

PATHOPHYSIOLOGY

IMPORTANT QUESTIONS

UNIT 4

UNIT - 4

① Explain the pathophysiology of Rheumatoid Arthritis.

- Rheumatoid arthritis is a systemic inflammatory disease which affects not only the joints but a wide range of extra articular organs.
- If the disease not treated early then it will leads to progressive joint deformity.

Etiology / Causes

The actual cause of rheumatoid arthritis is unknown, but several risk factors can be responsible as follows :

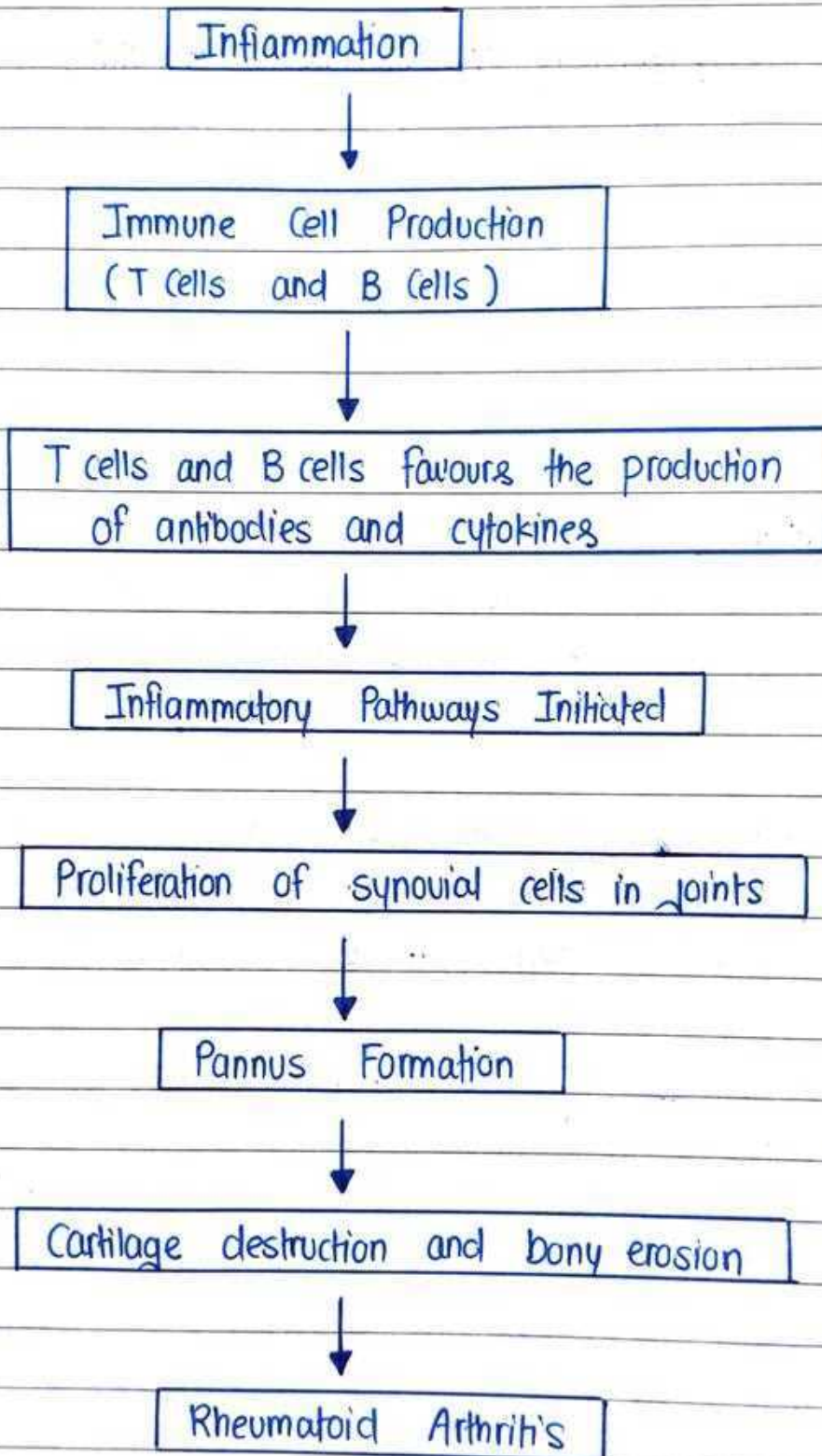
① Genetic Factors

- Genes essential to immune responses such as HLA - A, HLA - B, HLA - D are responsible for rheumatoid arthritis.
- Other genes may be PTPN22, CCR6, STAT4 etc.

② Environmental Factors

- Cigarette Smoking
- Obesity
- Hormonal Imbalance
- Infections.
- Hepatitis B & C
- Mycoplasma

Pathogenesis



Sign & Symptoms

- Fatigue
- Weakness
- Low-grade fever
- Loss of Appetite
- Deformity of joints
- Joint pain
- Joint swelling

Complications

- Osteoporotic fractures
- Extraarticular Manifestations
- Total joint replacements.
- Myocardial Infarction
- Premature Death.

Treatment

- Balanced Diet
- Physical Exercise
- NSAIDs
- Corticosteroids
- Surgical Approach

② Explain Alcoholic Liver Disease

- Alcoholic liver disease is caused by damage to the liver from years of excessive drinking.
- Years of alcohol consumption can also cause the liver to become inflamed and swollen.
- This damage can ultimately lead to Cirrhosis, the final stage of liver disease.

