



**Treating different
diseases and disorders (Part II)**

Table of Contents

Allergies	4
Arthritis.....	5
Blood Pressure	6
Cancer.....	8
Cholesterol.....	10
Chronic Pain	12
Cold and Flu (Influenza)	14
Depression	15
Diabetes.....	19
Heart Diseases.....	19
Infectious Diseases	20
Migraine	21
Sleep Disorders.....	22
Thyroid Disorders	23

Treating different diseases and disorders (Part II)

English for Health Sciences

Allergies

TREATING ALLERGIES

Severe allergic reactions (anaphylaxis) are treated with an adrenaline injection. Wherever possible, the most effective way of managing an allergy is to avoid all contact with the allergen.

MEDICATION

Medication can't cure your allergy, but can be used to treat the common symptoms of an allergy, such as a runny nose, itchy mouth and sneezing.

- **Antihistamines:** Can be taken in tablet, cream or liquid form, or as eye drops or nasal sprays.
- **Nasal sprays** can be used to reduce swelling and irritation in your nose, and eye drops will help to relieve sore, itchy eyes
- **Decongestants:** Decongestants help to relieve a blocked nose and can be taken as tablets, capsules, nasal sprays or liquids. They should not be used long-term.
- **Leukotriene receptor antagonists:** Leukotriene receptor antagonists are tablets that block the effects of leukotrienes, which are chemicals released during an allergic reaction that cause inflammation (swelling) of your airways. They are used to treat asthma when other treatments have failed, and as a supplement to steroid treatment.
- **Steroid sprays:** Are effective in suppressing inflammation, particularly nasal congestion. Absorption into the body is minimal, so adverse side effects are avoided.
- **Hyposensitisation** (immunotherapy): Works by gradually introducing more and more of the allergen into your body to make it less sensitive to it. This type of treatment must only be carried out under the close supervision of a doctor in a hospital, because there is a risk that it may cause a serious allergic reaction.

Do not forget!

If you have anaphylactic shock, you will need emergency treatment with an injection of adrenaline into the muscle.

The brands currently prescribed in the UK are the EpiPen and Anapen.

Arthritis

MEDICATION OPTIONS

There are several classes of arthritis medications that work to control arthritis symptoms, prevent joint damage, and improve mobility and function. Basically, there are 5 categories of arthritis medications: NSAIDs (nonsteroidal anti-inflammatory drugs), analgesics (painkillers), corticosteroids, DMARDs (disease-modifying anti-rheumatic drugs), and the newer biologics.

Did you know?

Alternative and natural treatments have gained popularity and serve as a complement to traditional therapies.

- **NSAIDs:** NSAIDs have anti-inflammatory, analgesic (painkilling), and anti-pyretic (fever-reducing) properties. The drugs can cause potentially serious side effects. Patients must weigh benefits and risks of taking NSAIDs.

Do not forget!

Drug side effects are unintended, adverse effects that can develop with medication use. Drug side effects can be mild or serious and it's important to know the difference and be able to recognize if medical attention is required.

- **Analgesics (Painkillers):** Analgesics are a class of drugs used to relieve pain. The pain relief induced by analgesics occurs either by blocking pain signals going to the brain or by interfering with the brain's interpretation of the signals, without producing anesthesia or loss of consciousness. There are basically two kinds of analgesics: non-narcotics and narcotics.
- **Corticosteroids (Steroids):** Corticosteroids are drugs closely related to cortisol, a hormone which is naturally produced in the adrenal cortex (the outer layer of the adrenal gland). They are still used (orally and by injection) to knock down inflammation.
- **DMARDs:** DMARDs (disease-modifying anti-rheumatic drugs) appear to decrease inflammation, though they are not categorized as anti-inflammatory drugs. They do not decrease prostaglandin production, do not directly relieve pain, nor reduce fever. In effect, DMARDs slow the disease process by modifying the immune system.
- **Biologic Drugs:** Biologic response modifiers (biologics) stimulate or restore the ability of the immune system to fight disease and/or infection. Anti-TNF drugs are just one type of biologic drug developed for the treatment of rheumatoid arthritis.

