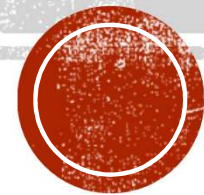


OVER THE COUNTER(OTC) MEDICATION



INTRODUCTION

Medication are broadly classified into 2 types

1. Prescription controlled medication
2. Prescription uncontrolled medication

Prescription controlled medication: this class involves the drugs and medicines which needed a signified prescription of eligible authority that is physician or a registered medical practitioner.

Prescription uncontrolled medications: this class involves all the drugs and medicines which do not require a written prescription of a physician or a medical practitioner. Such medications can be directly purchases over the chemist, so those drugs are called as an over the counter drugs or non prescribed drugs.



Definition:

- OTC Medications are those medications that can be obtained over the counter or from the chemist bench without prescription of a RMP and consultation with a physician. It can be suggested that those having little significant pharmacological activity and therefore the physician need not to be very much concerned about these use by the patient themselves.
- Over-the-counter medicine is also known as OTC or nonprescription medicine. All these terms refer to medicine that you can buy without a prescription. They are safe and effective when you follow the directions on the label and as directed by your health care professional.



Examples of OTC drug:

- For fever and pain: Paracetamol (Crocine, Calpol, Metacin etc), Aspirin (Aspirin, Disprin)
- For diarrhoea : Oral rehydration salts (Electral), probiotics (Bifilac,)
- For constipation: Laxatives: Bisacodyl (Dulcolax), Lactulose (Easylax), Isabgol (Softovac)
- For hyperacidity: Antacids: Magnesium/Aluminium Hydroxide (Digene, Gelusil)



Need & Role of The Pharmacist in OTC Medication Dispensing

The pharmacists play a vital role in controlling the number of medications being dispensed as OTC drugs. They can also counsel and advise the consumers regarding OTC medications.

The following are the role of pharmacist while dispensing the OTC medication-

- Interacting with the patients to assess and decide if self treatment is appropriate or if patient should be referred to physician.
- Assessing for the potential allergies.
- Helping patients in appropriate product selection , instructing for the correct use of the product e.g. how to take, how much to take, when to take, how long to take, storage condition, safe disposal and safety of medicine.
- Help the patient in thoroughly reading and understanding the label of OTC product.
- Evaluate the special population like pediatric, older, pregnant or breastfeeding women before dispensing OTC to avoid unnecessary usage and drug related problem in them.



- Instruct the patient to always consult the health care professional when considering the use of OTC medicines to avoid possible contraindications, drug- drug interaction, food- drug interaction, drug- alcohol interaction or dosing role.
- When patients are taking multiple OTC products, pharmacists should encourage patients to always check the active ingredients to ensure avoiding possible over-dosages.
- Pharmacists can control the unnecessary use of OTCs, prevent the misuse and abuse of these products and ensure safe usage and storage of medicines.



Counselling for OTC Product

- Counsel patients on the proper selection and use of the selected product, including dosage, administration technique, dosage intervals, route of administration, and recommended duration of therapy, as well as proper storage conditions of products.
- Remind patients not to exceed the recommended dose of the product and not to continue for a prolonged period
- Emphasize the importance of reading the labels on OTC items before taking any other prescribed medication.
- Recommend that the patient consult a physician if symptoms do not improve in 2/3 days or if the patient presents with severe symptoms at the first instance.
- Advise patients to exercise caution when using multiple medications; if unsure, they should consult a health care professional.



- Remind parents or caregivers of pediatric patients to use calibrated measuring devices to administer medications correctly.
- To always read the label of the medication prior to administering medicines to children and to give pediatric formulations only for pediatric patients as far as possible.
- Advise the patients and caregivers on probable adverse effects and drug interactions of other medications with the OTC medicines and how to manage the same.
- Encourage and teach the patients to report the adverse drug reactions and events to pharmacists, doctors or do self-reporting to Pharmacovigilance Programme of India (PvPI) using their website, App, email or through post.



