

A person wearing blue medical scrubs is holding a bright green apple in their hands. A silver stethoscope is draped around their neck. The background is a solid blue color. The image is framed by a curved orange and blue border at the top and bottom.

Stay Healthy

Take the bite out of
20 common health conditions


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Singapore Health Services Pte Ltd (SingHealth) offers specialist medical care through 2 tertiary hospitals – Singapore General Hospital and KK Women’s and Children’s Hospital, 5 National Specialty Centres – National Cancer Centre Singapore, National Dental Centre Singapore, National Heart Centre Singapore, National Neuroscience Institute, Singapore National Eye Centre, a community hospital and a network of primary healthcare clinics.

SingHealth provides tertiary medical care across a comprehensive spectrum of over 40 specialties with the in-depth expertise of 150 sub-specialties. Supported by a faculty of over 1,000 internationally-qualified medical specialists and well-equipped with advanced medical diagnostic and treatment technology, the group is well-recognised in the region for charting new treatment breakthroughs.

As an Academic Medical Cluster, we seek to transform patient care by integrating clinical services, teaching and research. Patients at SingHealth enjoy the benefit of leading-edge treatments with a focus on quality and holistic care, in an integrated and multidisciplinary setting.

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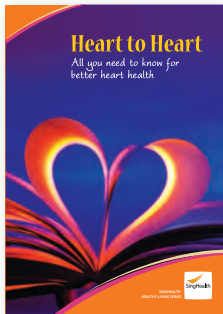
The SingHealth Healthy Living Series of booklets aims to bring health information to the public. Our booklets cover a range of medical conditions and are written with the aim of empowering you to take charge of your health by helping you to understand your medical conditions and the various treatment options available.

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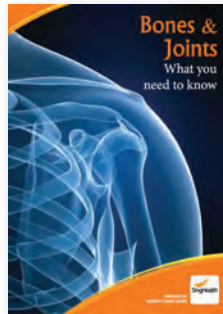
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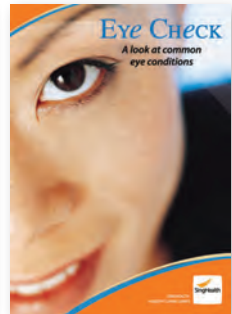
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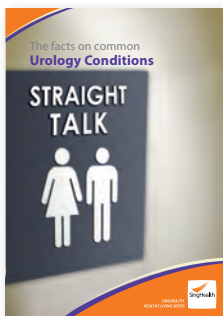
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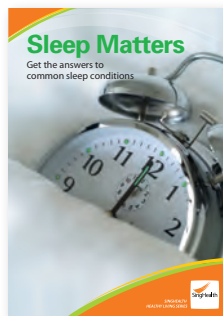
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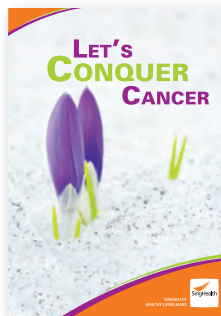
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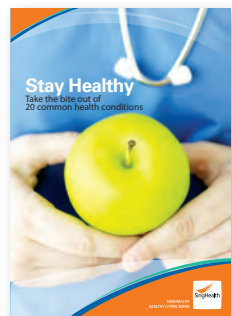
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Let's Conquer Cancer



Stay Healthy:
Take the bite out of 20 common health conditions

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Foreword

Information is power, so is knowledge. Especially when it relates to your health.

Many common health conditions can be managed well or even avoided, if right decisions are taken in a timely manner.

SingHealth constantly integrates our clinical services, teaching and research so that we can deliver timely and innovative multidisciplinary care for our patients - now and in the future. However, this by itself may not be enough, as patient education does significantly augment the overall management of medical conditions.

It is because you are at the heart of all we do, we constantly look for ways to enhance self-empowerment for our patients.

At SingHealth, we are committed to bringing you accurate and comprehensive information to help you take better charge of your health. As Singapore's largest academic healthcare cluster, we have drawn on our collective expertise to identify 20 of the commonest health conditions in Singapore.

This booklet provides you with the essentials to make the right lifestyle choices, understand your medical condition better and be aware of the latest treatment options.

Prof Fong Kok Yong
Group Director (Medical), SingHealth
Chairman Medical Board,
Singapore General Hospital

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Disclaimer: All information provided within this publication is intended for general information and is provided on the understanding that no surgical and medical advice or recommendation is being rendered. Please do not disregard the professional advice of your physician.

Acute Bronchitis in Children

Bronchitis is a respiratory disease where the lining of the main airways in the lungs becomes inflamed. As the airways swell, it restricts the air supply to the lungs making it difficult to breathe.

Acute bronchitis is a common condition and a healthy child will usually recover fairly quickly without any problems.

Chronic bronchitis, on the other hand, keeps recurring and can last a long

time. Chronic bronchitis is defined as a cough with mucus most days of the month for three months of the year, for at least two years in a row. It mostly affects adults.

Causes

Acute bronchitis is usually a mild condition and often starts as a result of a respiratory infection such as cold or flu. It is usually a result of a viral infection, although it is sometimes caused by bacteria.



Diagnosis is based on a physical exam, medical history and symptoms.

Symptoms

Common symptoms include:

- **Coughing.** May start as a dry cough but turns into one that brings up mucus from the lungs. The coughing may last for several weeks.
- **Wheezing.** Whistling noises when breathing, especially on physical exertion.
- **Shortness of breath.** The child may also experience chest discomfort.
- **Runny nose.**
- **Fever and muscle ache.**

Most symptoms will go away in about a week although the coughing can last for several weeks.

Diagnosis

Diagnosis is based on a physical examination, medical history and symptoms. The doctor may order tests to rule out other conditions such as asthma or pneumonia.

These tests include:

Sputum Culture or Nasal Swab for Respiratory Viruses. Tests for the presence of bacteria or viruses in the sputum and identifies the organism so that the appropriate antibiotic can be prescribed.

Pulmonary Function Test. Also known as lung function test, it measures the airflow and volume of air in the lungs and allows your doctor to measure how well your lungs are functioning.

Chest X-ray or CAT Scan. These tests can confirm diagnosis of bronchitis and rule out pneumonia or other lung conditions.

Blood Tests. To test for inflammation of the lungs.

Treatment

Acute bronchitis normally goes away on its own. Most treatments are meant to help relieve symptoms and include:

- Medication for fever
- Cough medicine or medication for rhinitis
- Vaporiser to help the child breathe easier
- Increased fluid intake to help keep the child's air passages moist and better able to get rid of germs and other irritants
- Avoiding smoke or fumes

The doctor may prescribe bronchodilators to help open the tight air passages in the lungs if the child is wheezing.

As acute bronchitis is usually caused by a virus, antibiotics are usually not needed. Antibiotic is prescribed only if the bronchitis is caused by bacteria.



Treatment for bronchitis usually aims to relieve symptoms.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institution:

KK Women's & Children's Hospital | Tel: 6294 4050

Allergic Rhinitis

Allergic rhinitis occurs when your immune system reacts to particles (allergens) in the air that you breathe by causing an allergic reaction such as sneezing, inflammation and a runny nose.

Causes

There are two types of allergic rhinitis – seasonal and perennial.

Perennial allergic rhinitis, which can occur all year round, is usually triggered by indoor allergens such as pet dander, dust mites, dust, mould and occasionally food allergy.

Seasonal allergic rhinitis is seasonal and is caused by outdoor allergens such as pollen from trees and plants. It is also likely that there is a genetic factor involved. If your parents have allergies, you are also likely to have allergies. The chance is higher if your mother has allergies.

Symptoms

You may have symptoms only at certain times of the year if you are allergic to pollen.

If you are allergic to indoor allergens or dust mites, you may have symptoms all the time.

Symptoms can be similar to that of the common cold but unlike a common cold they continue over a longer period. Symptoms include:

- Continual sneezing, especially in the mornings
- Runny nose and postnasal drip
- Watery and itchy eyes
- Blocked stuffy nose
- Ears, nose and throat that are itchy

People with allergies usually have symptoms for many years. Some conditions such as asthma and eczema can also be associated with allergic rhinitis. There may also be other problems such as sinusitis and ear infections as a result of your allergies.

Prevention

- Do not use carpets in the house. Replace carpets with hard flooring.
- Use synthetic pillows instead of those with feather fill.
- Enclose mattress and pillows in allergen-impermeable covers. Wash pillow and bed sheet covers and blankets in hot water (55-60 degree Celsius).
- Avoid pets. If that is not possible, keep your pet out of your bedroom.

Diagnosis

- Diagnosis by your doctor is based on physical examination and symptoms.
- Skin testing, as in a skin patch or prick test, is a common way of testing for the particular allergen that is causing your reaction.
- Blood tests to detect certain antibodies in the blood can confirm a diagnosis of allergy.

In certain cases, your doctor may order other tests to rule out other conditions.

These tests include:

Rhinoscopy. A rhinoscope is used to look inside the sinuses, upper passages and upper airways to look for nasal polyps or other problems that may be blocking the nasal cavity.

Imaging tests. X-rays, CT scans and MRIs can be used to look for sinus infection and chronic inflammation or thickening of the sinus lining (as a result of chronic inflammation), structural defects and cancer.

Treatment

The best treatment is to avoid the source of allergy. However, if that is not possible or does not work, other treatment options are available. Treatment is individualised depending on the type and severity of symptoms and other underlying medical conditions.

Treatment options include:

Antihistamines. Antihistamines provide relief by controlling symptoms of allergy. It does so by neutralising the effect of the histamines released into the bloodstream during an allergic reaction.

Corticosteriods. Cortisone nasal sprays are very effective in reducing the inflammation which causes swelling, sneezing, and a runny nose. Cortisone helps the body counter the effects caused by an allergic reaction.



A skin patch or prick test is recommended when an allergy is suspected.

Decongestants. Decongestants either taken orally or in the form of nasal sprays can help control allergy symptoms but not their causes. By shrinking the swollen membranes in the nose, decongestants make it easier to breathe. But this form of treatment can only be used for short periods.

Allergy Shots. For some people with very bad symptoms, immunotherapy or allergy shots may be helpful. Immunotherapy helps your body handle the allergens by exposing it to increasingly higher doses of the allergen.

