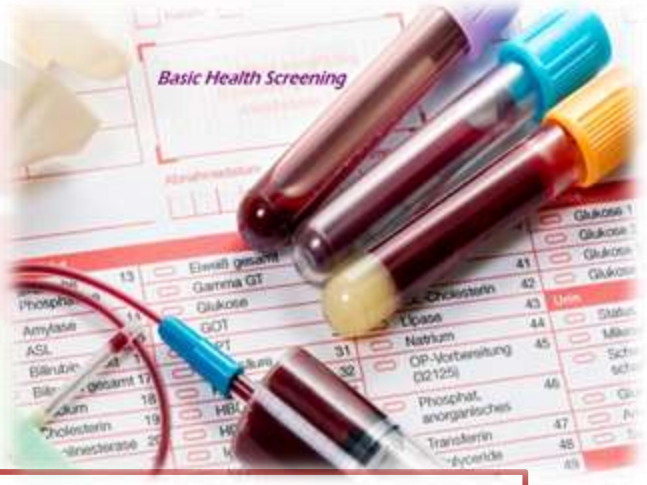


HEALTH SCREENING SERVICES IN COMMUNITY PHARMACY

Health Screening

- Services provided by Health care professionals to screen the health status of individuals with or without positive sign and symptoms.
- Health Screening, Healthy diet and exercise is necessary for maintaining good health and a higher quality of life.
- HS & regular testing helps to identify risk factors, facilitate early detection of common diseases & assist doctors with making effective diagnosis in people who do not yet have any symptoms or signs of sickness.

Health

- *Health is not merely the absence of diseases but a state of complete physical, mental and social well being.*

- It is the extent to which an individual or group is able to realize aspirations & satisfy needs and to change or cope with the environment.

- Screening-

  Examination of asymptomatic individuals to detect those with a high probability of having a given disease using an inexpensive diagnostic test.

- Goal of Screening is to improve Health outcomes, for example,

  Early detection of High Blood Pressure can prevent **Heart diseases & stroke** by timely start of medication and counselling for lifestyle change such as losing weight, cutting down on salt, regular exercise etc.

Types of Health Screening

- **Primary Health Screening Test-**

  These tests are performed either when doctors prescribe or when a patient himself undergo, after the occurrence of any abnormal signs or onset of any symptoms.

- Cholesterol levels ,eye examination/vision test etc

- Also called as Clinical Screening or Diagnostic Screening.

- **Secondary Health Screening Test-**

  These tests are performed after the diagnosis of the disease or its extent. These tests are done for mitigation of disease or check its re-occurrence.

- Mammography, regular blood pressure testing etc.

- Only carried out when doctors prescribe them.

Health Screening Services

1. *Body Mass Indexing* for Obesity, which measures and calculate body mass.
2. *Waist Circumference and the waist to hip ratio* to capture the Cardiovascular risk for central adiposity.
3. *Depression Screening* by mistake the individual to solve Hamilton Depression Rating Scale (HAM-D) questionnaire to figure out the level of depression of an individual by calculating the scores.

4. *Lipid profiling* for checking Cholesterol levels (HDL,LDL & triglycerides)
5. *Blood Sugar & Blood Pressure* Testing
6. *Pulmonary functions tests*
7. *Nutritional Assessments*
8. *Bone density Checking.*
9. *Health Awareness and Adherence Rating.*
10. *Vaccination services.*

Scopes of Health Screening Services

- Screening helps to find problems early on, when they may be easier to treat.
- HS tests are performed to diagnose the disease or to know the extent of the disease.
- E.g. Estimation of blood pressure, blood sugar, electrocardiography & Lung function test etc
- HS tests don't have any side effects and thus people can themselves carry out such tests and monitor their health status.
- Early detection can decrease chances of life threatening complications requiring lengthy and expensive hospitalization.

Importance of Health Screening Services.