OTC Medications in India

- The majority of India's population trusts self-medication, and the middle-class purchasing power is increasing.
- Self-medicated items in India include antacids, cold and cough remedies, laxatives, analgesics, vitamins, minerals, nutritional supplements dermatology products, anti-allergic medications etc.
- In India, the medicines are listed under different schedules in the Drugs and Cosmetics Act and Drugs and Cosmetics Rule.
- Drugs listed in Schedules H, H1, and X should carry a label stating that these drugs are to be sold by retail only on prescription of a registered medical practitioner.
- It has to be stressed that in India, the phrase “OTC” has no legal recognition. Here, the term OTC is used for the way drugs are used (self-medication without prescription or allowed to be sold by pharmacists without the prescription of a Registered Medical Practitioner) rather than being a recognized official category of medicines unlike other countries.



- Schedule K of the Drug and Cosmetics Act and its Rules includes household remedies such as paracetamol, Analgesic balms, Antacid preparations, pills and tablets for cough burn ointments, absorbent cotton wool, castor oil, liquid paraffin, eucalyptus oil, tincture iodine, and various formulations for the treatment of cough and cold and are the potential OTC drugs.
- Currently, nondrug-licensed stores (e.g., nonpharmacists) can sell a few medicines classified as “Household Remedies” in Schedule K of the D and C Rules in villages whose population is below 1000 subject to certain other conditions.
- Most of the developed nations have clear OTC medicines list, detail labelling requirements and guidelines for pharmacists. In most developed countries, these OTC medicine labels are patient-friendly, carrying sufficient information for the patient to make a suitable choice/decision of the medicine he/she is about to take.



- For example; the US FDA has requirement to have a Drug Fact Labels on all OTC products. It covers the following information: Active ingredients, its purpose/ use, warnings, precautions, usage and dosage instructions, storage and list of inactive ingredients.
- In recent developments, the Drugs Consultative Committee in India appointed a sub-committee and is working on creating a separate list of OTC medicines, and plans to include the definition, regulation, distribution, sale of OTCs in the Drugs and Cosmetics Act.



SELF MEDICATION

- The World Health Organization defines **self-care** as; "The ability of individuals, families and communities to promote health, prevent disease, and maintain health and to cope(deal with the difficult situation) illness and disability with or without the support of a health-care provider".
- Self-medication is just one element of self-care and can be defined as the selection and use of medicines by individuals to treat self-recognized illness or symptoms.
- According to the WHO's definition ,self-medication is the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent diseases or symptoms. Self-medication is necessary, however, it is important to take care that it is “responsible” self medication.



Role of Pharmacists in Promoting the Safe Practices during Self-Medication

A pharmacist is easily accessible and a trusted healthcare provider.

- A pharmacist should suggest appropriate OTC medicines for minor illnesses and give necessary instructions for its correct use, storage, and disposal of unused medicines.
- Should check for potential drug related problems and counsel the high-risk patient populations for the appropriate use of medications.
- Pharmacists should not dispense prescription medicines over the counter (without a valid prescription)
- Pharmacists should screen potential purchasers and those presenting prescriptions for risk factors as it is important to identify and quantify the problem to promote rational use of medications. Monitor the regular patients for long term complications
- Pharmacists should maintain patient related records, including of the OTC medications dispensed.
- Try to gain a greater understanding of consumer beliefs to maximize the benefits and minimize the risks of several medications.



Responding to Symptoms, Minor Ailments and Advice for Self-Care in Various Minor Ailments:

- Minor ailments are defined as common or self-limiting, uncomplicated conditions that can be diagnosed and managed without medical involvement.
- Minor ailments can be managed with minimal treatment or self-care strategies.
- Patients with these conditions can be traditionally assessed and provided with treatment recommendations within the practice of pharmacy.
- Most commonly seen ailments include indigestion, nausea, cough, headache, fever, allergic rhinitis, The process of prescribing for minor ailments includes identification of patient's needs, history taking, conduction of appropriate treatment assessment, implementation or recommendation of medicines, establishment of monitoring parameters and complete timely follow-up.

1.Pain management

- Pain is an unpleasant sensory and emotional experience. Around 1.71 billion people worldwide get affected by musculoskeletal pain.
- There are more than 150 pain conditions that affect mobility. Pain affects quality of life. It is subjective (perceived only by the one who suffers) and cannot be measured objectively.