Your doctor will advise on the best course of treatment for you.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institutions:

Singapore General Hospital | Tel: 6321 4377

KK Women's and Children's Hospital | Tel: 6294 4050 (Children)

Asthma in Children

Bronchial Asthma is a common problem in childhood that affects about 20% of children in Singapore. It is a condition where there is chronic inflammation of the airways.

Causes

Various triggers can affect the sensitive airways of children with asthma, and bring on symptoms. However, it is not always possible to pinpoint the exact cause.

Common causes are:

Viral Infections. Asthma is often brought on by viral respiratory infections in young children. Such viral infections are unavoidable and are very common in a young child. As the child grows older and resistance to viral infection improves, asthma attacks also decrease.

Exercise. Symptoms may occur a few minutes after exercise ends, or it may occur many hours later e.g. in the night. This is known as exercise-induced asthma.

Allergies. Asthmatic children are sensitive to certain substances called allergens, which when inhaled causes asthma. Common allergens are house dust mites and animal dander. Food allergy as a direct cause of asthma is uncommon but occasionally peanuts, citrus fruits, strawberries, egg or milk products, or bird's nest may provoke asthma symptoms.

Irritants. Air pollution can cause breathing problems. Children with asthma have more symptoms during periods of haze. Strong fumes and odours can also induce asthma. Cigarette smoke is particularly bad for children with sensitive airways and should be avoided at all cost.



Cigarette smoke is especially bad for children with sensitive airways.

Weather Changes. Sudden changes in temperatures and humidity may worsen asthma. Cold, dry air is a trigger to the sensitive bronchial airway. Exercising in cold air may also increase the symptoms of exercise-induced asthma.

Drug and Chemicals. Aspirin and other anti-arthritic medicines e.g. ibuprofen (Brufen), diclofenac (Voltaren) may cause asthma in some children. Certain cough mixtures, particularly those containing codeine,

may sometimes worsen asthma symptoms. Children with asthma also react adversely to artificial coloring (tartrazine dye), food preservatives (metabisulfite) and monosodium glutamate (MSG).

Emotional Factors. Emotional problems on their own do not cause asthma but anxiety, excitement and stress can aggravate the condition.

Symptoms

Wheezing. A high-pitched whistling sound that occurs when a child breathes out. This is an important symptom of asthma but may not be present in all cases of asthma.

Cough. Generally troublesome at night or early in the morning. Cough may be the only complaint in a small group of asthmatic children.



Emotional problems do not cause asthma but can aggravate the situation.

Shortness of breath. This may be severe enough to interfere with normal activity, sleep or exercise. In older children, it may occur after exercise.

Chest tightness. A complaint, particularly of older children, after vigorous exercise.

The symptoms of asthma vary for each child. Some children are troubled mainly by wheezing, while others may be bothered by a chronic cough.

Diagnosis

Diagnosis is made on a detailed history and careful examination. Special tests are usually not required, unless there are certain doubts in the diagnosis.

The following tests may be ordered:

Chest x-ray. May be necessary to exclude other medical conditions and reasons causing the narrowing of the airways.

Lung function test. This test gives an indication of the severity of the condition and the response to treatment.

Peak flow rate. This gives an indication of how quickly air can be forced out of the lungs – the lower the reading, the more obstructed the lungs are.

Spirometry. This test allows the doctor to get a detailed assessment of airflow in the smaller airways.

Challenge tests. In children whose history is not definitive and breathing tests are normal, 'stress' tests may be used to induce airflow obstruction.

Allergy tests. Allergy tests may be useful to confirm certain suspected allergens.

Treatment

There is no cure for asthma. But with effective treatment, asthma can be kept under control and the child can lead a normal life, participate in sports and have normal lung function.

There are two main groups of medicines that can improve the symptoms due to asthma.

Relievers or Bronchodilators.

These medicines act to relax the muscles around the airway, relieving the obstruction to airflow rapidly. They provide relief from asthma symptoms within minutes and are used during an acute asthma attack.

Reliever medications should be carried at all times and be used

promptly to treat any asthma symptom. School children should carry reliever medicines in their school bags.

Preventers. They act to reduce the swelling of the airway lining and reduce mucus production. They do not provide immediate relief of symptoms but treat the underlying disease. Anti-inflammatory medications are now the first line of treatment in many guidelines for managing problematic asthma.

They have to be given over a long period of time in order to modify the disease. Preventive medications should always be used, whether or not there are symptoms of asthma. Never stop preventive medications without medical advice.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institution:

KK Women's & Children's Hospital | Tel: 6294 4050

Benign Prostatic Hyperplasia (BPH)

Benign prostatic hyperplasia (also called BPH) is a condition that affects the prostate gland in men. The prostate is a gland found between the bladder (where urine is stored) and the urethra (the tube urine passes through).

As men age, the prostate gland slowly grows bigger (or enlarges). As the prostate gets bigger, it may press on the urethra and cause the flow of urine to be slower and less forceful.

Most symptoms of BPH start gradually.

Symptoms include:

- the need to get up more often at night to urinate
- the need to empty the bladder often during the day
- difficulty in starting the urine flow and dribbling after urination ends
- the size and strength of the urine stream may decrease

These symptoms can be caused by other things besides BPH. Tell your doctor if you have any of these symptoms, so he or she can decide on the tests to find the possible cause.

Risk Factors

BPH is extremely common. Half of all men over 50 develop symptoms of BPH, but only 10 percent need medical or surgical intervention.

Is BPH a type of cancer?

No. BPH is completely benign. It is not a precursor (a forerunner) to prostate cancer.

Diagnosis

After taking a history of your symptoms, a rectal exam is the next step. In a rectal exam, your doctor checks your prostate by putting a gloved, lubricated finger into your rectum to feel the back of your

Benign = Not caused by cancer; Hyperplasia = enlargement

prostate gland. This allows him to feel the size of the prostate gland and especially assess for hard lumps which may indicate cancer.

To make sure that your prostate problem is benign and not cancer, your doctor may do a blood test called PSA or prostatic specific antigen.

What are the consequences of BPH?

Mild cases usually have no consequence to life. If the enlargement gets moderate, symptoms related to difficult urination become troublesome. In severe cases, a sudden inability to urinate may require an immediate visit to a doctor to insert a urine tube or catheter into the urethra to drain out the urine.

Even if BPH sufferers manage to pass urine, some amount of urine may be left behind, which easily gets infected, making moderate to severe BPH sufferers prone to urine infections.

Treatments

Sometimes mild symptoms get better on their own. Many people believe that a healthy lifestyle and diet with less processed foods rich in fibre, fruit, vegetables will cause the prostate to enlarge less, by decreasing oestrogens and increasing testosterone levels both of which affect prostate size. Some herbal products like saw palmetto are even available commercially. In any case, it is always good to adopt a healthy lifestyle whether these measures make a noticeable difference or not.

If your symptoms get worse, your doctor may suggest drug treatment.

Finasteride and dutasteride block conversion of testosterone to dihydrotestosterone, which makes the prostate enlarge.

The side effects of finasteride are rare and mild and usually affect sexual function. The side effects cease when the medication is stopped. The prostate may enlarge again when the medicine is stopped, so your doctor may suggest another treatment.

Another kind of medicine, called alpha-blockers, can also help relieve the symptoms of BPH. Alpha-blockers have been used for a long time to treat high blood pressure, but they can also help the symptoms of BPH, even in men with normal blood pressure. Some of these drugs are terazosin, doxazosin, tamsulosin and alfuzosin.

The side effects of alpha-blockers include dizziness, fatigue and lightheadedness due to lowered blood pressure. Doctors therefore start with a low dose first.

How can a Urologist help me in further treatment of BPH?

A referral to a urologist (a surgeon of the urinary-genital system) may be necessary to explore surgical treatment options.

A urologist will perform an ultrasound exam of the prostate by inserting a well-lubricated probe into the anus. This will measure the size of the prostate gland, check for cancer if suspected and assess the need for surgery. Biopsy of the prostate is done through the rectum if cancer is suspected.

A urologist can also perform an ultrasound of the bladder to see how much urine is retained after urinating, due to the obstruction by the prostate.

One treatment option is a minimally invasive treatment. Most of these treatments use heat such as microwave or laser to destroy prostate tissue applied through the urethra.

Surgery is considered the most effective treatment and is used in men with symptoms that persist after other treatments are tried. This is also the best way to diagnose and cure early cancer of the prostate. Surgery is usually done via a tube passed through the urethra, thus leaving no abdominal scars (Transurethral resection of prostate – TURP).

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institution:
Singapore General Hospital | Tel: 6321 4377

Cataracts

A cataract is a condition in which the lens of your eye turns cloudy, preventing sufficient light from entering your eye therefore reducing vision. Eventually, this deterioration in vision will interfere with your daily activities, such as reading or driving a car (particularly at night).

Most cataracts develop slowly and you may not notice it at the earlier stages of the condition. However, your vision will be affected as the clouding progresses.

Although cataracts do not cause irritation or pain, it is the most common cause of blindness in the world. Fortunately, it is treatable with safe and effective surgery.

Causes

Cataract formation is associated with ageing and is common in the elderly. In young people, it can be congenital, associated with inflammatory eye disease or due to injuries.

Other risk factors include prolonged UV light exposure, long-term use of certain medications and medical conditions such as diabetes.

Are cataracts dangerous?

Cataracts are not dangerous to eye health unless they become completely white. This condition, called an overripe or hypermature cataract, can cause raised eye pressure and present suddenly with redness and pain in the eye, as well as headaches. If a cataract causes inflammation and raised eye pressure, it will need to be removed.

Symptoms

The first sign that you may have a cataract is if you have blurred vision that cannot be corrected with the usual corrective visual aids such as glasses. Other signs include you needing frequent change of glasses, colours appearing dull, poor vision in bright light, haloes around lights, difficulty in reading, watching television or driving at night.

Signs and symptoms of cataracts include:

- Clouded, blurred or dim vision
- Difficulty seeing at night that worsens with time
- Sensitivity to light and glare
- Seeing halos around lights
- The need for bright light when reading and when performing other tasks
- Fading or yellowing of colours
- Double vision in one eye



The symptoms of cataracts include colours appearing dull and halos around light.