1) Accuracy & Reliability : Includes minor tests & are accurate and can be relied upon.
2) Easily Available : Primary Healthcare Tests are available in nearby community centres or even at some Pharmacies.
3) Cost Effective : HS tests don't involve high cost and are affordable.
4) Can be performed anywhere : Can be performed by digital portable devices and at any place.
5) Side Effects : Secondary HS may have own side effects but no SE or AE on the body in Primary HS

RISK FACTORS

- **HYPERTENSION**

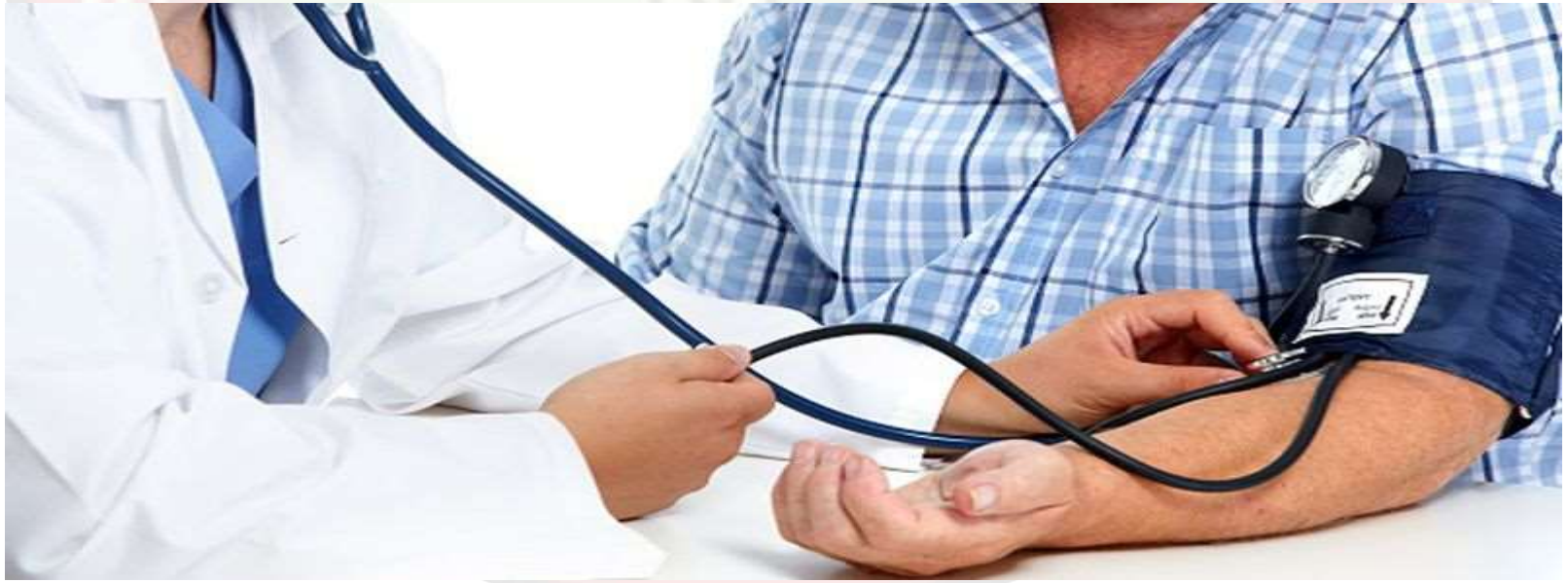
❖ A/NHLBI BP of 140/90 mmHg or higher is considered as high.

❖ 67% people above 65 years have high BP.

❖ Patients between 120/80 mmHg and 139/89 mmHg are pre-hypertensive and are likely to BP in future.

❖ Screening includes Urine analysis, Blood Cell Count, Blood Chemistry (Sodium, potassium, Creatinine, FG, Total Cholesterol & HDL cholesterol) & ECG

- Hypertension is directly responsible for 57% of all stroke related deaths and 24 % of all coronary heart disease deaths in India.
- Potential risk bearers-
  - Older patients (65 yrs +), Over weight, Obese, Males, people with Kidney disease, diabetes, existing Cardiovascular disease etc.