Blood Pressure

CHANGE YOUR LIFESTYLE

A critical step in preventing and treating high blood pressure is a healthy lifestyle. You can lower your blood pressure with the following lifestyle changes:

- Losing weight if you are overweight or obese.
- Quitting smoking.
- Eating a healthy diet, including the DASH diet (eating more fruits, vegetables, and low fat dairy products, less saturated and total fat).
- Reducing the amount of sodium in your diet to less than 1,500 milligrams a day if you have high blood pressure.
- Getting regular aerobic exercise (such as brisk walking at least 30 minutes a day, several days a week).
- Limiting alcohol to two drinks a day for men, one drink a day for women.

Did you know?

Healthy adults need to limit their sodium intake to no more 2,300 milligrams a day (about 1 teaspoon of salt).

MEDICATIONS TO TREAT HIGH BLOOD PRESSURE

There are several types of drugs used to treat high blood pressure, including:

- Angiotensin-converting enzyme (ACE) inhibitors
- Angiotensin II receptor blockers (ARBs)
- Diuretics
- Beta-blockers
- Calcium channel blockers
- Alpha-blockers
- Alpha-agonists
- Renin inhibitors
- Combination medications
- Diuretics are often recommended as the first line of therapy for most people who have high blood pressure.

If the blood pressure is more than 20/10 points higher than it should be, the doctor may consider starting on two drugs or placing you on a combination drug.

HIGH BLOOD PRESSURE TREATMENT FOLLOW-UP

After starting high blood pressure drug therapy, the patient should see a doctor at least once a month until the blood pressure goal is reached. Once or twice a year, doctor will check the level of potassium in blood (diuretics can lower this, and ACE inhibitors and ARBs may increase this) and other electrolytes and BUN/creatinine levels (to check the health of the kidneys).

After the blood pressure goal is reached, patient should continue to see the doctor every three to six months, depending on whether he has other diseases such as heart failure.

Cancer

COMMON CANCER TYPE

- Bladder
- Breast
- Colon and Rectal
- Kidney (Renal Cell)
- Leukemia
- Lung
- Melanoma
- Non-Hodgkin Lymphoma
- Pancreatic
- Prostate
- Thyroid

MAIN TREATMENTS

- **Chemotherapy:** Antineoplastic drug or with a combination of such drugs into a standardized treatment regimen.
 - Side Effects
 - Anemia
 - Appetite Changes
 - Bleeding Problems
 - Constipation
 - Diarrhea
 - Fatigue (Feeling Weak and Very Tired)
 - Hair Loss (Alopecia)
 - Infection
 - Memory Changes
 - Mouth and Throat Changes
 - Nausea and Vomiting
 - Nerve Changes
 - Pain
 - Sexual and Fertility
 - Skin and Nail Changes
 - Swelling (Fluid Retention)
 - Urination Changes

- **Radiotherapy:** the use of high energy x-rays and similar rays (such as electrons) to treat disease. External radiotherapy from outside the body using high energy x-rays. Internal radiotherapy: from a radioactive material placed within the body. Side effects:
 - Loose Stools (Diarrhea)
 - Feel Weak or Tired (Fatigue)
 - Hair Loss (Alopecia)
 - Mouth or Throat Hurts
 - Feeling Sick to Your Stomach and Throwing Up (Nausea and Vomiting)
 - Changes in Sexuality and Fertility
 - Mild Skin Changes
 - Changes When Urinate
- **Surgery:** An operation to repair or remove part of your body to diagnose or treat cancer.
- **Transplantation:** Blood and marrow transplantation (BMT) or HCT is a procedure that involves infusion of cells (hematopoietic stem cells; also called hematopoietic progenitor cells) that reconstitute the hematopoietic system of a patient.

Cholesterol

Did you know?

Cholesterol itself isn't bad. Is just one of the many substances created and used by our bodies to keep us healthy. Some of the cholesterol we need is produced naturally (and can be affected by your family health history), while some of it comes from the food we eat.

Do not forget!

HDL : "Good cholesterol"

LDL: "Bad cholesterol"

LEVELS

HDL (Good) Cholesterol Level

Less than 40 mg/dL (for men) Less than 50 mg/dL (for women) = Low HDL cholesterol. A major risk factor for heart disease.

60 mg/dL and above = High HDL cholesterol. An HDL of 60 mg/dL and above is considered protective against heart disease.

LDL (Bad) Cholesterol Level

The lower your LDL cholesterol, the lower your risk of heart attack and stroke. In fact, it's a better gauge of risk than total blood cholesterol.