Risk Factors

Everyone is at risk because age is the greatest risk factor. Your risk of developing cataracts increases with:

- Age
- Diabetes
- Family history
- Prior eye injury or inflammation
- Prior eye surgery
- Prolonged use of corticosteroid drugs
- Excessive exposure to UV light
- Smoking

Treatment

Cataracts cannot be cured with medication.

Lifestyle adjustments such as changing your spectacle power, using a magnifying glass to read or improving the lighting in your home can be adopted in the earlier stages of the condition.

Cataract surgery is required when the condition starts to interfere with your daily activities. It is a painless, safe and effective surgery. During the procedure, the clouded lens is removed and replaced with a clear lens implant.

Safer healing in cataract surgery

Most cataract surgeries are performed using a technique called phacoemulsification which does away with the need for stitches. The procedure involves making a small incision of 1.5 to 3mm on the cornea. A vibrating instrument is then introduced into the eye through this incision. This process causes emulsification (i.e. softening) of the clouded lens, which is sucked out

through the instrument. The capsule of the lens is thus left behind to receive the lens implant.

Sometimes, the cataracts are removed without the need to implant new lenses. In these cases, vision can be corrected with aids such as glasses or contact lenses. Cataract surgery is performed as a day surgery without general anaesthesia.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institution:

Singapore National Eye Centre | Tel: 6227 7266

Caries

Caries is the most common disease afflicting man. Dental procedures resulting from caries account for the most man hours spent on the dental chair. When caries affects children, the problem is compounded by their limited co-operation for dental procedures; yet 40% of our Singapore preschoolers have a form of decay known as Early Childhood Caries (ECC).

What is Early Childhood Caries?

This is an aggressive form of decay occurring in children below the age of six years. Typically, it attacks the teeth as they erupt - first, the upper anterior milk teeth, then the baby molars. Lower anterior teeth are usually unaffected because these teeth are protected by the tongue and saliva. Saliva has protective factors against decay. However, saliva is reduced during sleep. Children at risk of ECC continue to carry this risk to their permanent teeth.



Early Childhood Caries

Symptoms

Chipping away of parts of the teeth is the first symptom as the enamel is decalcified by the acids. This can happen as soon as the tooth erupts. This progresses to discolouration and tooth sensitivity. Severe pain and even tooth fracture occurs when decay has progressed into the deeper layers of the tooth.

Risk Factors

ECC is a dental infection by strep. mutans bacteria spread from parent or caregiver to the infant. Transmission occurs through saliva, such as the sharing of food or eating utensils. The earlier the infant is affected, the higher the risk of the disease.

ECC is closely related to the prolonged use of a milk bottle especially at night. This can also happen with demand breastfeeding, when the child nurses at the breast throughout the night. The child uses the bottle or breast for comfort, or as a pacifier – a habit called ‘non-nutritive sucking’. Unfortunately, this habit is intertwined with sleep patterns. The child is unable to fall asleep without sucking on the milk bottle. Parents, therefore, report difficulty in stopping this habit, once it is entrenched.

Plaque is also a risk factor. Children with ECC have high levels of plaque. Failure to brush the child’s teeth properly contributes to the accumulation of caries-causing bacteria.

Not all children who nurse with a milk bottle at night develop ECC. Like all diseases, the risk factors above are modified by the child’s resistance to developing caries. This resistance is found in protective factors like type of saliva and quality of tooth structure. This explains why parents may have one child who has the same habit but does not develop the disease, whereas another one does.

Prevention

Parents should observe the following:

- Do not share food or eating utensils with your baby. Caregivers should have good oral health to minimise the risk of infecting the child with strep.mutans. If you are an expectant mother, you can get yourself assessed by your dentist to minimise your risk of transmitting strep.mutans to your child.
- Never put your child to sleep with a milk bottle filled with milk or sweetened liquids in his mouth. Do not allow your child to suckle on demand from your breast when he is sleeping.
- If your child needs a comforter between regular feedings, at night or during the day, give him a bottle of cool water instead.
- Begin brushing your child’s teeth as soon as the first tooth erupts.
- Wean your child off the bottle by age one and schedule his first dental visit.



Bring your child to his first dental visit when he turns one.

Treatment

Treatment depends on how severely the teeth are decayed. Late presentation results in extractions as the only option. As the permanent teeth erupt between 6 – 12 years of age, there is a long time frame where the preschooler will be toothless.

This could compromise chewing and eating. Less severely affected teeth can be treated by fillings, or crowns. Almost always, general anaesthesia is required because of the extensive treatment needs, and the young age of the patient.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institutions:

National Dental Centre Singapore | Tel: 6324 8802

Chronic Back Pain

Since man is an upright creature, his low back bears a considerable amount of weight. The low back region, just above the hip level, is extremely prone to strain. As a result, backache affects nearly everyone at some point in their lives. Backache is said to be 'chronic' or persistent if it lasts for 12 weeks or more.

Causes

Our low back or lumbar region, consists of five bony segments called lumbar vertebrae 'stacked' end to end, each separated from the next by a gel-like disc which acts as a shock absorber. The segments are movable at their linkage points called facet joints. These vertebrae together form a column and bony canal through which the spinal cord runs. The spinal cord gives off pairs of spinal nerves at each segment near the facet joints.

Pain may arise if:

- The disc pops out of position and presses on a nerve (prolapsed intervertebral disc or slipped disc). This may happen in sportsmen who exert themselves, or if sudden heavy lifting is done.
- The facet joints become worn, developing irregular bony edges that press on the nerves (lumbar spondylosis)
- The spinal canal gets narrowed from old age and compresses the spinal roots within it (spinal stenosis)
- The vertebral bone gets softened with age (osteoporosis) and flattens (compression fracture)
- The spinal segments are not in line, either due to slippage forwards (spondylolisthesis) or curvature sideways (scoliosis)

If any of these happens, the back muscles tense up increasing pressure on the nerves and making the pain even worse (muscle spasm).

Prolonged sitting, standing, lifting or poor posture or overuse can cause muscles in the low back to become sore (backstrain) even if none of the above structural events occur.

Symptoms

Pain can run down the thigh (sciatica) due to pressure on the sciatic nerve which is the nerve supplying the leg. Sometimes numbness or pins and needles (parasthesia) occur. Calf ache relieved by sitting, is due to pressure build up in the spinal canal in cases of spinal stenosis.



Surgery is normally not needed for chronic back pain.

Diagnosis

X-rays can reveal bony structures, while a more detailed scan called MRI (magnetic resonance imaging) will show up nerves, discs and muscles.

Treatment

In most cases, bed rest which relieves the back of its weight and pain medication is all that is needed.

If a compression fracture is diagnosed, osteoporosis medications must be administered. Physiotherapy can help relieve muscle spasm by manipulation, traction (stretching of the vertebral column by application of weights) exercises and heat treatment. Back care education on how to avoid straining the back further can be taught by the physiotherapist. Weight reduction is also important to reduce the load on the spine.

When is surgery necessary?

When the above measures fail and especially if there is serious nerve pain running down the leg, surgery may be needed. The procedure advised depends on the cause. For example, the disc may be removed if it is prolapsed, or the spinal canal may be widened in spinal stenosis (laminectomy).

What if the pain is persistent and surgery is not advised or declined by a patient?

Fortunately, today, pain management specialists have developed many techniques just for chronic back pain.

Treatment modalities include:

- **Radiofrequency ablation.** Radiowaves are used to generate heat around a nerve destroying its ability to transmit pain.
- **Spinal cord stimulation.** An implantable device stimulates the spinal cord electrically to block the transmission of pain.
- **Spinal injections.** Epidural injections consist of a corticosteroid and anaesthetic introduced within the spinal canal which numbs all the nerves within it.
- **Nerve blocks.** Injections of anaesthetic near individual nerves to numb them.
- **Pharmacotherapy.** For chronic pain management, special pain medications are also used which suppress nerve conduction. It is also known that chronic pain can lead to depression. Depression can also lead to increased pain perception, hence mental state management and anti-depressant therapy often enters into the pain control strategy.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institutions:

Singapore General Hospital | Tel: 6321 4377

Chronic Obstructive Pulmonary Disease (COPD)

Everybody knows that smoking causes lung cancer. Government warnings and graphic photographs on cigarette boxes have driven home this important message. We also know that smoking is a major cause of heart disease and stroke.

However, there is yet another major disease, Chronic Obstructive Pulmonary Disease (COPD), caused by cigarette smoke which, although not uncommon, is less well-emphasised to the public.

The word 'chronic' means long-standing. 'Pulmonary' refers to the lung. In COPD, there is lung damage and airway inflammation caused by long-term exposure to noxious gases and particles. **In Singapore, the single most important cause is cigarette smoking.** Other causes include secondhand smoke, industrial pollution and a rare genetic condition

known as alpha-1 antitrypsin deficiency where there is a lack of an enzyme important for the repair of lung tissue.

COPD, although not cancer, causes much disability and many deaths. In 2000, the World Health Organization estimated that 2.74 million people died of COPD. By the year 2020, COPD is estimated to be the 5th leading cause of death in the world. As compared to heart disease and stroke, it is the only major illness where the death rate is still increasing.

Prolonged exposure to cigarette smoke causes narrowing of airways (called bronchioles) and copious phlegm production due to changes in the mucous glands of the airway lining. Air has difficulty entering the lungs due to this obstruction, and the person makes a wheezing sound during breathing not unlike an asthmatic. This airway disease is called chronic bronchitis.

Smoke also damages the lung air sacs (alveoli) whose walls break down. This results in a loss of lung tissue and the lung becomes less 'spongy'. The affected person has difficulty absorbing oxygen and ends up feeling 'winded' all the time. This lung tissue disease is called emphysema.

Chronic bronchitis and emphysema are the two components of the smoke-induced lung disease called COPD.

Symptoms

The four symptoms of COPD are:

- A cough that does not go away
- Wheezing (a whistling sound heard during breathing)
- Sputum production for many days in a year
- Shortness of breath

Diagnosis

COPD can be confirmed by performing a test called spirometry. In this test, an individual is asked to blow hard into a machine, which analyses the amount of air expired and the time required to do so.

Airway narrowing, coupled with loss of air sacs whose elastic recoil normally expels air out of the lungs, causes COPD patients to have air trapped in their lungs. In established cases, patients appear 'barrel-chested' and this hyperinflation can be seen on chest x-ray.