- Aches and pains is the most common reason for people to self-medicate. Low back pain, headaches, toothache, body pain, leg pain, menstrual pain are very common conditions.
- Pain has a multi-dimensional nature, has an emotional component. So treatment includes medications and mind-body techniques.
- *Self Care - Pharmacological advice*
 - Oral or local anti-inflammatory and analgesic such as paracetamol tablets, syrup, suspension
 - Diclofenac sprays, creams, gel or ointment
 - Use of topical pain balms
 - Aspirin (less used)
 - If headache or pain seems to be due to hyperacidity, advise antacids
 - Ibuprofen, aceclofenac, diclofenac, mefenamic acid (for menstrual pain) (all these medicines are not yet in the OTC category in India, but lower strengths of these medicines are widely used globally as OTCs).
- *Non-pharmacological advice*
 - Avoid the use of the affected limb/area
 - Provide support and orthopedic materials if needed. e.g. elastic foot bandage
 - Cold packs/cold water immersion to reduce swelling and pain (useful following acute sporting injuries)



- Hot packs - useful for temporary relief of pain, mainly back pain, abdominal pain and menstruation pain)
- Simple, everyday activities like walking, swimming, gardening and dancing can ease some of the pain
- Activity also helps lessen pain by stretching stiff and tense muscles, ligaments and joints.
- Avoid excess use of tea, coffee, spicy food
- Stay hydrated
- Avoid alcohol, smoking
- Stress management, use of relaxation techniques,
- Yoga, Pranayam
- Control of acidity and avoiding trigger factors
- Adequate sleep



2. Cough

- Cough could be due to various reasons, some of which are listed below:

Dust, smoke, allergens like mold, pollen etc

Infections of upper or lower respiratory tract

Pulmonary diseases like bronchitis, pneumonia, TB

Left ventricular failure, Gastroesophageal reflux disease (GERD), Chronic obstructive pulmonary disorder (COPD)

- Cough is mainly of 2 types:

Wet or productive cough which is associated with lot of mucus secretion

Dry or unproductive cough where there is no mucus secretion but act of coughing

Self Care- Pharmacological advice

Expectorants: e.g. guaifenesin, ammonium chloride are Indicated for the symptomatic relief of productive cough

Lozenges for sore throat



Non-Pharmacological

Steam inhalation ,Gargle with salt water/turmeric water

Stay hydrated, Warm liquids

Use of respiratory hygiene while coughing

3.Cold

Cold is an infectious upper respiratory illness of the nose, throat, sinuses, and trachea. It can be caused by more than 200 different viruses; however rhinoviruses are responsible for causing majority of colds.

Causes:

Rhinoviruses are responsible for up to 50% of common colds. There are around 100 types of rhinoviruses. Other viruses, on the other hand, can cause cold

Symptoms:

The following symptoms appear within 1-3 days of getting infected with cold virus: Sneezing, Sore throat, Runny nose, Headache, Fever (most common in children), Cough, Nasal congestion

Self-care pharmacological advice

- Paracetamol
- Medicated lozenges containing local anaesthetics, antiseptics
- Antihistamine if patient also suffers from allergic rhinitis
- Nasal decongestant containing oxymetazoline,
- Saline nasal sprays
- No antibiotic should be given without physician's assessment and prescription

Non-Pharmacological advice

- Gargling with salt water might help coat the throat and relieve inflammation.
- Staying hydrated aids is the replacement of lost fluids as well as relief of congestion.
- Topical ointments with vapour rubs assist in expanding the airways
- If used at the beginning of the cold symptoms, zinc lozenges may help to shorten the duration of symptoms.



4. Diarrhoea

Diarrhoea can range from a little inconvenience to a potentially fatal illness. Diarrhoea is characterised by excessively loose or watery faeces. Bacteria, viruses, and parasites are the most common causes of diarrhoea. Chronic diarrhoea can also be caused by digestive system issues.

Causes

Viral Infections E.g. Rotavirus, norovirus

Bacterial Infections e.g. E. coli, V. cholera

Parasitic infections

Food poisoning

Allergy of certain food

Symptoms

Loose or watery faeces is the most common sign of diarrhoea.

Other symptoms of mild diarrhoea include: 1) Bloating or abdominal pain. 2) A strong and pressing desire of bowel movement. 3) Nausea and vomiting (upset stomach).