- Less than 100 mg/dL = Optimal
- 100 to 129 mg/dL = Near or above optimal
- 130 to 159 mg/dL = Borderline high
- 160 to 189 mg/dL = High
- 190 mg/dL and above = Very high

Total Blood (or Serum) Cholesterol Level

Less than 200 mg/dL= Desirable level that puts you at lower risk for coronary heart disease. A cholesterol level of 200 mg/dL or higher raises your risk.

200 to 239 mg/dL = Borderline high

240 mg/dL and above = High blood cholesterol. A person with this level has more than twice the risk of coronary heart disease as someone whose cholesterol is below 200 mg/dL.

DANGERS OF HIGH CHOLESTEROL LEVELS

- Atherosclerosis - narrowing of the arteries.
- Higher coronary heart disease risk - an abnormality of the arteries that supply blood and oxygen to the heart.
- Heart attack - occurs when the supply of blood and oxygen to an area of heart muscle is blocked, usually by a clot in a coronary artery.
- Angina - chest pain or discomfort that occurs when your heart muscle does not get enough blood.
- Other cardiovascular conditions - diseases of the heart and blood vessels.
- Stroke and mini-stroke - occurs when a blood clot blocks an artery or vein, interrupting the flow to an area of the brain. Can also occur when a blood vessel breaks. Brain cells begin to die.

PREVENTION AND TREATMENT OF HIGH CHOLESTEROL

- Lifestyle Changes
- Eating a heart-healthy diet,
- Enjoying regular physical activity
- Avoiding tobacco smoke.
- Know Your Fats
- Cooking for Lower Cholesterol
- Understand Drug Therapy Options

Chronic Pain

Do not forget!

Many doctors won't consider pain chronic unless it has lasted for 3-6 months, and is interfering with your quality of life.

HOW DO I KNOW IF MY PAIN IS CHRONIC?

Patient has chronic pain if he answers yes to any of the following questions:

- Has your pain lasted for more than six months?
- Is your pain the result of an injury which should have healed by now?
- Does your pain get worse when you are stressed or angry?
- Do you feel a sense of hopelessness when you are in pain?
- Has your pain medication stopped working, even if your dose has increased?
- Do you have trouble sleeping because of pain?
- Does your pain affect your social life or relationships?
- Do you regularly call in sick because of pain?
- Is it harder for you to enjoy things because you are in pain?

SYMPTOMS THAT OFTEN ACCOMPANY CHRONIC PAIN

People who suffer from chronic pain often experience other sensations associated with their illness. If you have chronic pain, in addition to the physical symptom of pain you may notice one or more of the following:

- Depression or anxiety
 - Irritable Bowel Syndrome (IBS)
 - Decreased coordination
 - Confusion or difficulty concentrating
 - Insomnia
 - Flu-like aches and pains
 - Headaches
 - Nausea
 - Blurry vision
-
- Commonly Used Pain Medication
 - Opioids (Narcotics) for Chronic Pain
 - Used for moderate to severe chronic pain

- NSAIDs for Chronic Pain, and Acetaminophen
- NSAIDs and acetaminophen are non-opioid analgesics, pain medications often used for mild to moderate chronic pain
- Antidepressants for Chronic Pain
- Antidepressants are adjuvant analgesics. They are not formulated specifically as pain medications, though they can effectively treat certain types of chronic pain.
- Anticonvulsants for Chronic Pain
- Anticonvulsants, usually used to control seizure disorders, can also be used as pain medication.
- Topical Analgesics
- Topical analgesics are pain medications that are applied to the skin.

Cold and Flu (Influenza)

TREATMENT

- **Cold.** Make you feel better :
 - Decongestant nasal sprays.
 - Cough suppressants.
 - Antihistamines.
 - Good nutrition (balanced diet. vitamin A, vitamin B complex (vitamins B1, B2, B5, B6, folic acid) and vitamin C, minerals zinc and copper.
 - Chicken soup.

Help you fight off the virus

- 12 hours of sleep each night
- Warm and humid environment.
- Drink lots of water.

- **Flu**
 - Stay at home.
 - Get plenty of rest.
 - Drink a lot of liquids.
 - Do not smoke or drink alcohol.
 - Consider over-the-counter medications to relieve flu symptoms.
 - Consult a physician early on for best possible treatment.
 - Remain alert for emergency warning signs.