Treatment

The most important thing to do is to stop smoking, regardless of how long you have smoked or how much. This is simply critical to your well-being. Studies have shown that stopping smoking at any stage of COPD will slow down the deterioration in lung function.

COPD when advanced is not a curable disease. Structural lung damage cannot be restored once it has happened. However, there are medications available which help to relieve symptoms and slow the progression of disease.

An important class of medications are bronchodilators, agents which open up the airways. These are usually inhaled and sometimes taken orally. Examples include salbutamol, theophylline, ipratropium, salmeterol, formoterol and tiotropium.

Another class of medications are glucocorticoids, also called simply 'steroids'. These are prescribed in inhaled, oral or injectable forms. Oral and injectable steroids are used only on a short-term basis to control exacerbations so as to avoid steroid side effects.

These treatment strategies are similar to that employed for an asthmatic. However, for asthmatics, the condition is reversible as the airways go back to normal after an 'attack', whereas in COPD, the airways are permanently narrowed and lung sacs destroyed, thus drugs are able to act to a limited extent only.

Due to damaged lung architecture, copious sputum which easily gets infected, and damaged airway lining less resistant to micro-organisms, COPD patients are prone to fever and chest infections which often require antibiotics and even hospitalisation.

Other treatment options include pulmonary rehabilitation, exercise regimes designed to maximise the lung capacity. Home and portable oxygen can also be given.

When medications, oxygen and exercise fail, **surgical options** such as lung volume reduction surgery and even lung transplantation can be considered.

However, such drastic surgical methods are only suitable for a minority of patients. Unfortunately by the time symptoms are advanced, death will eventually occur from insurmountable breathing difficulties.

Can I quit smoking and begin to recover now?

A cough in a smoker may not be a simple case of 'smoker's cough'. It may be the start of early COPD. If you are a smoker with any of the four symptoms - persistent cough, wheeze, persistent sputum production and shortness of breath, seek advice from your doctor as to whether COPD has developed.

Quitting smoking early can help curtail the progression of this deadly disease and prevent you from becoming what is called a 'respiratory cripple', someone who can hardly walk or do much because of breathlessness.

If you need help to strengthen your resolve to quit, contact your doctor. Many hospitals and clinics offer smoking cessation programmes with medical advice coupled with behavioral modification strategies and new anti-smoking drugs to make your effort more successful and sustained.



Quit smoking early - it can stop the progression of COPD.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institution:

Singapore General Hospital | Tel: 6321 4377

Diabetes Mellitus

Diabetes mellitus, usually simply called 'diabetes', is a condition of abnormally high blood glucose. If levels are sufficiently high, the glucose begins to filter through the kidneys and appears in the urine. Urine-attracting ants may be the first sign that something is wrong. In fact 'mellitus' is a Latin word denoting sweet urine.

At least 11 percent of Singaporeans have diabetes. Singapore has been found to have fourth highest diabetic rate in the world. With rising affluence, this is a trend in Asian countries.

What is glucose ?

Glucose, the type of sugar that exists in our blood, is the chief source of fuel for energy for our body cells. It is derived from carbohydrates such as rice, bread, noodles and table sugar (sucrose). Insulin, a hormone produced by the pancreas, is needed to transport glucose into cells from the blood.

What is a normal level?

Normally, glucose levels are maintained within narrow limits 4-5.5 mmol/L before food and up to 7 mmol/L two hours after eating. In diabetes mellitus, this control of blood glucose levels is lost, resulting in many undesirable effects on the body.

How does diabetes mellitus (DM) develop?

There are two distinct types of DM.

Type 1

In Type I, the pancreas is damaged by abnormal antibodies and cannot make insulin. Without insulin, glucose cannot be brought into cells and remains at a high level in the blood. The affected person, starved of energy, rapidly loses weight. As sugar holds water and brings it along into the kidneys and bladder, the patient passes large quantities of urine and consequently has excessive thirst and dehydration.

Type 1 DM patients require lifelong insulin injections. This type of DM is rare in Singapore but may be seen in Caucasian populations. It can occur suddenly at any age, even childhood.

Type 2

Almost all DM in Singapore is Type 2 DM. Here, there is sufficient insulin, but cells have developed a resistance to insulin due to long-standing dietary excesses causing more and more demand for insulin. Excessive fat also makes insulin act poorly.

Type 2 patients may not have the typical diabetic symptoms at all as they still have insulin. As such, diabetes may be present for years and cause damage to organ systems before it is ever detected by a blood test. In Singapore, 50 percent of patients have already some organ damage at the point of diagnosis.



More people in their 20s and 30s are developing diabetes.

Type 2 diabetes' incidence increases with age, and those with a family history are more likely to develop it. Although associated with older people, with today's consumption patterns, there is an alarming trend for patients to start developing it in their 20's and 30's or even earlier.

Consequences of uncontrolled diabetes

Many infections such as abscesses, chest and urine infections as well as fungal infections can be caused by uncontrolled diabetes. Many patients are diagnosed at the point when they seek medical attention for a severe infection.

Blindness can result from damage to the retina of the eyes. Cataracts form at a faster rate. High blood glucose also damages the kidneys. In Singapore, diabetes is the leading cause of kidney failure.

Atherosclerosis, which blocks off blood vessels, is caused by diabetes, together with high blood pressure, high cholesterol and smoking, (the four big villains). Heart attacks result when heart arteries are blocked; strokes when brain arteries are blocked; gangrene of feet when arteries to the legs are blocked. One or more amputations are carried out per day from diabetes In Singapore.

Poor wound healing, caused by poor blood supply due to narrowed blood vessels caused by advanced diabetes. One may hear someone saying 'I am OK as my wounds heal well'. However, by the time poor wound healing occurs it may be too late. The ability to heal cannot be used as an indication whether diabetes is present or under control. Blood testing is still the required method to establish the status.

Diagnosis

In Type 1 DM, severe symptoms drive the patient to the doctor. In Type 2 diabetes, the only sure way for diagnosis is by a blood glucose test.

Blood glucose above 7 mmol/L after an eight hour fast or 11.1mmol/L after a meal on two occasions indicates diabetes. Intermediate levels like fasting level of 6.1-6.9mmol/L or 7.8-11.1 after meals indicates a likelihood of developing it in the future, a condition called prediabetes.

To ensure that the sugar levels have been ideal on a daily basis and not only on the day of the doctor's visit, another blood test, HbA1C is done which reflects the average control over three months. A well-controlled diabetic must have an ideal level of HbA1C, as protection of organs from damage can only be possible if blood sugars are maintained consistently everyday and not on and off.

Managing diabetes

The cornerstone of diabetic management is:

- Dietary control
- Restricting carbohydrates
- Calories
- Meal sizes
- Getting enough fibre

Various diabetic tablets may be prescribed for Type 2 diabetes. Insulin may be required in advanced cases of Type 2 diabetes. It is advantageous for diabetics to invest in a home blood glucose meter to monitor themselves.

Glucose levels in diabetics can also fall too low (hypoglycaemia) for example if a person takes their medication and then did not have their meal. Sugar needs to be consumed immediately in such an emergency.



Avoid diabetes – Eat right, exercise and watch your weight.

How to avoid diabetes and its complications

- Going for a blood test annually can determine if you have developed diabetes or prediabetes. The earlier the diagnosis, the better the outcome.
- A balanced diet modest in carbohydrates, regular exercise and weight management can prevent diabetes altogether or prediabetes from developing into diabetes.
- For the established diabetic, excellent control can prevent the tragic complications of heart attacks, strokes, foot gangrene, blindness and kidney failure. Good medical care includes surveillance for all these conditions besides blood glucose monitoring.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institutions:

Singapore General Hospital | Tel: 6321 4377

Diabetic Retinopathy

The retina is the layer that lines the inside of the back of the eye, much like the film in a camera. It contains millions of light-sensing cells that detect the images we see.

Diabetes can cause damage to the retina, causing loss of vision due to swelling of the retina, insufficient blood supply to the retina cells, bleeding inside the eye or scarring and detachment of the retina.

Causes

Diabetes damages the small blood vessels in the retina over time. The small blood vessels can leak, causing swelling of the retina. The small blood vessels can also become blocked, causing the retina to react by trying to grow new blood vessels. These abnormal and fragile new vessels bleed into the cavity of the eye. Scars can form from these new vessels. The

scars pull on the retina and cause it to detach. All these can lead to severe and permanent vision loss.

Symptoms

Patients usually have no symptoms, i.e. the vision is perfectly normal, in the early stages of diabetic retinopathy. Once vision is affected, the diabetic retinopathy is usually severe.

Symptoms of diabetic retinopathy include:

- Blurred vision
- Dark clouds in your field of vision due to bleeding inside the eye

Risk Factors

The risk of diabetic retinopathy increases with the duration of diabetes. About 60 percent of patients with diabetes for 15 years or more will have some diabetic retinopathy. Some of these patients are at risk of developing blindness.

Important risk factors that make retinopathy worse include:

- Poor blood sugar level control
- High blood pressure
- High cholesterol
- Pregnancy
- Smoking
- Kidney failure

Prevention

If you have diabetes you should control your blood sugar level, blood pressure and cholesterol to reduce the risk of diabetic retinopathy.

Unfortunately, good glucose control does not wholly eliminate the risk of diabetic retinopathy. Together with the fact that diabetic retinopathy has no symptoms in the beginning, **it is very important for all diabetics to have their eyes checked every year.** This can be done by your doctor or by having a photograph of the retina taken.

Diagnosis

The doctor can make the diagnosis of diabetic retinopathy by examining the eye with special instruments and lenses. Taking photographs of the retina is a helpful way of detecting and assessing diabetic retinopathy.

Treatment

Laser treatment is required if the retinopathy becomes severe. Laser burns are used to treat swollen areas of the retina. They are also applied to areas of the retina damaged by poor blood supply to stop abnormal new blood vessels from growing. Laser treatments are usually carried out in an outpatient setting and multiple sessions of treatment are usually necessary.

Other surgical procedures such as vitrectomy may be required in advanced cases where there is bleeding into the eye, scar tissue formation and retinal detachment. Surgery is the last resort to save the eye. Injections of medication into the eye to control swelling or new vessel growth are given in selected cases.



Diabetics should have their eyes checked annually.