If a person is suffering from severe diarrhoea, the following symptoms may be observed: 1) Fever
Severe pain, Weight loss, Vomiting, Dehydration, Blood in faeces



Non-pharmacological advice

When a person has acute diarrhoea, it may usually be treated by oneself without the use of medication. There are several things that can be done to treat diarrhoea, including:

- 1) Enough water and electrolyte-balanced fluids (diluted and pulp-free fruit juices, broths, sports drinks, and caffeine-free sodas) should be taken. Hydration level should be maintained throughout the day to replenish the lost water and prevent dehydration.
- 2) Eating habits should be changed.
- 3) Caffeine intake (coffee, diet sodas, strong tea/green tea, and even chocolate) should be limited. Caffeine-containing foods and beverages have a modest laxative impact, worsening the diarrhoea.
- 4) Gas-producing foods and beverages (beans, cabbage, beer, and carbonated beverages) should be avoided. If a person is suffering from diarrhoea and stomach is cramping, cutting back on gas-producing foods may assist.
- 5) If a person is suffering from diarrhoea, the following foods should be included in the diet: Potatoes, Rice (white), bananas, fish,



Self-care pharmacological advice

- Oral Rehydration Salts to treat dehydration (educate patient or caregiver to use ORS correctly, use boiled and cool water in correct proportion mentioned on the label. If using ORS powder, not to add excess water than recommended and not to add extra sugar)
- Zinc supplements
- Probiotics
- Some Ayurvedic formulations containing nutmeg, kudu etc are commonly used (eg. Mebarid tablets, syrup)



5. Constipation:

Constipation is a condition in which bowel motions become less frequent and faeces become harder to evacuate. Changes in food or lifestyle, as well as lack of fibre, are the most common causes.

Causes

Constipation can be caused by a variety of factors, including lifestyle choices, drugs, medical disorders, and pregnancy.

Constipation is caused by a variety of lifestyle factors, including:

1. Eating low-fibre meals
2. Insufficient water intake (dehydration).
3. Inadequate physical activity.
4. Alterations in regular routine, such as travelling, eating, or sleeping at different times.
5. Drinking a lot of milk or cheese.
6. Stress.

Drugs that may cause constipation are: 1) Narcotic pain relievers containing codeine, such as oxycodone and hydromorphone. 2) NSAIDS, like ibuprofen and naproxen. 3) Antidepressants, including Selective Serotonin Reuptake Inhibitors (SSRIs), such as fluoxetine and tricyclic antidepressants, such as amitriptyline. 4) Calcium or aluminium-containing antacids. 5) Iron pills. 6) Antihistamines, such as diphenhydramine, for treating allergies. 7) Calcium channel blockers (verapamil, diltiazem, and nifedipine) and beta-blockers (atenolol) are used to treat blood pressure. 8) Antipsychotic drugs, such as clozapine 9) Anticonvulsant drugs, such as phenytoin and gabapentin. 10) Anti-nausea drugs, such as ondansetron.



Self-care

It is easy to treat mild to moderate constipation at home in the majority of situations. Self-care begins with a review of what a person eats and drinks, followed by modifications. Here are some suggestions for assisting in getting rid of constipation:

- 1) Water intake should be increased by 2-4 glasses each day. Caffeine-containing beverages and alcohol should be avoided because they can lead to dehydration.
- 2) Intake of fruits, vegetables, whole grains, and other high-fibre foods should be increased. Intake of high-fat foods such as meat, eggs, and cheese should be reduced.
- 3) Prunes should be consumed.
- 4) A diet journal should be maintained, containing foods that cause constipation.
- 5) Moving and exercise.
- 6) Diet should be supplemented with an OTC fibre supplement (such as Metamucil®, Citrucel®, or Benefiber®)
- 7) A very moderate OTC stool softener or laxative (such as docusate or Milk of Magnesia®) should be taken. Mineral oil enemas and stimulant laxatives or senna should be taken. There are numerous laxative options available



6. Vomiting:

Vomiting is forcible voluntary (done by choice) or involuntary emptying of stomach contents through mouth. Issues in stomach and intestines (infection, damage, and food irritation), inner ear (dizziness and motion sickness), and brain (head injury, brain infections, tumours, and migraine headaches) are potential causes of vomiting.