Warning signs are symptoms that indicate that the disease is becoming serious and needs immediate medical attention.

- Difficulty breathing or shortness of breath.
- Pain or pressure in the chest or abdomen.
- Dizziness.
- Confusion.
- Severe or persistent vomiting.

In children other warning signs include irritability, failing to wake up and interact, rapid breathing, and a blueish skin color. If the flu symptoms appear to resolve, but then reappear with fever and a bad cough.

Depression

Do not forget!

Dysthymia is a chronic depression, with less severe but longer lasting symptoms than major depressive disorder.

SYMPTOMS

In adults

- Feeling of intense sadness or feeling blue
- Insomnia or excessive sleeping
- Loss of pleasure or interest in activities one used to enjoy including hobbies and being intimate with their partner
- Feelings of worthlessness, hopelessness or self loathing
- Feelings of helplessness or pessimistic feelings and guilt
- Loss or increase of appetite, usually accompanied by noticeable weight loss or weight gain
- Feelings of anxiousness and restlessness
- Irritability and increased anger, usually a short temper where everything seems to “get on one’s nerves”, general increase in overall frustration
- Decreased energy level and overall fatigue
- Increase in the number of aches and pains in the body, including back aches, headaches and stomach pains
- Inability to think clearly, slowed thinking, memory loss
- Easily distracted with an inability to concentrate clearly
- Crying for no apparent reason
- Isolation or withdrawal from family and friends
- Thoughts of suicide or death
- Risky behavior such as substance abuse, gambling addiction or other self-destructive activities

In children and teenagers

- Sudden drop in grades or school performance
- Unusual anxiety, anger or withdrawal from friends or normal social activities
- Changes in sleep patterns, loss of sleep (more common in teenagers than with small children)
- Increase in physical complaints, stomach aches etc.
- For teenagers: Increase in risk taking behavior such as dangerous driving, alcohol or drug abuse or promiscuous encounters.
- Extreme boredom

Did you know...?

Some estimates have 1 in 30 children and 1 in 8 teenagers may suffer from depression.

Elderly

- Loss of memory
- Inability to think clearly or concentrate
- Physical symptoms and complaints such as abdominal pain or headaches

TREATMENT

Medications

Types of antidepressants include:

- Selective serotonin reuptake inhibitors (SSRIs).
- Serotonin and norepinephrine reuptake inhibitors (SNRIs).
- Norepinephrine and dopamine reuptake inhibitors (NDRIs).
- Atypical antidepressants.
- Tricyclic antidepressants.
- Monoamine oxidase inhibitors (MAOIs).

Psychotherapy

- Cognitive behavioral therapy is one of the most commonly used therapies.

Lifestyle changes

- Exercise: For maximum results, aim for 30 to 60 minutes of aerobic activity on most days.
- Nutrition: complex carbohydrates are a better choice.
- Sleep: between 7 to 9 hours each night.
- Social support: Strong social networks reduce isolation, a key risk factor for depression.
- Stress reduction: Too much stress exacerbates depression and puts you at risk for future depression.

Diabetes

Did you know?

Diabetes is a disease in which your blood glucose, or sugar, levels are too high. Glucose comes from the foods you eat. Insulin is a hormone that helps the glucose get into your cells to give them energy.

Do not forget!

With type 1 diabetes, your body does not make insulin.

With type 2 diabetes, the more common type, your body does not make or use insulin well. Without enough insulin, the glucose stays in your blood.

TYPE 1

Most often in children and young adults but can appear at any age.

Symptoms:

- Being very thirsty
- Urinating often
- Feeling very hungry or tired
- Losing weight without trying
- Having sores that heal slowly
- Having dry, itchy skin
- Losing the feeling in your feet or having tingling in your feet
- Having blurry eyesight

Treatment:

- Insuline

TYPE 2

Higher risk of type 2 diabetes if you are older, obese, have a family history of diabetes, or do not exercise.

Symptoms:

- Appear slowly. Some people do not notice symptoms at all.
- Being very thirsty
- Urinating often
- Feeling very hungry or tired
- Losing weight without trying

- Having sores that heal slowly
- Having blurry eyesight

TREATMENT

Healthy eating, physical activity, and blood glucose testing. Some people also need to take diabetes medicines (diabetes pills and insulin).

