you can look at minimising other forms of stress to reduce your total stress burden. There are six main types of stress that we are exposed to each day and every day:

- Physical stress
- Chemical stress
- Emotional stress
- Biological stress
- Psychological stress
- Social stress
Nutritional stress
Physical stress
Chemical stress
Mental and psychic stress
Electromagnetic stress
Thermal stress

NUTRITIONAL STRESS
Aside from artificial colourings, flavours, preservatives, pesticides, hormones, stabilisers and the like that are found in most processed foods, the two most common nutritional stressors are nutrient deficiencies and hypoglycaemia, or low blood sugar.

Nutrient deficiencies can occur as a result of stress and illness or, more commonly, by just not getting enough nutrients from your food. Your food simply does not contain the nutrients it should, partly because of modern farming practices that deplete the soil. Storage and shipping of fresh fruits and vegetables also results in nutrient loss. Digestive problems can interfere with your absorption of nutrients. If you suffer from digestive problems such as bloating, constipation, reflux or allergies, taking a good digestive enzyme with food and supplements can help to ensure you’re absorbing more of the good stuff.

Nutritional deficiencies in any of the following will contribute to high stress:
- Magnesium and calcium are calming to a frazzled nervous system. Deficiencies can result in increased muscle tension, sleep problems and anxiety — 500mg of each is recommended per day.
- Vitamin B6 and B5 help to support adrenal function. Look for a B complex that contains around 50mg of B6 and 500mg of B5 (pantothenic acid).
- Vitamin C also helps to support healthy adrenal gland function as well as helping to prop up a flailing immune system due to chronic stress. Stress really does burn up your vitamin C, which is why it’s common to come down with a cold or flu after a stressful event such as a car accident.
- Protein, vitamin B2 and choline deficiency can affect your pituitary gland’s ability to orchestrate your body’s response to stress. Choline is a member of the B vitamin family and is found in many B complex formulations. Look for one that contains at least 50mg of both choline and B2.
- Omega-3 fatty acids found in fish and flaxseed oils can help relieve depression and improve mental focus and clarity.
- While a deficiency of the amino acid tyrosine is unlikely, it can be used to support adrenal gland and thyroid function during periods of stress.

Hypoglycaemia, or low blood sugar, probably has the single largest dietary influence on how well you cope with stress. When your blood sugar or blood glucose drops, your fuel-deprived brain interprets this as a stress and stimulates your adrenal glands — remember that adrenalin and cortisol both increase the level of sugar or glucose in your blood to fuel your brain and muscles through a crisis. What you experience is a craving for junk food and a sudden surge of stress hormones putting your nervous system on red alert and ensuring that you react to even small stressors like they’re life-and-death situations. Hypoglycaemia produces symptoms of nervousness, anxiety, mood swings, feeling jittery, tremors, cold sweats, nausea and depression. If you experience these symptoms and they’re relieved by eating, you can cut a deal of your stress by changing your eating habits.

Skipping breakfast, eating a high sugar breakfast or replacing breakfast with coffee and a muffin is a guaranteed recipe for hypoglycaemia later in the day. Simply by changing your breakfast, you will improve your energy levels and your ability to cope with deadlines, tired and cranky children or a demanding boss for the rest of the day.

Avoid high sugar breakfasts such as cereals, breakfast bars, honey or jam on toast, muffins and banana bread and instead look for low-glycaemic-load (low-GL) and high-protein alternatives such as homemade Bircher muesli, fruit and yoghurt, poached eggs with toasted rye bread or some good-quality whey protein blended with antioxidant-rich berries.

Follow breakfast with a healthy mid-morning snack a few hours
Limit your exposure to toxic chemicals by avoiding chemical-laden cleaning products, ensuring your house has adequate ventilation and choosing your skin products and cosmetics wisely.

later and you'll be setting yourself up for a stress-free afternoon. Healthy morning tea options include fresh fruit and nuts, boiled egg, yoghurt or cucumber, or carrot and celery sticks served with hommus, avocado, goat's cheese or cottage cheese.