Causes- Vomiting can be caused by a variety of factors depending on the age:

- 1) In adults, vomiting is usually caused by a viral infection or food poisoning, although it can also be caused by motion sickness or illnesses that results in high fever.
- 2) In children, viral infections, food poisoning, motion sickness, over-eating or feeding, coughing, and conditions in which the kid has high fever are common causes of vomiting. Blockages in intestines can cause which is most common in early childhood.

Symptoms- 1) Abdominal pain 2) Diarrhoea 3) fever 4) Light-headedness 3) Excessive sweating 4) Chest pain 5) Dry mouth 6) Fainting 7) Rapid pulse vomiting 8) Decreased urination



Self care

- 1) The amount of clear liquids consumed should be gradually increased.
- 2) Solid foods should be avoided until the vomiting stops.
- 3) Enough rest should be taken.
- 4) All oral drugs should be discontinued for a while as they might irritate the stomach and worsen vomiting.

Small amounts of clear, sweetened beverages, such as soda pop, fruit juices .(excluding orange and grapefruit, which are too acidic), and Sugary drinks are more soothing to the stomach than other uses liquids. Resting in either a sitting is also beneficial. Activity might aggravate (to make something worse) nausea and cause vomiting.

Snacks should be limited, and sweet snacks should not be served with standard soda pop. Children should not be allowed to eat and play simultaneously. They should be encouraged to take a break while eating snack.



Fever

Fever can be defined as a body temperature that is higher than normal. It can be a symptom of the body's natural defense mechanism.

The average body temperature is 98.6° Fahrenheit (37° Celsius).

A fever can be defined as a temperature of more than 100.4°F in adults.

A fever in children can be defined as a temperature of 100.4°F (measured rectally), 99.5°F (measured orally), or 99°F (measured axillary).

Cause: Fever can be caused by a variety of things and is a symptom of practically any sickness: 1) Colds or flu 2) Ear aches 3) Bronchitis 4) Strep throat 5) Urinary tract infections 6) Mononucleosis

Symptoms: 1) High temperature (more than 100.4°F). 2) Shivering, trembling or chills. 3) Aches and pains throughout the body. 4) Fatigue (tiredness). 5) Sweating that is either intermittent or persistent. 6) Flushed complexion or heated skin.



Self-care

- 1) Mild fever (less than 101°F) does not need any medical care. Drinking sufficient water (not alcoholic beverages) and getting enough rest are sufficient.
- 2) There are a variety of effective medicines, like aspirin, acetaminophen, and ibuprofen, that are used to reduce high fever.
- 3) 3) If the child is under 17 and has fever, aspirin should be avoided as it may trigger Reye's syndrome (a potentially fatal condition). A lukewarm bath (about 98°F) can also assist to lower the body's temperature.

Sore Throat:

Sore throat is a condition in which the throat becomes swollen, itchy, painful or excessive dry due to bacterial or viral infection, allergies, acid reflux, overuse Severe pain in throat may be experienced while swallowing. and straining of vocal cords, or keeping mouth open for a long time while sleeping

Causes: Following are the common causes of sore throat:

- 1) **Viral Infection:** Commonly, sore throat occurs due to viral infection (like, the Coxsackie virus) and mononucleosis (caused by the Epstein-Barr virus). flu or common cold), and due to hand, foot, and mouth disease (caused by e of causative virus. At times, some viruses cause symptoms for a few Generally, symptoms eradicate by their own within 7-10 days on the basis of the type of causative virus. At times ,some viruses cause symptoms for few months, e.g., mono



2) Tonsillitis: This is a condition in which tonsils (two small masses of soft tissue present at the back of throat) that help in trapping the disease-causing germ become infected and inflamed due to some bacteria and viruses.

3) Bacterial Infection: Generally, group A Streptococcus bacteria cause strep throat infection having symptoms, like fever and red and swollen tonsils. However, it can also be caused by Chlamydia, Gonorrhoea and Corynebacterium. Antibiotics are prescribed to treat this infection.

4) Allergies: Pollen, dust mites, pets, or mold can cause allergic reaction, making the throat dry and itchy. This result in sore throat caused by postnasal drip, i.e., when mucus from the nose drips down the back of throat and causes pain and irritation in throat.