Heart Diseases

- **Angina:** muscles of the heart are not getting enough oxygen
- **Aortic stenosis:** the aortic valve becomes narrowed, or stenosed, the blood flow through it is reduced and the heart has to work harder to pump blood to the body.
- **Arrhythmia:** the heart's natural pacemaker develops an abnormal rate or rhythm, the normal blood flow is blocked or another part of the heart takes over as pacemaker.
- **Atrial fibrillation:** If something damages or interferes with the transmission of these electrical impulses, the heart may beat faster and irregularly, called fibrillation.
- **Cardiomyopathy:** disease that changes the structure of the muscle tissue in the heart, or makes it weaker, so it's less able to pump blood efficiently.
- **Cardiovascular disease (CVD)** group of conditions that includes stroke and heart disease. Is caused by a build-up of fatty streaks and cholesterol in the blood vessels.
- **Congenital heart defects:** take the form of holes between the chambers, blockages in the pathways from the heart to the lungs or the body, or abnormal connections between the chambers and vessels of the heart.
- **Heart attack:** blood flow to part of the heart is blocked, often by a blood clot, causing damage to the affected muscle.
- **Heart failure:** Muscular pump is damaged by disease it no longer moves blood around efficiently. As a result, blood (and therefore oxygen and nutrients) isn't delivered very well to the tissues and organs. Meanwhile, back pressures build up in the circulation causing fluid to accumulate in the lungs and lower limbs.
- **Heart Murmurs:** Murmurs are abnormal heart sounds that can be heard using a stethoscope or sometimes by just listening to the chest.
- **Heart valve disease:** The two main problems that occur are:
 - Valves that don't shut properly, causing regurgitation of blood back across the valve in the wrong direction.
 - Valves that won't open properly, known as stenosis of the valve, which means blood flow through the valve is limited
- **High blood pressure:** It causes the heart to work harder than normal putting both the heart and arteries at greater risk of damage
- **Palpitations:** sensation of a rapid or irregular heartbeat.

Do not forget!

Becoming more active, improving your diet and cutting out smoking reduces your risk of coronary heart disease.

Did you know?

CVD kills one in three people in the UK.

Infectious Diseases

Infectious pathogens include some viruses, bacteria, fungi, protozoa, multicellular parasites, and aberrant proteins known as prions. These pathogens are the cause of disease epidemics, in the sense that without the pathogen, no infectious epidemic occurs.

TRANSMISSION

Transmission may occur through several different mechanisms.

- **Respiratory diseases** and meningitis are commonly acquired by contact with aerosolized droplets, spread by sneezing, coughing, talking, kissing or even singing.
- **Gastrointestinal diseases** are often acquired by ingesting contaminated food and water.
- **Sexually transmitted diseases** are acquired through contact with bodily fluids, generally as a result of sexual activity.
- Contact with a **contaminated**, inanimate object such as a coin passed from one person to another, while other diseases penetrate the skin directly.
- **Vectors**: may be mechanical (infectious agent on the outside of its body and transmits it in a passive manner. E.g. a housefly), or biological (harbor pathogens within their bodies and deliver pathogens to new hosts in an active manner, usually a bite.)

Migraine

SYMPTOMS

Recurrent severe headache associated with autonomic symptoms.

PHASES

- The prodrome, which occurs hours or days before the headache.
- The aura, which immediately precedes the headache.
- The pain phase, also known as headache phase.
- The postdrome, the effects experienced following the end of a migraine attack.