- Routine Monitoring (Pharmacist’s Role)
  - Ask questions about patient’s medical history.
  - Do a physical examination.
  - In case of High BP, patient must be informed to visit doctor who monitors it over 24 hr duration.
  - Doctor may ask the patient to record BP at home to provide additional information and confirm the high BP
  - Doctor may recommend a urine test, including cholesterol test.
  - ECG
  - Echocardiogram

- **DIABETES MELLITUS**

- A series of complex & chronic metabolic disorder characterized by symptomatic glucose intolerance.
- A/WHO, Over 19 % of World Diabetic population resides in India.
- Every 5^{th} person who suffer from Diabetes in the world is Indian.
- By 2030, India will have 79.4 million daibetics.
- More than 50% of the diabetic subjects in India, remain unaware of their diabetic status.

- Screening Includes : Fasting Plasma Glucose Test (FPG), Hemoglobin A1C.
- A1C- Average Blood Sugar in last 2-3 months.
  - Should be tested twice annually for patients with stable glycemic control.
  - Should be tested four times annually for patients who are not meeting treatment goals.

➢ Potential Risk bearer: People with symptoms of *Polyuria*, *Polydipsia* & *Polyphagia, slow healing of wounds, blurred vision, UTIs etc*

Asymtomatic *: Family history of Type 2 DM, Obesity (BMI>30), gestational diabetes, Sedentary life style, Alcoholics, Hyperlipidemia, Age>40.*

- **ANEMIA**

- A/WHO, Haemoglobin level less than ***13g/dL for males*** and less than ***12 g/dL for females.***
- Major Cause : *Inadequate Iron Absorption, Dietary Deficiency, Malabsorption, Increased physiological Demands, loss through bleeding etc.*
- Hypochromic Microcytic Anemia – *due to iron deficiency, sideroblastic, thalassaemia*
- Screening: CBC

- Mormochromic Macrocytic Anemia : *Due to folate deficiency & Vitamin B12 deficiency.*
- Polychromatophillic macrocytic anemia : *Due to Haemolysis.*
- **Signs & Symptoms of Anemia**: *Tiredness, Pallor (pale appearance), Fainting, Exertion (physical or mental effort), Dyspnoea (Shortness of breath), Tachycardia (fast heart rate), Palpitations (racing heart), Worsening angina (chest pain),worsening cardiac failure.*
- ***Iron deficiency Anemia***: *Pale skin & mucus membrane, painless glossitis (inflammation of tongue), angular stomatitis (small cracks at side of mouth), dysphagia (difficulty in swallowing), atrophic gastritis (thinning of stomach lining)*

- **OBESITY**

- Condition where weight gain reaches the point of serious danger to the health.
- Cause--*Excess food intake over energy expenditure*.
- *BMI* used to diagnose obesity.
- BMI is calculated as ratio of body weight(kg) to body height (m^2)
- Men with waist size over 40” and women with waist size over 35” are considered to have excess body fat.
- RISKS : Overweight, hypertension, decrease in Good lipoprotein ,high triglycerides, high blood sugar, heart disease etc

Calculate BMI
(Using Metric Measurements)