Regular eye exams are required after treatment for diabetic retinopathy as it is a long-term condition. The aim of treatment is to make the retinopathy stable and therefore prevent worsening of vision over a period of time. Unfortunately, the damage that has already occurred can be permanent.

As diabetic retinopathy can have no symptoms initially, it is important to have your eye checked annually if you are diabetic. Good vision can be maintained if retinopathy is detected and treated early before permanent damage has occurred.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institution:
Singapore National Eye Centre | Tel: 6227 7266

Gingivitis (Periodontal Disease)

90% of adult Singaporeans have some form of gum disease. This may range from the mildest (gingivitis) to the most severe (periodontitis). Gum disease can affect every tooth (generalised) or just some teeth in the mouth (localised).

Gingivitis

The early stage of gum disease is gingivitis – an inflammation of the gums immediately surrounding the teeth. The first symptom of gingivitis is bleeding on brushing. In some cases, bad breath is noted. Pain is usually not a presenting symptom. Gum disease is called the ‘silent’ enemy because it may present with no symptoms at all. By the time symptoms arise, the disease

may have advanced considerably. Gingivitis is reversible with proper oral hygiene and simple treatment like scaling and polishing.

Periodontitis

Unattended gingivitis over a long time, progresses to periodontitis. This is where the disease attacks the deeper parts of the supporting structures of the tooth such as the surrounding bone and attachments. In addition to the symptoms of gingivitis, patients may complain of loose teeth, changes in tooth position, gum boils, longer looking teeth, or dull ache in the gums and teeth. Periodontitis is irreversible with just brushing alone and needs dental intervention.



Healthy gums



Moderate Periodontitis

Causes

Bacteria in plaque are the cause of gum disease. These bacteria do not cause periodontal disease when removed daily by proper brushing. However, when there is inadequate oral hygiene, bacteria accumulate to form hardened deposits called tartar. Tartar cannot be removed by brushing and requires scaling.

Plaque bacteria produce toxins that irritate the gums. When bacterial toxins accumulate over time (as happens when plaque is not removed) the body mounts a response by producing enzymes. Toxins and enzymes dissolve bone and surrounding tissue holding the teeth. Periodontal disease is a chronic disease and if untreated gets worse over time resulting finally in tooth loss.

Risk Factors

- Genetic susceptibility
- Puberty, menopause when hormonal changes occur
- Smoking, stress, diabetes. Poorly controlled diabetics are at risk of developing gum disease
- Medications like anti-depressants, oral contraceptives, some heart medications
- Compromise of immune system e.g. AIDS, leukaemia, cancer treatment

Prevention

Maintenance of good oral health involves regular six monthly visits to the dentist for scaling and proper and effective home care. This means that patients must practise proper brushing and flossing and use appropriate dental aids to remove plaque from hard to access areas. Cessation of smoking and tobacco use will reduce risk factors.

Treatment

Once you have been diagnosed with periodontitis, your dentist will decide if you can be treated surgically, non-surgically or a combination of both. Treatment aims are to control infection, prevent disease progression and return to good oral health. Non-surgical treatment involves scaling and root planing. Surgical treatment includes gum surgery, bone or tissue grafts to replace or encourage new growth of bone or gum tissue destroyed by periodontitis.

The link between periodontal disease and general health

The effects of periodontal disease are not limited to the mouth. Researchers have found that people with periodontal disease are almost twice as likely to suffer from coronary artery disease as those without periodontal disease.

Additional studies point to a relationship between periodontal disease and stroke. Periodontal disease can exacerbate existing cardiac conditions.

Pregnant women with periodontal disease are seven times more likely to have pre-term deliveries and babies who are of low birth weight. Pregnant women should have a periodontal evaluation.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institution:
National Dental Centre Singapore | Tel: 6324 8802

Gout

Gout is a form of arthritis or joint inflammation where sudden pain, redness, warmth and swelling of a joint occurs, due to uric acid from the blood crystallising within the joint. The condition is called 'Niao Suan' by traditional Chinese physicians, a term many patients are familiar with.

Symptoms

An attack often occurs suddenly with the maximum intensity of pain reached within a few hours such that the sufferer may have difficulty even walking. This rapid development of pain is a feature that differentiates it from other forms of arthritis. Similarly, after some days, the pain and swelling subsides, hastened by medication, and things return to normal.

This is unlike other forms of arthritis where pain is present constantly.

The most commonly affected joints are those of the big toe, as well as forefoot, knee, ankle and elbow joints. The shoulders, hips and spine are rarely affected.

Causes

Uric acid, or urate, is a breakdown of the product purine, a component of DNA found in all cells. Urate is poorly soluble. When the body produces too much uric acid or the kidneys cannot clear enough of it, or if there is over-ingestion of high purine foods, blood uric acid levels rise. This leads to urate deposits of needle-shaped urate crystals in the joint space. These cause intense irritation producing the symptoms of gout.

Risk Factors

Obesity. Excessive food intake and a large body type increases the body's production of uric acid.

Excessive Alcohol. Alcohol, especially beer contains high uric acid. A typical scenario of gout is a man after an alcoholic binge, waking up in the middle of the night with excruciating pain in the big toe, ankle or knee.

Food. Food with a high purine content include red meat, beans, nuts, seeds, pulses and their products (e.g. soybean products), certain rich fish like sardines



Foods with high purine content such as meat and seafood are a risk factor for gout.

and anchovy, salmon, organ meats like intestines and offal ('kway chap') and certain vegetables like spinach and broccoli.

However, moderation in consumption of foods, weight reduction and overall healthy eating is advised rather than total abstinence from such a long list of food items some of which also offer positive health benefits. Food accounts for only 30 percent of uric acid in our blood so even if none of the above are consumed, there may still be gouty attacks requiring medications.

Kidney disease. Someone with impaired kidney function will have difficulty clearing excess uric acid in their urine and are more prone to gout.

Age & Gender. Men are at higher risk. The typical patient is often a middle-aged obese man. Women are at lower risk until after menopause. The risk of developing gout also increases with age. Many elderly get attacks of gout for the first time in their senior years.

Family history. There is a higher risk of developing gout if a family member already has gout.

Diagnosis

Doctors diagnose gout when symptoms affecting a joint are sudden and severe with a swollen and hot joint. There is often a previous experience of a similar event, and a return to normal after the 'attack'.

Gout is also the likely diagnosis when the 'typical' joints are affected, especially the big toe, which can turn red.

A high blood uric acid level with these symptoms suggests the diagnosis of gout. However, a high uric acid without gout symptoms does not mean a diagnosis of gout. Patients need not be treated based on a high blood uric acid level alone if they do not have attacks of joint pain.

Joint aspiration is a procedure where a needle and syringe is used to suction out a sample of fluid from the affected joint. This is sometimes done in specialist clinics both to confirm diagnosis and relieve pain by removing excess fluid from a badly

swollen joint. The presence of urate crystals in this joint fluid seen under a microscope definitely confirms a diagnosis of gout.

Medications

Pain relief. Drugs which can rapidly reduce pain and swelling are needed in an acute attack. These include non-steroidal anti-inflammatory drugs (NSAIDs), steroids and colchicine.

Preventing future attacks

Drugs. Pain relief of the current attack is not enough if the sufferer has recurrent attacks. This is because the joint will become damaged with repeated attacks leading to chronic pain and disability from a worn-out cartilage

Drugs that reduce blood uric acid levels can prevent future attacks. A drug called allopurinol is able to decrease the production of uric acid. The drug probenecid increases the amount of uric acid passed out in the urine.

A small percentage of people will get a rash with allopurinol. When this occurs, the drug must be stopped as the rash can involve the whole body which can be dangerous. If you are given allopurinol, your doctor will warn you about the possibility of this condition called allopurinol hypersensitivity syndrome.

Low purine diet. Food with high purine content should be reduced.



Drink enough water to avoid future gout attacks.

Drink enough water. It is also important to drink more water (at least 2 litres a day) unless instructed by a doctor not to do so.

Avoid alcohol. The consumption of alcoholic beverages should be avoided, especially beer.

Reduce weight and lead a healthy lifestyle. Weight reduction is also important. For the typical middle-aged sufferer, gout is often the manifestation of an unbalanced diet, over-nutrition and lack of exercise. An overall healthy lifestyle, exercise, avoidance of alcohol, dietary modification and weight reduction goes a long way in gout control rather than simply strict abstinence of one or two food items.

Gout and its association with other lifestyle diseases

Gout often occurs together with other diseases due to lifestyle imbalance such as high blood pressure, diabetes and high cholesterol. If you have gout it is important to screen for these diseases as well.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institution:

Singapore General Hospital | Tel: 6321 4377

Haemorrhoids

Also known as 'piles', haemorrhoids are abnormally enlarged and bulging blood vessels in and around the anus and lower rectum.

There are two types of haemorrhoids – external (near the opening of the anus) and internal (inside the anal canal).

External haemorrhoids develop near the anus and are covered by very sensitive skin. If a blood clot develops in one of them, a painful swelling may occur. The external hemorrhoid feels like a hard, sensitive lump. It bleeds only if it ruptures.

Internal haemorrhoids develop within the anus beneath the lining. Painless bleeding and protrusion during bowel movements are the most common symptoms. However, an internal hemorrhoid can cause severe pain if it protrudes from the anal opening and cannot be pushed back inside.

Risk Factors

Haemorrhoids are very common. They affect nearly half of the population at some stage in their lives.

Causes

Haemorrhoids are caused by pressure on the veins in the pelvic and rectal areas causing them to swell and stretch.



Haemorrhoids affect half the population, at some point in their lives.



Up your water and fibre intake to help prevent piles.

Prevention

- **Increase fibre intake.** Fruits, vegetables and cereals soften the stools and increase the bulk so that straining can be avoided.
- **Drink plenty of fluids.** At least six glasses of water daily helps to keep the stools soft.
- **Don't strain.** Straining when passing stools puts pressure on the veins in the rectum.
- **Don't hold.** Holding off when you feel the urge could make your stools dry and harder to pass.
- **Exercise.** Regular moderate exercise, together with a high fibre diet, promotes regular bowel movements.
- **Avoid long periods of sitting and standing.** Extended periods of standing and sitting increase the pressure on the veins in the rectum.