Sleep Disorders

- **Primary insomnia:** Chronic difficulty in falling asleep and/or maintaining sleep when no other cause is found for these symptoms.
- **Bruxism:** Involuntarily grinding or clenching of the teeth while sleeping.
- **Delayed sleep phase syndrome (DSPS):** inability to awaken and fall asleep at socially acceptable times but no problem with sleep maintenance, a disorder of circadian rhythms.
- **Hypopnea syndrome:** Abnormally shallow breathing or slow respiratory rate while sleeping.
- **Narcolepsy:** Excessive daytime sleepiness (EDS) often culminating in falling asleep spontaneously but unwillingly at inappropriate times.
- **Cataplexy:** a sudden weakness in the motor muscles that can result in collapse to the floor.
- **Night terror:** Pavor nocturnus, sleep terror disorder: abrupt awakening from sleep with behavior consistent with terror.
- **Parasomnias:** Disruptive sleep-related events involving inappropriate actions during sleep; sleep walking and night-terrors are examples.
- **Periodic limb movement disorder (PLMD):** Sudden involuntary movement of arms and/or legs during sleep, for example kicking the legs. Also known as nocturnal myoclonus. See also Hypnic jerk, which is not a disorder.
- **Rapid eye movement behavior disorder (RBD):** Acting out violent or dramatic dreams while in REM sleep, sometimes injuring bed partner or self (REM sleep disorder or RSD)
- **Restless legs syndrome (RLS):** An irresistible urge to move legs. RLS sufferers often also have PLMD.
- **Situational circadian rhythm sleep disorders:** shift work sleep disorder (SWSD) and jet lag.
- **Sleep apnea, obstructive sleep apnea:** Obstruction of the airway during sleep, causing lack of sufficient deep sleep, often accompanied by snoring.
- **Sleep paralysis:** is characterized by temporary paralysis of the body shortly before or after sleep. Sleep paralysis may be accompanied by visual, auditory or tactile hallucinations. Not a disorder unless severe. Often seen as part of narcolepsy.
- **Sleepwalking or somnambulism:** Engaging in activities that are normally associated with wakefulness (such as eating or dressing), which may include walking, without the conscious knowledge of the subject.
- **Nocturia:** A frequent need to get up and go to the bathroom to urinate at night
- **Somniphobia:** A cause of sleep deprivation. Somniphobia is a dread/ fear of falling asleep or going to bed.

Thyroid Disorders

Do not forget!

Hyperthyroidism: abnormally increased activity.

Hypothyroidism: abnormally decreased activity

Thyroid nodules, are generally benign thyroid neoplasms, but may be thyroid cancers.

DISORDERS

Hyperthyroidism

What is it? Overproduction of the thyroid hormones T3 and T4

Causes: development of Graves' disease an autoimmune disease in which antibodies are produced which stimulate the thyroid to secrete excessive quantities of thyroid hormones. The disease can result in the formation of a toxic goiter as a result of thyroid growth in response to a lack of negative feedback mechanisms.

Symptoms: Thyroid goiter, protruding eyes (exophthalmos), palpitations, excess sweating, diarrhea, weight loss, muscle weakness and unusual sensitivity to heat. The appetite is often increased.

Treatment: Beta blockers decrease symptoms of hyperthyroidism such as increased heart rate, tremors, anxiety and heart palpitations. Anti-thyroid drugs decrease the production of thyroid hormones. Radioactive iodine destroy a portion of or the entire thyroid gland,

Hypothyroidism

What is it? underproduction of the thyroid hormones T3 and T4.

Causes: congenital thyroid abnormalities), autoimmune disorders such as Hashimoto's thyroiditis, iodine deficiency (more likely in poorer countries) or the removal of the thyroid following surgery to treat severe hyperthyroidism and/or thyroid cancer. Symptoms: abnormal weight gain, tiredness, baldness, cold intolerance, and bradycardia

Treatment: hormone replacement therapy

Initial hyperthyroidism followed by hypothyroidism

What is it? overproduction of T3 and T4 followed by the underproduction of T3 and T4. types: Hashimoto's thyroiditis and postpartum thyroiditis.

Hashimoto's thyroiditis or Hashimoto's Disease is an autoimmune disorder whereby the body's own immune system reacts with the thyroid tissues in an attempt to destroy it. At the beginning, the gland may

be overactive, and then becomes underactive as the gland is damaged resulting in too little thyroid hormone production or hypothyroidism.

Thyroid Cancers

In most cases, the thyroid cancer presents as a painless mass in the neck. It is very unusual for the thyroid cancers to present with symptoms, unless it has been neglected. One may be able to feel a hard nodule in the neck.

Non-cancerous nodules in the neck

The majority of these thyroid nodules are benign (non cancerous). The presence of a thyroid nodule does not mean that one has thyroid disease. Most thyroid nodules do not cause any symptoms, and most are discovered on an incidental examination.

Congenital anomalies

A persistent thyroglossal duct or cyst is the most common clinically significant congenital anomaly of the thyroid gland.