5) Acid Reflux: Gastroesophageal Reflux Disease (GERD) causes burning sensation and pain (or heartburn) in throat because the acid present in stomach backs up into the oesophagus (food pipe).

6) Overuse or Irritants: Physical conditions, like yelling, screaming, singing or speaking for a long time without taking rest, or excessive consumption of spicy foods, smoking, and hot liquids lead to sore throat which causes irritation and burning sensations in throat.

7) Excessive Dryness: Sleeping with open mouth for breathing (because of nasal congestion due to cold, flu or allergies) also cause sore throat.

Symptoms:

Following are the symptoms of sore throat that may vary depending on the cause:

1) Itchy 2) Burning sensation



Self care

To relieve pain due to sore throat, the following measures can be taken at home: 1) Sufficient rest (minimum 8 hours of sleep a night) should be taken to ensure proper functioning of immune system.

2) Warm fluids, like hot lemon tea or broth, should be consumed.

3) Fluid intake should be increased to prevent dryness of throat and to maintain body hydration. 4) Gargle should be done with salt water (1/4th teaspoon of salt in a cup of water).

5) Popsicle or ice cream should be eaten to keep the throat cool.

6) Adults should use lozenges or hard candies to keep their throat moist; and children below 2 years of age should be given popsicles, instead of lozenges or hard candies as it may cause choking.

7) Throat spray or cold liquids should be used to decrease pain.

8) Cool mist humidifier or vaporiser should be used in living and bedroom.

9) Plenty of rest and at least 8 hours of sleep should be taken.

10) The healthcare professional or pharmacist should be consulted about possible OTC drugs to be taken.

11) Excessive talking should be avoided until the throat heals.



Skin Disorders

➤ skin disorders are conditions which clog, irritate or inflame the skin, resulting in rashes or changes in skin appearance.

Cause :

Certain lifestyle factors and health conditions may affect the skin and cause development of skin disease. Common causes of skin diseases include:

- Bacteria stuck in pores or hair follicles.
- Viruses
- Conditions affecting thyroid, kidneys, or immune system.
- Exposure to environmental triggers (allergens or another person's skin).
- Exposure to sun
- Genetics
- Fungus or parasites living on skin
- Medications, like those used for treating Inflammatory Bowel Disease (IBD).
- Diabetes



Symptoms:

Skin disease symptoms vary based on the type of skin condition. It is not necessary that skin changes occur due to skin diseases; for example, a blister may form due to wearing ill-fitting shoes. Unexpected skin changes may also occur due to some underlying conditions.

Following symptoms are present in cases of skin diseases:

- 1) Abnormal pigmentation (discoloured patches of skin)
- 2) Xerosis (dry skin)
- 3) Open sores, ulcers or abrasion
- 4) Peeling of skin
- 5) Rashes with irritation or pain
- 6) Red, white or pus-filled bumps
- 7) Rough or scaly skin

Self-care

Making the following lifestyle changes can reduce the symptoms of skin condition:

- 1) Sugar or dairy foods should be avoided or limited.
- 2) Stress should be managed.
- 3) Good skin hygiene and care should be maintained.
- 4) Too much alcohol consumption and smoking should be avoided.

Following are the tips for prevention of some infectious skin disorders:

- 1) Hands should be washed frequently with warm water and soap.
- 2) Sharing eating utensils and drinking glasses with other individuals should be avoided.



- 3) Direct contact with infected individuals should be avoided.
- 4) Things in public spaces (e.g., gym equipment, etc.) should be cleaned prior to using them.
- 5) Sharing of personal livelihood things (e.g., blankets, hairbrushes, or swimsuits) should be avoided.
- 6) Sleep should be taken for at least 7 hours each night.
- 7) Sufficient quantity of water should be consumed.
- 8) Excessive physical or emotional stress should be avoided.
- 9) Nutritious diet should be consumed.
- 10) Vaccinations for infectious skin diseases (e.g., chickenpox, etc.) should be received



Following are the tips for prevention of some non- infectious skin disorders:

- 1) Face should be regularly washed with a gentle cleanser and water.
- 2) Moisturiser should be used to keep skin hydrated.
- 3) Environmental and dietary allergens should be avoided.
- 4) Contact with strong chemicals or other irritants should be avoided.
- 5) Sleep should be taken for at least 7 hours each night.
- 6) Sufficient amount of water and a healthy diet should be consumed.
- 7) Skin should be protected from extreme cold, heat, and wind environments.