Contributing factors can include:

- Ageing
- Chronic constipation or diarrhoea
- Pregnancy
- Hereditary
- Faulty bowel function due to overuse of laxatives
- Straining during bowel movements
- Spending long periods of time in toilet

Symptoms

- Bright red blood dripping during bowel movements - may stain the toilet paper
- Lump at the anus coming out during bowel movements
- Itching in the anal area
- Pain
- Sensitive lump

Diagnosis

Your doctor will make the diagnosis based on a physical examination.

For internal haemorrhoids, your doctor may need to use an anoscope, proctoscope or sigmoidoscope, which are special tubes inserted into the anus after lubrication, to allow the anus and rectum to be visualised.

Treatment

Mild symptoms can be often be relieved by increasing your intake of fibre and fluids. This decreases straining during motion so that the pressure on haemorrhoids is reduced. This helps prevent them from bleeding or protruding.

If this does not work, then ligation and injection can be considered. Both these procedures can be done in your doctor's clinic without hospitalisation.

Ligation works best on internal haemorrhoids that protrude with bowel movements. A small rubber band is placed over the haemorrhoid to cut off its blood supply. The haemorrhoid and band will fall off in a few days and the wound usually heals in a week or two. Ligation is performed without the need for hospitalisation.

Injection can also be used on bleeding haemorrhoids that do not protrude. This method is relatively painless and causes the haemorrhoids to shrivel up. Hospitalisation is not required for this procedure.

Haemorrhoidectomy is the best method for permanent removal of haemorrhoids.

It is necessary under the following circumstance: when clots repeatedly form in external hemorrhoids; ligation fails to treat internal hemorrhoids; the protruding hemorrhoid cannot be reduced; or there is persistent bleeding.

A hemorrhoidectomy removes excessive tissue that causes the bleeding and protrusion. It is done under anaesthesia and usually requires hospitalisation.

Stapled Haemorrhoidectomy uses a specialised circular stapler to remove the haemorrhoids. The advantages of this procedure are that it is less painful than conventional procedures yet offers the convenience of day surgery. A better outcome is also achieved with the excision of the haemorrhoids, especially for larger-sized ones.

Do haemorrhoids lead to cancer?

There is no relationship between haemorrhoids and cancer.

However, as the symptoms of haemorrhoids, particularly bleeding, are similar to that of colorectal cancer and other diseases of the digestive system, it is important that you have all symptoms investigated by a doctor.

See a doctor to correctly diagnose your symptoms and to have the correct treatment prescribed.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institution:

Singapore General Hospital | Tel: 6321 4377

Headaches and Migraines

Headaches are very common and nearly everyone will have had one at some point. Most headaches are not an indication of a sinister cause and will resolve on its own or with simple painkillers.

However, some headaches may recur frequently or may be severe and start to affect your lifestyle, causing concern and anxiety. Medical attention should be sought, when one experiences headaches that are frequent or severe.

Types of Recurring Headaches

The two most common types of headaches that recur are migraine and tension headaches.

Migraine

- Can be on one or both sides of the head
- Usually throbbing in nature
- Moderate to severe
- May last few hours to a few days
- May be precipitated by certain food (caffeine, cheese, alcohol), sleep pattern, menstrual cycle
- Worsened by bright lights, noise, physical activities

- Often with associated nausea and/or vomiting
- May be associated with visual (e.g. seeing zigzag lines) and sensory (e.g. tingling of face or limbs) symptoms
- May run in families

Tension headache

- Tight band pressing around head
- Dull, steady pain
- Mild to moderate
- May last from 30 minutes to 7 days
- May be precipitated by stress, anxiety, fatigue
- May be associated with neck ache

When Do You Need To See A Doctor?

You should consult your doctor if you experience any of the following:

- Frequent headaches recurring more than once a week
- First or the worst headache in your life
- New or persistent headache after head injury
- Headache that begins after age of 50
- New headache with a history of cancer, autoimmune disease or HIV
- Take daily painkillers or exceed recommended dose
- Change in regular headache pain or pattern

- Headache associated with neck stiffness or fever
- Headache associated with giddiness, unsteady gait, slurred speech, weakness or numbness
- Headache associated with confusion or drowsiness

Treatment

Your doctor will advise on your treatment specifically. Headache treatment usually involves pharmacological treatment with medications as well as lifestyle modifications. If you suffer from recurring headaches, you should keep a headache diary to help ascertain the headache pattern, identify any triggering factors as well as monitor your condition and response to treatment.

Pharmacological treatment

This may be divided into two main approaches.

- Symptomatic treatment – for immediate relief of pain, this should be taken periodically when the symptoms occur
- Prophylactic treatment – to prevent or reduce the frequency of the headache, this is usually taken regularly whether or not the symptoms are present

Lifestyle modifications

You can reduce the frequency and severity of your headaches by simple lifestyle changes, sometimes without even taking any medication:

1. Regular sleep – go to bed and wake up at regular times each day. Most adults need six to eight hours of uninterrupted sleep
2. Regular meals - eat regularly and maintain a balanced diet to avoid sugar highs and lows.
3. Moderate amount of routine exercise
4. Drink plenty of water
5. Limit caffeine, alcohol and other drugs
6. Reduce stress
7. Avoid smoking
8. Avoid known trigger factors - If you have known triggers for your headache, try to avoid them

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institutions:

Singapore General Hospital | Tel: 6321 4377
National Neuroscience Institute | Tel: 6357 7095

Heart Attack and Ischaemic Heart Disease

Your heart pumps blood 72 times each minute, 100,000 times each day, making sure all parts of the body are supplied with blood. How does the heart itself receive blood? The coronary arteries, coming straight from the main artery or aorta, supply blood to the heart.

What is coronary artery disease?

Ischaemic heart disease, also called coronary artery disease, is what the layman refers to as having 'heart problem'. The coronary arteries are narrowed, causing chest discomfort, breathlessness and tiredness because of inadequate blood flow to the heart muscle. 'Ischaemic' means 'inadequate blood flow'.

These narrowings occur because the lining of the coronary vessels become accumulated with cholesterol and fat in

layers called atherosclerotic plaques. In Singapore, heart disease and cancer are the top two causes of death.

What is a heart attack?

A heart attack occurs in someone with ischaemic heart disease when any of these three arteries get suddenly (acutely) blocked. This may happen because a blood clot suddenly forms over the narrowed portion, or a fat-filled plaque bursts or ruptures. The heart muscle (myocardium) that has its blood supply interrupted will die ('infarction') if flow is not restored. A heart attack is also called acute myocardial infarction.



Get regular medical check-ups as some risk factors show no symptoms in the early stages.

Consequences of a heart attack

A severe blockage will result in immediate death. Heart attacks are the leading cause of sudden death for both men and women worldwide.

Less severe blockage will weaken the heart and result in heart failure later on, where the person feels breathless as the heart cannot pump enough for the body's needs. Irregular or slow heart rates can also happen.

Signs and symptoms of a heart attack

Chest pain or discomfort is the most common symptom (angina). Discomfort can occur in the centre or left side of the chest, may go up to the neck, jaw or left arm. The discomfort can feel like uncomfortable pressure, squeezing, fullness or pain. It can be mild or severe.

It can be associated with shortness of breath, nausea, vomiting, palpitations, sweating and anxiety. Women may

experience fewer typical symptoms than men and approximately one quarter of all heart attacks are silent, without chest pain or other symptoms.

Causes of heart attacks and ischaemic heart disease

The four main preventable causes of plaque formation are smoking, diabetes, hypertension and hyperlipidaemia (high blood cholesterol and fat). Other contributing factors are obesity, lack of exercise, stress, and increasing age.

Men older than 45 years and women older than 55 years after menopause are at higher risk. Your risk increases if your father or brother had a heart attack before 55 years of age, or if your mother or a sister had a heart attack before 65 years of age.

Diagnosis

An electrocardiogram (ECG) records the electrical activity of the heart, and blood cardiac enzyme levels detect heart muscle damage. Coronary angiography shows exactly where the blockage is. It requires the insertion

of a fine tube (catheter) via an artery in the leg directly into the coronary vessels. Dye is injected into each of them to outline where the blockage is as viewed by an x-ray examination.

Treatment

If a heart attack is suspected, the person must be rested, kept calm, propped up and brought to a hospital immediately. Initial measures will be to administer oxygen and relieve pain by nitroglycerin placed under the tongue, via a skin patch or injection of morphine in severe cases. Aspirin is used to prevent more blood clots and drugs called beta-blockers to slow down the heart, are also used. The heart beat is monitored for irregularities.

If blood flow can be restored within six hours, the myocardium can be saved from totally dying. If a person arrives at hospital on time, doctors may attempt to open up the blockage through a catheter by a balloon inflated at the site of the blockage (PTCA-percutaneous transluminal coronary angioplasty) and the insertion of a

stent (a stiff cylindrical tiny 'piping' to keep the blockage open) after ballooning.

Coronary artery bypass grafting may be offered where there are multiple blockages. This is a heart operation where other blood vessels such as veins from the leg are removed and sewn across the blocked portions, thereby 'bypassing' the blockages.

Can PTCA and CABG be done early to prevent a patient with ischaemic heart disease from developing a heart attack?

Both PTCA and CABG can be done where there are significant blockages but a heart attack has not occurred yet. This in fact would be better. People with risk factors and symptoms of chest pain and breathlessness may benefit from a cardiology referral for coronary angiography or other tests to look for blockages.

Prevention

Reducing the risk of heart attack means making healthy lifestyle choices. These include:

- A low-fat diet rich in fruits and vegetables, lower in salt
- Losing weight and cutting back on calories if you're obese
- Quitting smoking
- Exercise to improve heart fitness. Ask your doctor what kinds of physical activity are safe for you.

The best prevention is to prevent risk factors even before they occur. However, not everyone has the opportunity to do this early enough. If hypertension, diabetes and hyperlipidaemia are already present, these conditions must be well treated.

If significant risk factors are present, regular screening e.g. annually for heart disease may need to be done. These include ECG, treadmill test (ECG while exercising), echocardiogram (ultrasound of the beating heart), and in high-risk cases, CT (computer) scan of the heart that shows up blockages.

If you have risk factors and symptoms such as chest pain, breathlessness and sweatiness on exertion, consult a doctor immediately to be assessed for ischaemic heart disease. Blockages may already be present. If detected early, PTCA/CABG done before a heart attack occurs will produce a far better outcome.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institutions:
National Heart Centre Singapore | Tel: 6704 2000

High Blood Cholesterol and Hyperlipidaemia

Lipids are a collective term meaning the fat component in our blood. They comprise cholesterol and triglycerides.