A high-protein snack before bed can help stop your blood sugar dropping early in the morning, which results in a surge in stress hormones that rouses you from sleep and makes returning to sleep very difficult. Stabilising your blood sugar levels also helps to reduce cravings for sugary and processed foods, making it easier to stick to a healthy diet without the added stress of cravings sabotaging your efforts. It will also help you maintain a healthier weight without the need for extreme dieting. A rapidly expanding waistline is a significant source of stress for most of us.

MENTAL AND PSYCHIC STRESS

This is the form of stress most people are familiar with, but without some forms of positive mental and psychic stress we would not grow and develop into balanced human beings. Positive forms of mental stress include overcoming adversity, achieving a challenging goal and even learning to say no to damaging foods, people and lifestyle choices. Some of the more damaging forms of mental and psychic stress include:

- Perfectionism
- Focusing on what you don't want instead of what you do want
- Feeling powerless
- Staying in no-win situations
- Having a fear of making mistakes
- Feeling guilty about relaxing and taking time for yourself
- Surrounding yourself with negative people
- Being unable to say no

Mental and psychic stress is often one of the hardest stresses to resolve for most people. Many of the thought processes and behavioural patterns behind this type of stress stem from our reactions to past stressful events as far back as childhood. Activities such as flow-of-consciousness journaling can help you to become more conscious of the underlying drivers that contribute to mental stress. In her best-selling book The Artist's Way, Julia Cameron recommends practising the “morning pages”, a form of flow-of-consciousness journaling, as a way of creating clarity and decreasing the power your internal critic has over you. Your internal critic is that nagging voice that tells you’re a failure, too fat, too old, too young, too ugly, too stupid, that it’s impossible, you’ll never get healthy, you’ll never be loved and so forth.

Flow-of-consciousness journaling is vastly different from a regular journal or diary. It simply means moving your pen across the page and writing down whatever happens to be in your mind at that particular moment. If you happen to be thinking, “I don’t know what to write. This is stupid. Why am I doing this? What on earth am I going to write?”, this is exactly what goes onto the paper until you have filled three A4 pages with writing. It’s not a record →
The four doctors
According to Paul Chek, the best way to manage your stress and enjoy a long, healthy and disease-free life is to ensure you spend some time each day with the four doctors: Dr Diet, Dr Quiet, Dr Happiness and Dr Movement.
- Eat a healthy, balanced diet, avoiding chemically laden foods and sugar.
- Drink sufficient pure, filtered water each and every day.
- Limit or avoid stimulants such as coffee.
- Balance mental stress and excitement with quiet down time.
- Slow down and stop rushing by developing good time management.
- Get eight to nine hours of solid, uninterrupted sleep every night.
- Play, laugh, smile and engage in activities that bring you happiness and pleasure.
- Move your body to prevent stagnation and maintain circulation.

of things you have done that day or plans for tomorrow. Put simply, flow-of-consciousness journaling is a form of “brain drain” or “mind detoxing.” In fact, this type of journal-keeping is more like a meditation practice than a record of events. Done daily on a regular basis, it allows you the insight and strength to effect positive change in your life. If you’re a morning person, write it in the morning, and if you’re an evening person it will be best to do it at night before bed.

ELECTROMAGNETIC STRESS
You are surrounded by extremely low-frequency (ELF) radiation, which, like chemical stress, your ancestors never had to deal with. You can’t see, hear, smell or even feel it, making it easy to dismiss it as a source of stress. But ELF radiation disrupts your body’s own electromagnetic fields, creating biological stress as well as altering hormonal and immune systems.

Try to limit your exposure as much as possible by avoiding wireless technology and investing in a device that helps to shield radiation emitted from your mobile, computer and laptop. For some positive electromagnetic exposure, spend some time each day walking barefoot on grass or sand in order to connect with the earth’s electromagnetic field. Sun exposure in moderation is also a positive form of electromagnetic stress.

THERMAL STRESS
Extremes of temperature can create a state of stress for your body. Air-conditioning in the office set too high in summer or sleeping with the electric blanket switched on all night can contribute to your stress burden. You may have already noticed that coughs, colds and runny noses are much more common during the change of seasons, when the temperature swings from 30°C down to 15°C from one day to the next. If your body is already highly stressed, the fluctuating temperatures can be the final straw, resulting in a respiratory infection due to a suppressed immune system. Burns, including severe or repeated sunburn, are another type of thermal stress. This is part of the reason why too much sun can bring on an attack of cold sores in susceptible people.