Oral Health

Oral health is a disease free condition of teeth, gums, and overall oral-facial affected by certain diseases, like tooth decay (cavities), gum (periodontal) system responsible for smiling, speaking, and chewing. Oral health can be disease, and oral cancer.

Following oral hygiene should be practiced to protect the oral health:

- 1) Tobacco use should be avoided.
- 2) Teeth should be brushed using soft-bristled brush and fluoride toothpaste for 2 minutes at least twice a day.



- 3) Flossing should be done on a regular basis.
- 4) After brushing and flossing, mouthwash should be used to remove left-over food particles.
- 5) Healthy diet should be consumed and sugar intake should be reduced.
- 6) Toothbrush should be changed in every 3 to 4 months or may be earlier if the bristles are scattered or damaged.
- 7) Regular dental check-ups and cleanings should be taken.
- 8) Tobacco consumption should be avoided.

Mouth Ulcers

Mouth ulcer (or aphthous ulcers or canker sores) is a condition in which yellow or red coloured lesions form in the mucus membrane (soft tissue lining) of tongue, gums, inner cheeks, lips, or palate, and cause mild pain.

Causes:

Following factors are responsible for mouth ulcers; but the exact cause is unknown:

- Minor tissue wound due to dental surgery (like having a cavity filled)
- Accidental cheek or tongue bite.
- Anaphylactic reaction (allergic reaction) to certain bacteria.



- Orthodontic braces or retainers.
- Vitamin deficiencies.
- By using harsh or abrasive toothpaste.
- Consuming excessive acidic foods (oranges, pineapples, and strawberries).
- Stress
- Viral, bacterial or fungal infections.

Symptoms

Mouth ulcers are easy to identify. Normally, they are present as sores on lips, gums, tongue, inner cheeks, or palate. They appear red around the edges and white, yellow, or grey in the middle. They may develop alone or in groups.

Following are the symptoms of mouth ulcers:

- 1) Swelling around the ulcer.
- 2) Increased soreness while brushing teeth.
- 3) Pain that intensifies on eating spicy, salty or sour foods.



Self-care

Following are the tips for treating mouth ulcer at home:

- 1) OTC topical anaesthetics, such as Orajel™ or Anbesol®, should be used.
- 2) Water intake should be increased.
- 3) Good oral hygiene should be maintained to keep mouth clean.
- 4) Mouth should be rinsed with warm saltwater few times a day.
- 5) Hot and spicy foods should not be eaten until the ulcer heals.

it is difficult to prevent mouth ulcers; however, following measures can be taken to reduce the risk:

- Teeth should be brushed twice a day and flossing should be done once a day for optimum oral health.
- A soft-bristled toothbrush should be used to avoid tissue irritation.
- A healthy diet, rich in fresh fruits and vegetables, should be taken.
- Regular visits to dentist should be made for check-ups and cleanings.



Dental Pain

Dental pain or toothache occurs in or around a tooth. Minor toothaches occur due to a temporary gum irritation and can be treated at home. Severe toothaches occur due to dental and mouth problems that can be treated by a dentist.

Causes

Toothaches can be caused by:

- Tooth decay.
- Abscessed tooth (a bacterial infection in the centre of tooth).
- Broken tooth.
- Damaged filling.
- Repetitive motions, such as chewing gum or grinding or clenching teeth, which can wear down the teeth.
- Infected gums.
- Eruption (teeth coming out of gums) or removal of tooth (wisdom teeth).

Symptoms:

1) Sharp, throbbing, or constant tooth pain. In some individuals, pain occurs only when pressure is applied to the tooth (biting down on something). 2) Swelling around the tooth. 3) Fever or headache. 4) Foul-tasting drainage from the infected tooth. 5) Bad mouth odour.



Self-care

Some toothaches that appear from pain around the tooth can improve without visiting to the dentist. Pain due to a temporary irritation (redness) in gum resolve within a few days during which chewing food around the affected area should be avoided. Soft foods, like eggs and yogurt, should be eaten; and sweets and very hot or very cold foods should be avoided if teeth are sensitive.