Lipids are actually made by our own body from carbohydrate even if we do not eat them. They are essential components of cell membranes and are used to make many steroid hormones such as vitamin D, sex hormones and cortisol.

However, excess eating will cause levels to rise such that they get accumulated in blood vessel walls, a process called atherosclerosis. Food items such as animal fats are extremely rich in cholesterol. Many Singaporeans already avoid these and wonder why their cholesterol levels are still high. This is because the body makes excess cholesterol when we eat in excess.

What is cholesterol?

Dietary cholesterol is found only in foods of animal origin. Plant foods may

contain oils e.g. avocado, coconut, palm oil, peanuts etc but do not have cholesterol. Oils can also be used by the body to manufacture cholesterol.

Some people are also predisposed with a family history of a tendency to higher cholesterol levels.

What is a lipid blood test and what are normal lipid levels?

Lipid blood tests include total cholesterol which consists of LDL, the 'bad cholesterol' that can harm, and HDL or good cholesterol which can limit the bad effect of LDL. There is another item, triglycerides, blood fat which can also cause atherosclerosis and needs to be lowered if it is too high.

While total cholesterol is a good screening test, it is actually a combination of good and bad cholesterol together. The LDL level is what doctors use when ordering treatment. Total cholesterol should not exceed 5mmol/L (200mg/dL) and LDL

4 mmol/L for normal people, about 3 mmol/L for those with conditions such as hypertension and 2.6mmol/L for those already with heart disease.

HDL should be more than 1mmol/L and triglyceride not exceeding 2mmol/L. Lipid tests include the LDL/HDL ratio which indicates total risk balancing good and bad. This should be 3.5 or less.

Effects of high cholesterol

Although a high result itself will not cause symptoms, over time the cholesterol will cause atherosclerosis and accumulate in lipid plaque formation along vessel wall linings which block up blood vessels.

Blood vessel blockages in the heart will lead to heart attacks, and in the brain to strokes. When a lipid laden plaque bursts or ruptures, this can lead to a sudden, catastrophic and devastating event. Controlling lipid levels is therefore an important strategy to reduce these diseases.

Prevention

Limit total fat intake, high cholesterol foods and carbohydrate. Keep total fat intake between 20 to 35 percent of calories for adults. Make choices that are lean, low fat or fat-free. Choose fish, skinless poultry and lean meat. Avoid animal fat.

Certain food items, apart from fat, known to contain higher cholesterol, include shellfish, crabs, lobster, egg yolk, squid and prawns. While it is prudent to consume these in moderation, one need not abstain totally. Total dietary moderation is more effective than omitting one or two items but still overeating overall. For example, it is okay and even good for growing children to eat an egg a day.

Other preventive measures:

- More fruits, vegetables and fibre. Foods high in fibre can help reduce lipid levels. Aim for '2+2': 2 servings of fruits and 2 servings of vegetables per day.
- Maintain a healthy body weight. Excess weight increases blood cholesterol.

- Exercise regularly. This increases HDL and reduces LDL.
- Control alcohol intake. Excess alcohol increases lipid levels.
- Control smoking, diabetes and hypertension. Hypertension, diabetes, smoking and high cholesterol work together to cause atherosclerosis, control of all these four together will lessen the total risk. Smoking also lowers HDL levels.

cholesterol-lowering medication. Examples are statins like simvastatin, lovastatin and atorvastatin for cholesterol and fibrates such as gemfibrozil and fenofibrate for triglycerides. These drugs are taken under medical supervision and monitoring as a minority of patients may develop muscle aches, muscle inflammation and liver inflammation, requiring drug regime adjustments.

Treatment

If your blood lipid levels do not achieve the desirable range despite lifestyle modification, you may need

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institutions:
Singapore General Hospital | Tel: 6321 4377



Have 2 servings each of fruits and vegetables everyday.

Hypertension

Hypertension, also known as high blood pressure, is one of the major risk factors for cerebrovascular disease such as stroke and coronary heart disease.

Your blood pressure is determined by the amount of blood your heart pumps and the amount of resistance to blood flow in your arteries. High blood pressure indicates that the heart is working harder than it should and the arteries are under great strain.

Causes

In most cases of hypertension in adults, there is no known cause. This type of hypertension is called primary or essential hypertension and it has usually developed over many years.

In 5 to 10 percent of cases, hypertension is caused by other underlying medical conditions.

Risk Factors

Factors you cannot control

Age. Older people are at a higher risk of developing hypertension. Women are at higher risk after menopause.



Older people and women after menopause are at higher risk.

Family history. Hypertension tends to run in families.

Factors you can control

Smoking. Chemicals in cigarettes cause the heart to pump faster and lead to higher blood pressure.

Alcohol. Your blood pressure can be elevated by alcohol consumption as the body releases hormones that increase blood flow and heart rate.

Overweight. The heart needs to pump harder to supply a person who is overweight. You can reduce your risk of getting high blood pressure by keeping your body mass index (BMI) between 18.5 and 22.9.

Too much salt in diet. Blood pressure is increased as salt causes the body to retain too much fluid.

Inactive lifestyle. People who are physically inactive often have higher heart rates, which means that the heart must work harder and exert more force on the arteries.

High blood cholesterol. Your blood vessels become more rigid due to atherosclerosis, a process where fatty substances are deposited in blood vessel walls.

Other health conditions. About 10 percent of people with high blood pressure have underlying kidney diseases or hormonal disorders.



A healthy lifestyle can help control hypertension.

Prevention

- Know your blood pressure and monitor it regularly
- Lose weight if you are overweight
- Eat a healthy diet that is low in saturated fat, cholesterol and salt
- Quit smoking
- Take your medication as prescribed
- Follow your doctor's advice and take up a physical activity that you enjoy
- Manage your stress level
- Control your alcohol intake
- Manage your stress level

Symptoms

Hypertension usually occurs without any symptoms. However, if left untreated and uncontrolled, hypertension can lead to damage of the heart and blood vessels, and cause stroke, heart attack or kidney failure.

When blood pressure is extremely high, you may experience headaches, dizziness or changes in vision.

Diagnosis

You should have your blood pressure checked at least once a year.

If you are diagnosed with high blood pressure or hypertension, your doctor may recommend that you take the following tests to detect damage to the heart or blood vessels.

Electrocardiogram (ECG). A non-invasive test that helps to assess the extent of damage, if any, of heart muscle.

Echocardiogram. An ultrasound examination of the heart that helps to assess the blood supply to heart muscles indirectly. It also measures the strength of the heart muscle.

Treatment

Marginally elevated blood pressure may improve with changes in lifestyle such as weight loss, more exercise and reduction in salt intake. If these measures are not successful, then drug treatment may be needed.

However, once medication has started, it is essential to continue with the treatment on a long-term basis, which is likely to be life-long for most people.

It is also important to complement the treatment with a healthy lifestyle.

Drugs used to treat high blood pressure include:

- Diuretics
- Calcium channel blockers
- Angiotension-converting enzyme (ACE) inhibitors or Angiotensin II receptor blockers
- Beta blockers
- Alpha blockers
- Central acting agents
- Direct vasodilators

What is normal blood pressure?

Normal blood pressure can vary from 90/60 mmHg to 120/80 mmHg in a young and healthy person. Hypertension is present when a person's blood pressure is persistently above 140/90 mmHg.

If you have diabetes or kidney disease, you must try to keep your blood pressure at around 120/80 mmHg because even a marginally high blood pressure will increase your risk of developing complications.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institution:

National Heart Centre Singapore | Tel: 6704 2000

Peptic Ulcer Disease (PUD)

While much of our digestive tract is alkaline, the stomach is an exception, containing hydrochloric acid which is important for initial digestion and killing of many bacteria. When the stomach and small intestine lining (mucosa) is damaged, this acid may cause injury resulting in a peptic ulcer. The word 'peptic' describes the acidic component of the digestive tract, while 'ulcer' refers to an eroded area in the mucosa.

Peptic ulcers may be gastric ulcers or duodenal ulcers. If the ulcer occurs in the stomach, it is called a gastric ulcer. If it occurs just after the stomach, in the first part of the small intestine (duodenum), it is called a duodenal ulcer.

Causes

In the majority of cases, a bacteria called helicobacter pylori (HP) infects the mucosal lining, causing inflammation which weakens the lining and leads to ulceration.

Another cause is the class of painkillers called NSAIDs (non-steroidal anti-inflammatory drugs) which affects the action of prostaglandins, a protective substance produced by the mucosa. Many painkillers (apart from paracetamol, codeine and tramadol) belong to this group. Examples include diclofenac, naproxen, ketoprofen, indomethacin and celecoxib. Check with your doctor if your painkillers are NSAIDs. Aspirin used for heart and stroke patients is also in this group. Doctors often prescribe an anti-ulcer drug when prescribing these medications. With the exception of aspirin, NSAIDs should not be taken continuously.

Symptoms

Symptoms include:

- Upper abdominal pain
- Pain on hunger
- Pain at night
- Pain relieved by food
- Nausea, loss of appetite, fullness after eating can occur.

If these persist, one may have an ulcer, or a milder form of injury – which is an gastritis or duodenitis inflammation of the gut lining.

Diagnosis

PUD is proven by undergoing endoscopy of the stomach, called oesophago-gastro-duodenoscopy (OGD), where a fibre-optic tube with a camera attachment is passed, after a local anaesthetic spray, via the mouth through the oesophagus to the stomach and into the duodenum. This enables the viewing and photography of abnormal portions and the taking of biopsies - tiny mucosal samples of tissue, which are tested for helicobacter pylori (HP) and to exclude more sinister diagnoses like cancer.

Although OGD takes less than five minutes, patients can choose to be sedated with a short-acting intravenous drug so that they can be asleep during the procedure.

Is there any other way to diagnose peptic ulcer?

Barium meal, where a drink containing barium salt is used to outline the stomach lining before taking x-rays of the stomach and duodenum. It is done when OGD is not performed for various reasons.

Treatment

NSAIDs must be discontinued. If HP has been identified, a three antibiotic regimen lasting two weeks is often necessary to eradicate the bacteria. To demonstrate that HP has been eliminated, a repeat OGD and biopsy or a breath test may be done. A blood test and stool test is also available.