ARE YOU AN ADRENALIN JUNKIE?
Adrenalin makes you feel good — so good, in fact, that it can become seriously addictive. You may even be an adrenalin junkie without realising it. As your adrenals become more and more fatigued, your body becomes more tired without adrenalin and cortisol to prop it up. This can result in a tendency to manufacture stress or engage in stressful activities as a way of keeping the stress hormones flowing. The stress response is an emergency system and your body tries hard to balance time spent in this energy-consuming state with one requiring less energy. The old saying, what goes up must come down, is a universal law that applies to time spent fueling yourself with adrenalin. Adrenalin arousal is almost always followed by a withdrawal period characterised by extreme restlessness, irritability, inability to relax, obsessing about everything that remains under short attention span and a vague feeling of depression while not engaged in activity.

Depending on how long and intense your adrenalin high was, withdrawal period may last a few days up to a week or even longer. You answer yes to any of the following, then according to Dr Alex Hart, there is a strong possibility you are an adrenalin junkie:
- Would you rather engage in activity than sleep?
- When you stop your activity, do you feel restless or low?
- Does your activity help you forget your problems?
- Whenever you feel depressed, do you turn to your activity to help yourself feel better?

Anything that stimulates the release of adrenalin has the capacity to become addictive, including running, dieting, caffeine and arguments.

Flow-of-consciousness journaling is a form of “brain drain” or “mind detoxing”. In fact, this type of journal-keeping is more like a meditation practice than a record of events.

HERBAL MEDICINE FOR STRESS
The plant world offers some wonderful herbs that are beneficial during times of increased stress or for sufferers of adrenalin fatigue. Adaptogens are a group of herbal remedies that quite literally help your body resist and adapt to physical, chemical and emotional stress by helping to support and maintain the adrenal response. They can delay and minimise adrenalin fatigue due to times of intense or prolonged stress. They also be used to assist in recovery from adrenalin fatigue. Most adaptogen herbs are also potent antioxidants. Some of the better-known adaptogens include:

**LICORICE ROOT** *(Glycyrrhiza glabra)* help extend the action of cortisol, exerting a synergistic effect on the adrenal glands. Licorice root be used to assist in the recovery not only from stress but also from the suppressive effects of corticosteroid medication such as cortisone. High doses of licorice out long period of time may increase blood pressure.

**KOREAN GINSENG** *(Panax ginseng)* assists in improving star concentration, healing and work efficiency during times of stress. Panax works very quickly to restore energy levels, but it should be taken if you suffer from acute anxiety or consume large amounts of coffee. As it is quite stimulating, it is best used in states of underactive adrenal glands such as adrenalin fatigue rather than during acute stress. In traditional Chinese medicine, panax is also used to treat low libido in men, a common side effect of excess stress.

**SIBERIAN GINSENG** *(Eleutherococcus senticosus)* is more suited to men who are long-term use than Korean ginseng, making it ideal for assistir
in recovery from adrenal fatigue. It helps to improve vitality and stamina and increases resistance to disease and infection. It combines well with licorice root.

**MACA** (*Lepidium meyenii*) comes from Peru where it is made into a flour and consumed liberally as a food. Rich in nutrients, maca is particularly useful when chronic stress has resulted in low oestrogen or testosterone. This is a gentle remedy well suited to long-term use.

**RHODIOLA** (*Rhodiola rosea*) is particularly well suited to mental and emotional stress as it helps to alleviate depression and elevate mood as well as being a stimulant. Research suggests it may help to optimise levels of the feel-good neurotransmitters serotonin and dopamine as well as having adaptogenic properties in helping to improve resistance to stress.

**ASHWAGANDHA** (*Withania somnifera*), also known as Indian ginseng, is an important herb in Ayurvedic Indian medicine. It has a very mild sedative and calming action, making it well suited for use during acute stress when the adrenal glands are overactive. It’s also used in herbal medicine for undertactive thyroid. Ashwagandha is a very safe and gentle herb that can even be given to small children.

**DAN SHEN** (*Codonopsis pilosula*) has many of the health effects of the ginsengs but without any stimulating properties, making it ideal for acute stress and anxiety. It helps to increase white blood cells and strengthen digestion and immunity. Dan shen is a wonderful adaptogen tonic for after illness or surgery.