Following measures should be taken for temporary relief of a toothache:

- 1) Mouth should be rinsed with warm saltwater (half teaspoon of salt dissolved) in a glass of warm water) for loosening debris between the teeth, acting as a 10 disinfectant, and reducing inflammation.
- 2) Mouth should be rinsed with 3% hydrogen peroxide solution diluted with equal parts water to reduce inflammation and pain.
- 3) A cold compress of ice wrapped in a towel should be held to the painful area for 20 minutes to relieve swelling and pain.
- 4) OTC pain medications, e.g., NSAIDs (aspirin, ibuprofen, naproxen, or acetaminophen) should be taken to reduce pain and inflammation.

Natural or Herbal Treatments

- 1) Cotton ball soaked in a small amount of clove oil should be applied to the painful area or a drop of clove oil added to a small glass of water should be used for rinsing mouth. This is because clove oil is a natural antiseptic numbs pain, and reduces inflammation.
- 2) 2) Vanilla extract should be applied to the tooth and gum a few times a day using fingertips or cotton ball. This is because the alcohol in vanilla extract numbs pain temporarily and its antioxidants heal the area.



3) A warm peppermint tea bag should be held against the tooth and gum because peppermint has soothing properties.

4) A paste of crushed garlic clove should be applied to the affected area because garlic can kill bacteria (due to the presence of antimicrobial allicin) and relieve pain.

Gum Swelling

Swollen or inflamed gums often bleed and appear bright red in colour due to increased blood flow to the affected site. Red and puffy gums do not heal by themselves.

Due to improper oral hygiene, bacteria in plaque and calculus accumulate on the teeth and infect the gums. This is the major cause of gum disease; however given below are the other factors that increase the risk of developing gingivitis:

- Smoking or chewing tobacco prevents healing of gum tissue.
- Crooked, rotated, or overlapping teeth are harder to keep clean and create spaces for plaque and calculus build-up.
- Hormonal changes in puberty, pregnancy, and menopause make the blood vessels in gums more prone to bacterial and chemical attack and increase the risk of gingivitis.
- Cancer and its treatment can make a person more vulnerable to infection and increase the risk of gum disease.⁵⁾ Alcohol affects the oral defense mechanisms.
- Stress impairs the immune response to bacterial attack.



- Mouth breathing can be harsh on the gums when they are not protected by the lips, causing chronic irritation and inflammation.
- Diet rich in sugar and carbohydrates and low in water intake increase plaque formation. Also, deficiency of vitamin C impairs healing.
- Diabetes mellitus impairs blood circulation and the ability of gums to heal.
- Anti-seizure medications increase the risk for gum disease.
- Infrequent or no dental care increases the risk for gum disease.
- Poor saliva production increases the risk for gum disease.

Symptoms:

Bright red, swollen gums that bleed easily, even during brushing or flossing

Bad taste or persistent mouth odour

Gums with white spots or plaques

Gums that appear as if pulling away from the teeth

Pus between gums or interdental spaces

Change in the way the teeth fit together in the mouth or spaces opening up between teeth

Loose teeth or tooth loss

Change in the way partial dentures fit



Self-care

- Gums should be soothed by brushing and flossing gently.
- Brushing of teeth should be done at least twice a day and flossing should be done once a day.
- Toothpaste or mouthwash should be non-irritant to gums.
- Mouth should be rinsed with a salt water solution to remove bacteria.
- Baking soda diluted in water should be used to rinse and brush teeth and gumline to neutralise the acids irritating the gum tissue.
- Green tea should be taken to reduce inflammation due to antioxidants.
- Hydrogen peroxide should be used as a mouthwash or as a gel to kill bacteria,
- A warm compress should be held over the face to reduce gum pain. A cold compress should be held over the face to reduce inflammation.
- Intake of water should be increased to stimulate saliva production, which weakens the disease-causing bacteria in mouth.
- Extra fruits and vegetables should be added in the diet.
- Irritants, including strong mouthwashes, alcoholic beverages, and tobacco, should be avoided.



- Foods that can get lodged between the teeth and gums should be avoided.
- Sugary drinks and food should be avoided.
- Sesame oil or coconut oil can reduce bacteria that cause gum disease