height: 152 centimeters = 1.52 meters

square of height: $(1.52 \times 1.52)\ m^2$

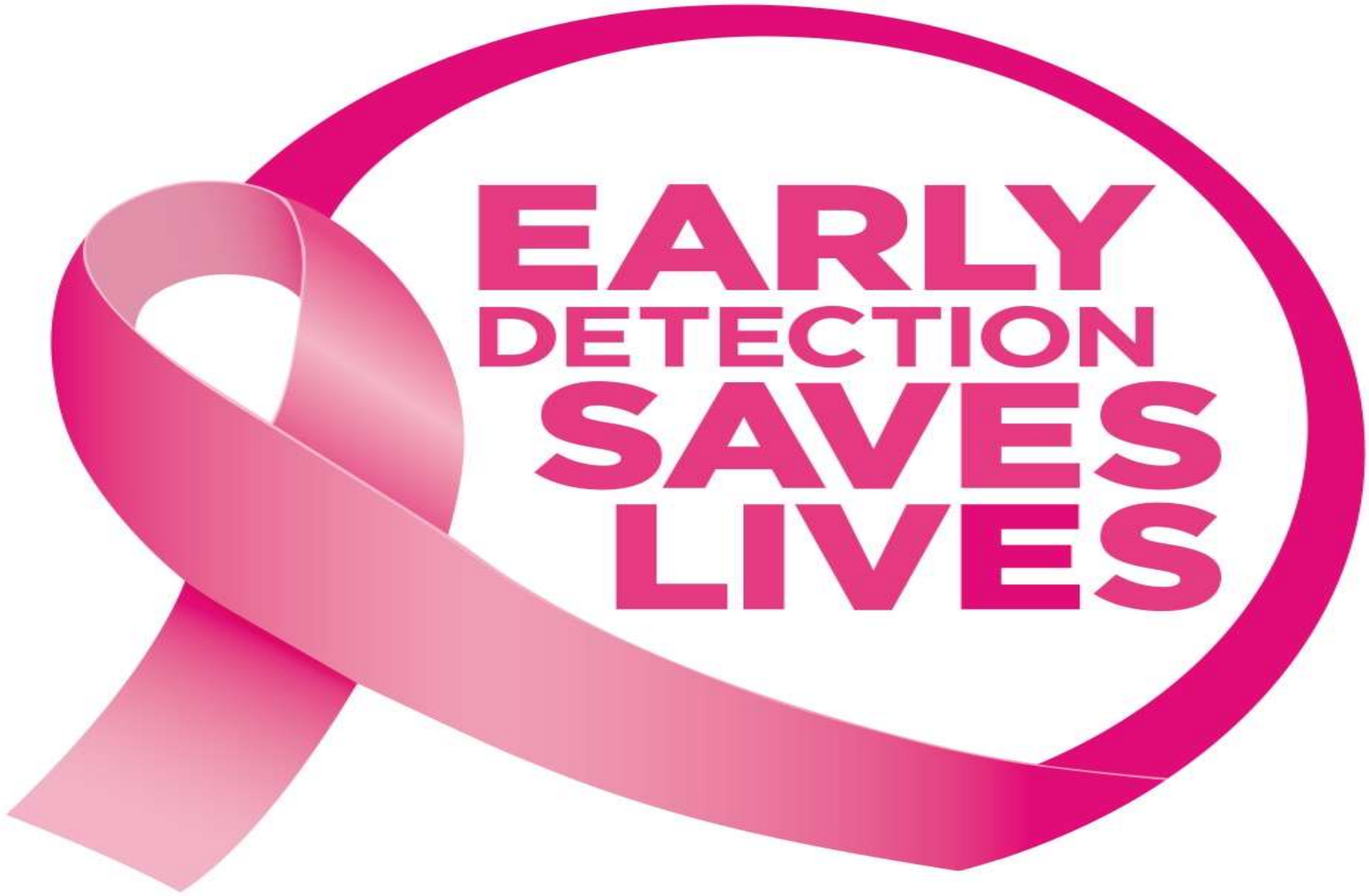
$= 2.31\ m^2$

weight: 60 kilograms

$$BMI = \frac{weight}{height^2} = \frac{60}{2.31} = \boxed{25.96}$$

BMI	Classification
<18.5	Under Weight
18.5 - 24.9	Normal
25 - 29.9	Over Weight
30 - 34.9	Obesity (Class I)
35 - 39.9	Obesity (Class II)
> 40	Extreme Obesity

Early Detection of Diseases



PREVENTION IS BETTER THAN CURE!