Powerful drugs that reduce acid secretion either belong to the class 'proton pump inhibitors' like omeprazole or esomeprazole or 'H2 blockers' like ranitidine or famotidine. Maintenance with these drugs is required for six to eight weeks.

Over-the-counter alkaline salts called antacids (chewable or liquid) can provide quick relief of symptoms. They may contain magnesium trisilicate, calcium carbonate or sodium bicarbonate. On their own they cannot heal ulcers.

Complications of Peptic Ulcers

Bleeding can occur from ulcers causing black stool (the appearance of blood after undergoing digestion) or even vomiting of blood. Perforation, is where the ulcer deepens and penetrates a hole right through the muscular wall of the stomach or duodenum, with spillage of stomach contents into the abdominal cavity causing infection. This requires emergency surgery. Sometimes the ulcer can heal with a scar causing deformity of the stomach outflow called gastric outlet obstruction. This also requires surgery.

Fortunately, with prompt and effective treatment, these consequences are quite rare today.

Can my upper abdominal pain be caused by other possibilities?

Not all upper abdominal pain is due to peptic ulcer, gastritis or duodenitis. Your doctor can help you evaluate.

Prevention

Avoidance of prolonged NSAIDs is important. Alcohol, smoking, stressful situations, delayed and irregular meals are often linked to gastritis and ulcers. By themselves these do not generally cause ulcers, but may affect promptness of recovery. Therefore, it is prudent to avoid these factors.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institutions:

Singapore General Hospital | Tel: 6321 4377

Stroke

Stroke is a brain attack. It occurs when the blood supply to the brain is interrupted causing brain cells to lose their function thus leading to the symptoms and signs of stroke.

Stroke is the leading cause of adult disability – 63 percent of stroke patients have some disability at three months. It is the fourth most common cause of death, accounting for more than 10 percent of all deaths.

In Singapore, 3.65 percent of the resident population has had a stroke in the past. There are 26 new stroke cases every day. The burden of stroke will rise with our ageing population.

Types of Stroke

- **Ischaemic stroke:** This is due to blockage of a blood vessel limiting blood flow to the brain. It is the most common cause, accounting for 74 percent of strokes in Singapore.
- **Haemorrhagic stroke:** This is due to rupture of a blood vessel causing bleeding into the brain. This makes up 24 percent of stroke cases in Singapore.
- There are some other rarer forms of stroke.

Symptoms

The symptoms of stroke depend on the part of brain which loses its function due to the interruption of blood supply. An easy way to remember these symptoms is to think of FAST- Face, Arm, Speech and Time.

Face- Ask the person to smile. Does one side of the face droop?

Arm- Ask the person to raise both arms? Does one arm drift downwards?

Speech- Ask the person to repeat a phrase. Does the speech sound slurred or strange?

Time- If you see or experience any of these signs, call for an ambulance and go to a hospital immediately. There are some beneficial stroke treatments that can only be given in the first few hours after the onset of the stroke. Therefore, it is vital that stroke patients go to a hospital as soon as possible.

Other symptoms of stroke include:

- Sudden weakness or numbness of the face, arm or leg, especially on one side of the body
- Sudden trouble walking, dizziness, loss of balance or incoordination
- Sudden severe headache with no known cause
- Sudden trouble seeing in one or both eyes

Risk Factors

There are some stroke risk factors which one cannot change such as older age, race, family and past history of stroke. However, there are many stroke risk factors that are modifiable, meaning you can do something to reduce the risk of stroke. These include high blood pressure, cholesterol problems, smoking, diabetes, obesity, sedentary lifestyle as well as certain blood and heart conditions.

Reducing The Risk Of Stroke

Stroke risk can be reduced. Remember, prevention is better than cure. These measures reduce the risk of first stroke (if you have never had one) and recurrent stroke (if you are a stroke patient).

Control blood pressure

High blood pressure is the most important risk factor in stroke prevention. Uncontrolled blood pressure increases the risk of stroke by four times. High blood pressure should be treated if it is repeatedly above 140/90 mmHg. If you have diabetes, your blood pressure should be below 130/80 mmHg. In addition to medication, lifestyle plays an important role in controlling blood pressure. Having a healthy diet, reducing your intake of alcohol and salt and exercising regularly are some lifestyle measures that reduce blood pressure.

Control blood sugar levels

Diabetes causes high blood sugar levels in the body. Uncontrolled diabetes over a long period of time can cause damage to your blood vessels and nerves. The risk of stroke is 1.5 times more in diabetics. Good control of blood sugar in diabetics reduces the risk of stroke. A healthy diet, taking medication as ordered by your doctors and regular monitoring is crucial in controlling blood sugar levels.

Control cholesterol levels

High cholesterol levels can cause the narrowing of blood vessels in your body. This can lead to blockage of the blood flow to your vital organs including the brain, increasing the risk of stroke. Diet control that includes reducing the intake of foods high in cholesterol and saturated fats, such as coconut milk, deep-fried foods and seafood, as well as medications can control cholesterol levels.



Prevent stroke – adopt a healthy lifestyle.

Don't smoke

Smoking increases the risk of stroke by 1.5 to 2.5 times for you and your family. The risk is reduced as soon as you stop smoking. Your risk of stroke will be the same as that of a non-smoker within five years of stopping. So stop smoking today. Consult your doctor who can help you to stop smoking.

Maintain an ideal body weight

Obesity is the accumulation of excess body fat. It is associated with various stroke risk factors such as diabetes, high blood pressure and high cholesterol levels. Stroke risk is particularly high with deposition of fat around the tummy. You can calculate your body mass index (BMI) by using your height and weight. To obtain your BMI, simply divide your weight (in kilograms) by your height x height (in metres). The ideal range for an Asian body frame is 18.5 to 22.9. An ideal body weight is maintained by having a healthy diet and exercising regularly.

Have a healthy diet

An unhealthy diet increases the risk of stroke, as well as high blood pressure, diabetes and high cholesterol. Excessive salt and alcohol consumption contributes to high blood pressure. Start today with a healthier diet – an appropriate calorie intake, high in fibre, low in cholesterol and reduce salt intake.

Exercise regularly

Stroke risk is higher with a sedentary lifestyle. Exercise at least three to five times a week, 30-60 minutes each time. Find an exercise regime that can suit your lifestyle and personality. Regular exercise helps to reduce obesity and also aids in the prevention and management of high blood pressure, diabetes and high cholesterol.

Take your medication as instructed

If you are diagnosed with high blood pressure, diabetes and high cholesterol, it is important to take your medication as instructed by your doctor, even if you feel fine. High blood pressure, diabetes and high cholesterol can be controlled with medications. If you have suffered a prior stroke or have certain blood and heart conditions that increases your risk of a stroke, your doctor may advise you to take certain specific medications for stroke prevention.

Have regular health screening

Have yearly health checks to monitor your blood pressure, cholesterol and blood sugar levels once you are over 40 years old. By adopting a regular health screening regime, these stroke risk factors can be detected early.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institution:
National Neuroscience Institute | Tel: 6357 7095

Urinary Incontinence

Urinary incontinence means the uncontrollable leakage of urine at inconvenient and socially unacceptable moments. It could range from a few drops to significant amounts requiring the use of pads.

Risk Factors

The risk of urinary incontinence increases with age. Women are more likely to suffer from this problem. Many do not seek medical attention due to embarrassment.

Symptoms

Two common patterns are: a person may leak urine on sneezing or coughing (stress incontinence) or there may be an inability to control flow once the sensation to urinate is felt (urge incontinence).

Causes

There are many causes and some relate specifically to women or men.

In women, the pelvic floor muscle may become weakened after childbirth and this becomes more marked after menopause due to tissue degeneration. This may occur together with a condition called utero-vaginal prolapse, in which the womb sinks lower down dragging the urethra as well, affecting urine flow. The urethra is the passageway opening out from the bladder to the exterior.

In men, urinary problems may be due to the prostate gland. This is a small organ which surrounds part of the male urethra that tends to get enlarged in later life. Obstruction of urine flow results, causing slow stream, hesitancy on passing urine, incomplete urination as well as urge incontinence. Surgery can be done in severe cases, but sometimes, the problem of incontinence can result after surgery.

In both sexes, nerve damage from diabetes and stroke, infection, obesity, as well as brain changes related to age can cause the problem of incontinence.

Diagnosis

A urine test (urine microscopy) is usually done to look for signs of infection.

Urodynamic studies. Pressure measurements of the bladder while voiding (passing urine) are taken to determine how much urine the bladder can hold, what makes leakage occur, and if there are problems emptying the bladder.

Post-void residual urine measurement. An ultrasound examination of the bladder is done to assess how much urine is left behind after one completes voiding.

Treatment

In many cases, **advice and training** in certain techniques by a skilled continence care professional will do much to relieve the issue. These techniques include pelvic muscle strengthening exercises, behavioural techniques, fluid intake as well as drug and food modification.

Drugs such as tolterodine, flavoxate and oxybutynin can be prescribed to reduce urge incontinence.

Surgery is suitable in women with pelvic floor issues. Many surgical techniques are available with high cure rates, which range from very simple yet effective 'taping' techniques to suspend the urethra in its proper position, to repair of the pelvic floor or resection of utero-vaginal structures.

Vaginal ring pessary. This is a flexible silicone ring that is inserted into the vagina to reduce or eliminate stress incontinence, for those who are not physically fit for surgery.

Preventative measures

Preventative measures should begin early and can be of great help. For example, good control of diabetes mellitus prevents many complications including bladder problems from nerve damage.

Control of blood pressure, diabetes and cholesterol levels prevents strokes which causes incontinence issues as well. Treating of constipation improves urine flow in many elderly people.

For the majority, the quality of life that is compromised by the issue of incontinence can be improved or overcome by one or a combination of the above methods.

Please consult your Family Doctor if you have any concerns about your health.

Specialist services available at the following SingHealth institutions:

Singapore General Hospital | Tel: 6321 4377

KK Women's and Children's Hospital | Tel: 6294 4050

In severe cases of incontinence which fortunately form the minority, the use of pads, urine tubes (catheters) are needed.



For most people, treatment can improve or overcome urinary incontinence.

Notes

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Notes

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