Nervous system restoratives are another class of herbal remedies that may assist in restoring and nourishing a frizzled and debilitated nervous system. They help to improve the tone and function of the nervous system and should be used over several weeks to months for best results. They combine well with herbal adaptogens. Commonly used herbal nervous system restoratives include oat seed, passionflower, skullcap, St John’s wort, chamomile, lavender, hops and lemonbalm.

**BACH FLOWER REMEDIES FOR STRESS**

Bach flower remedies offer an incredibly gentle yet effective way of helping you move through periods of stress, mentally and physically. They can safely be used for babies, children, the elderly and the very ill. They are also safe to use in conjunction with medication if you are unsure about interactions with herbal remedies. Several remedies can be combined for best results.

**OAK** helpful for those who plod on, even when exhausted, or who are driven by a sense of duty and responsibility.

**PINE** of benefit for those who are driven by guilt and self-reproach, or who never feel that anything they do is quite good enough.

**IMPATIENS** should be taken by those who take on too much work and are always stressed by not having enough time. They are often snappy, irritable and impatient.

**VERVAIN** can be used by people who cannot stop their minds from over-thinking, which can often result in muscle tension and sleep problems.

**AGRIMONY** for classic adrenalin addicts who are active to keep themselves from dealing with their internal pain.

**WHITE CHESTNUT** for a worrywart, always worrying and obsessing about what might go wrong.

**ELM** for those who feel completely overwhelmed and unable to cope with stress.

**OLIVE** for those who are mentally and physically drained from a long period of stress.

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**HOW HEALTHY ARE YOUR ADRENAL GLANDS?**

Are your adrenals exhausted and worn out or are they worn out only after overtime? Do you need to calm them down or build them up?

**Adrenal fatigue checklist**

- Easily frazzled and fly off the handle at small things
- Cannot tolerate loud noises
- Dizziness when standing or low blood pressure
- Catch every respiratory infection that goes around or take long time recovering from minor infections
- Difficulty recovering from jet lag
- Quivering tongue
- Dark circles under eyes
- Cannot tolerate confrontation
- Low libido
- Exhausted in the mornings, even after a good night’s sleep
- A night owl, finding it difficult to wind down and sleep at night
- Hypoglycaemic or low blood sugar
- Dry skin
- Skipping meals causes anxiety, headaches, the shakes or let you angry and irritable
- Craving salt and salty foods
- Sensitive to caffeine, alcohol, chemicals and strong smells
- Tired but wired [exhaustion coupled with a sense of anxiety making it difficult to relax and rest]

If you scored high on the adrenal fatigue checklist, you need to focus on remedies and foods that tonify and nourish your adrenal gland. Herbal remedies such as licorice root, ginseng and withania can help restore your energy levels. Avoid sugar, fruit juices and refined foods while increasing good-quality fats and protein-rich foods such as eggs, fish and organic chicken. It’s important to never skip breakfast and you’ll do best if you graze regularly through the day.

**High adrenal checklist**

- Heart palpitations
- High blood pressure
- Easily confused and frazzled when under pressure or rushed
- A sense of anxiety
- Tendency to be aggressive and intolerant
- Unhealthy skin [infected, injured or bruised easily]
- Excessively oily skin and acne
- Increased facial and body hair in woman
- Problems getting to sleep or waking after a fitful sleep
- Sugar cravings
- Restless legs
- Increased muscle tension and discomfort

If you scored high on the checklist, you need to focus on calming your overactive adrenal system before it burns out. Avoid stimulants such as caffeine, sugar, artificial sweeteners and MSG. Calming herbal remedies such as zizyphus, skullcap and passionflower can be helpful for sleep problems. Be sure to take extra B vitamins to help your nervous system, as well as B5, vitamin C and the amino acid tyrosine for your adrenal gland.

Aerobic exercise is a good way to burn off excess stress hormones that can otherwise leave you feeling anxious, jittery, angry and panicked. Walking meditation or yoga often work best for this adrenal people who may find themselves bored, restless or even panicked during more sedate forms of meditation. Try carrying a small bottle of pure lavender essential oil with you; whenever you start to feel stressed, anxious or overwhelmed, inhale deeply from the bottle for an instant sense of calm and relaxation.