- Delay in routine check ups, screening tests, diagnostic tests has the potential to have serious consequences and may lead to diminished quality of life, conditions worsening instead of being managed and even deaths that would have otherwise been preventable.

CANCER

- 5 yr survival rate for women diagnosed with Cervical cancer before it has spread is 92%, compared to 15% diagnosed at later stage.
- 5 yr survival rate for lung cancer before it has spread is 61%, compared to 6% diagnosed at later stage.
- A chest x-ray reveals an abnormality suggesting cancer and further elevation should be arranged promptly.
- Pap Test is used to screen for cervical cancer
- Colonoscopy to screen colon cancer.
- Low dose computed tomography because of higher risk of lung cancer.

Referral of Undiagnosed Cases

MINOR AILMENTS	CASES THAT CAN BE REFFERED
COLD	Ear Ache that is severe, vulnerable patient groups(very young, Very elderly),heart disease, lung disease, asthma, persistent fever & cough, chest pain, shortness of breath that cant be explained.
COUGH	Longer than two weeks and not improving, chest pain, shortness of breath, recurring cough present at night, whooping cough, yellow, green, brown or blood stained sputum/phlegm, offensive and foul smelling sputum/phlegm
EAR WAX	Foreign body in the ear, pain, dizziness, tinnitus, treatment failure.
HEADACHE	Associated with recent head injury, children under 12 yrs, associated with stiff neck, fever or rash, sudden onset & severe pain, suspected ADR, blackouts, visual disturbances, vomiting, recurring headaches.

MINOR AILMENTS	CASES THAT CAN BE REFFERED
SORE THROAT	Dsyphagia (difficulty in swallowing), longer than 7-10 days , hoarseness for more than 3 weeks , sore throat with a skin rash, white spots, pus on the tonsils with high temperature & swollen glands, suspected ADR, failed treatment, breathing difficulties.
CONSTIPATION	Blood in stool, pain in defecation, suspected drug induces constipation, abdominal pain, vomiting or bloating, weight loss, change in bowel habit for more than 2 weeks.
MOUTH ULCER	Lasting longer than 3 weeks, crops of 5-10 or more ulcers, rash, diarrhoea with weight loss
CYSTITIS	Diabetics, Immunocompromised patient, Elderly women, Vaginal Discharge, Pain or tenderness in loin area, longer than 2 days.
PRIMARY DYSMENORRHOEA	Abnormal Vaginal Discharge, Heavy or unexplained bleeding, fever

MINOR AILMENTS	CASES THAT CAN BE REFFERED
DIARRHOEA	Presence of blood mucus in stools, diarrhoea with severe vomiting & fever, signs of dehydration, drowsiness and confusion, passing little urine, longer than 3 days, severe abdominal pain
HAEMORRHOIDS	Blood in stool, with abdominal pain or vomiting, weight loss, longer than 3 weeks
ATHELETE'S FOOT	Not responded to appropriate treatment, Nail Involvement, Spreading to other parts of foot, diabetic, signs of bacterial infection
COLD SORES	Longer than 2 weeks, Lesions inside the mouth, eye is affected, pus, yellow crust, babies & children, painless lesions
WARTS & VERRUCAS	Anogenital warts, Facial warts, Diabetic, change in size or colour, bleeding or itching, OTC treatment that has been unsuccessful following 3 months of treatment.

CONCLUSION

- When an indivisual with minor ailment symptoms contacts their community pharmacists, the pharmacist must ask them a series of question using appropriate symptom checklist.
- If the symptoms are appropriate, pharmacist should refer them for consultation with a doctor.
- After reviewing the patients reports, pharmacist should ask question about symptoms and any current medication.
- Following the counselling, the pharmacist should offer advice on medication and help in selecting OTC products if appropriate and he agrees.
- In India, " We Care India" at Mumbai, "Apollo Pharmacy" (Across India), "Tulsi Pharmacy", "Aswas Community Pharmacy", "MedPlus", "MedLife" are paying attention of healthcare screening.