Causes

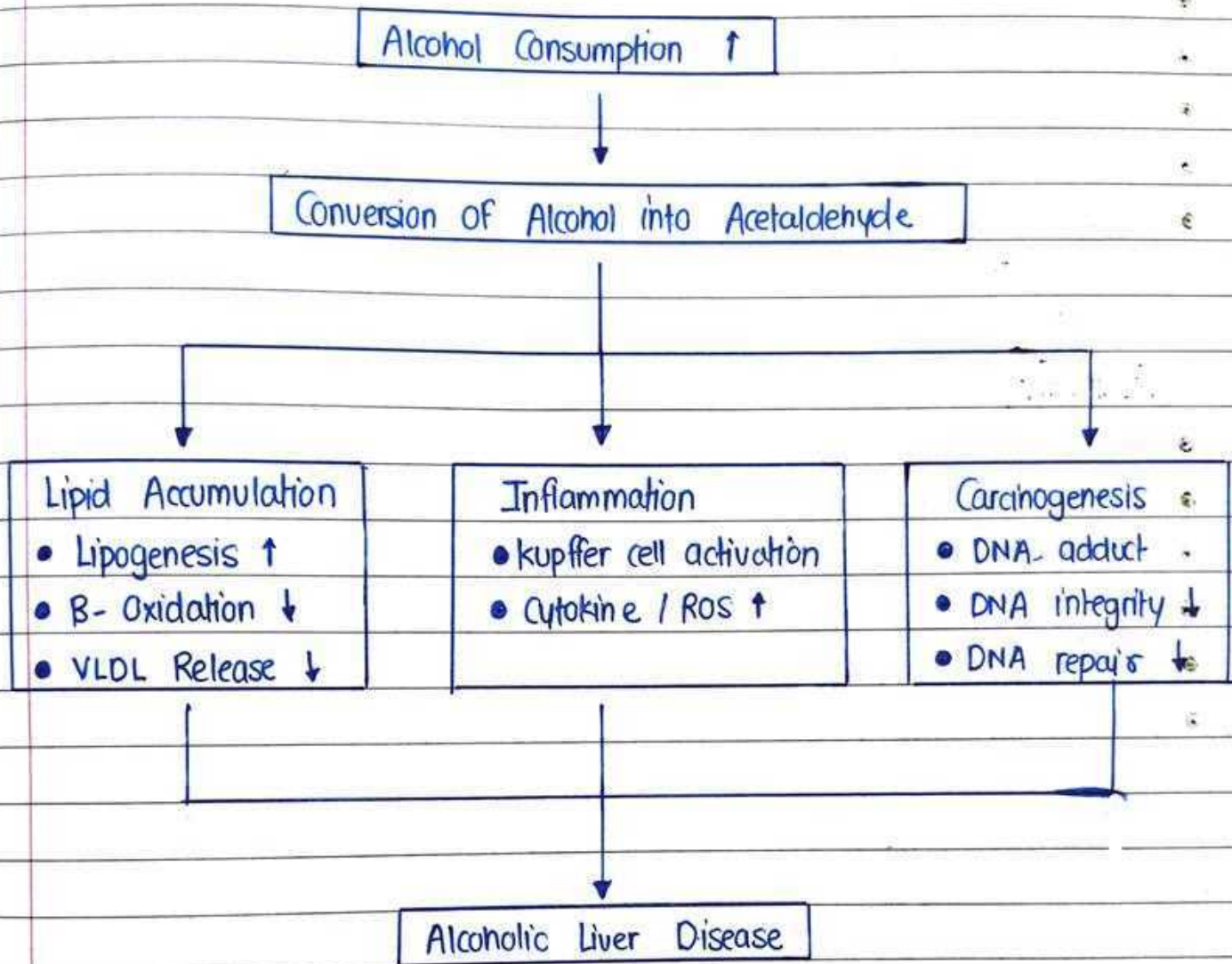
① Major cause is heavy alcohol consumption

- Men: > 40g / day
- Women: > 20g / day

② Other risk factors:

- Women with increased susceptibility
- HCV Infection
- Obesity
- Smoking
- Diabetes

Pathogenesis



Sign & Symptoms

- Abdominal discomfort
- Low-grade fever
- Loss of appetite
- Nausea
- Jaundice
- Confusion
- Fatigue
- Weight Loss

Complications

- Hypertension
- Variceal Bleeding
- Jaundice
- Hepatorenal Syndrome
- Hepatocellular Carcinoma

Treatment

- No Alcohol
- Nutritional Support
- Glucocorticosteroids
- Antioxidants
- Liver transplantation
- Antibiotics

③ Explain the pathophysiology of Cancer

- Cancer is defined as a group of disease that involves an abnormal & uncontrolled cell division in body cells.
- Other terms like Neoplasm and Tumours are also used for cancer however they have slight different meanings.

Neoplasm

- An abnormal mass of tissue that forms when cell grows & divide more than they should be.
- This leads to formation of tumours.

Types

On the basis of nature # tumour can be of two types:

- ① Benign Tumour
- ② Malignant Tumour

Benign Tumour

- It is a non-cancerous.
- It does not spread
- It can be surgically removed

Malignant Tumour

- It is cancerous tumour
- It spreads to other locations of body
- It can not be removed

Classification of Cancer

On the basis of tissue involved, cancer can be of various types:

- ① Carcinomas
- ② Sarcomas
- ③ Leukemias
- ④ Lymphomas

Carcinomas

- It begins in the skin or tissues that covers the surface of internal organs and glands.
- eg. Breast cancer, Lung cancer etc.

Sarcomas

- Sarcoma begins in the tissue that supports & connect the body.
- e.g. Fat, muscles, joints, cartilage etc.

Leukemias

- It is also known as Blood cancer.
- It begins when healthy blood cells change & grow uncontrollably.

Lymphomas

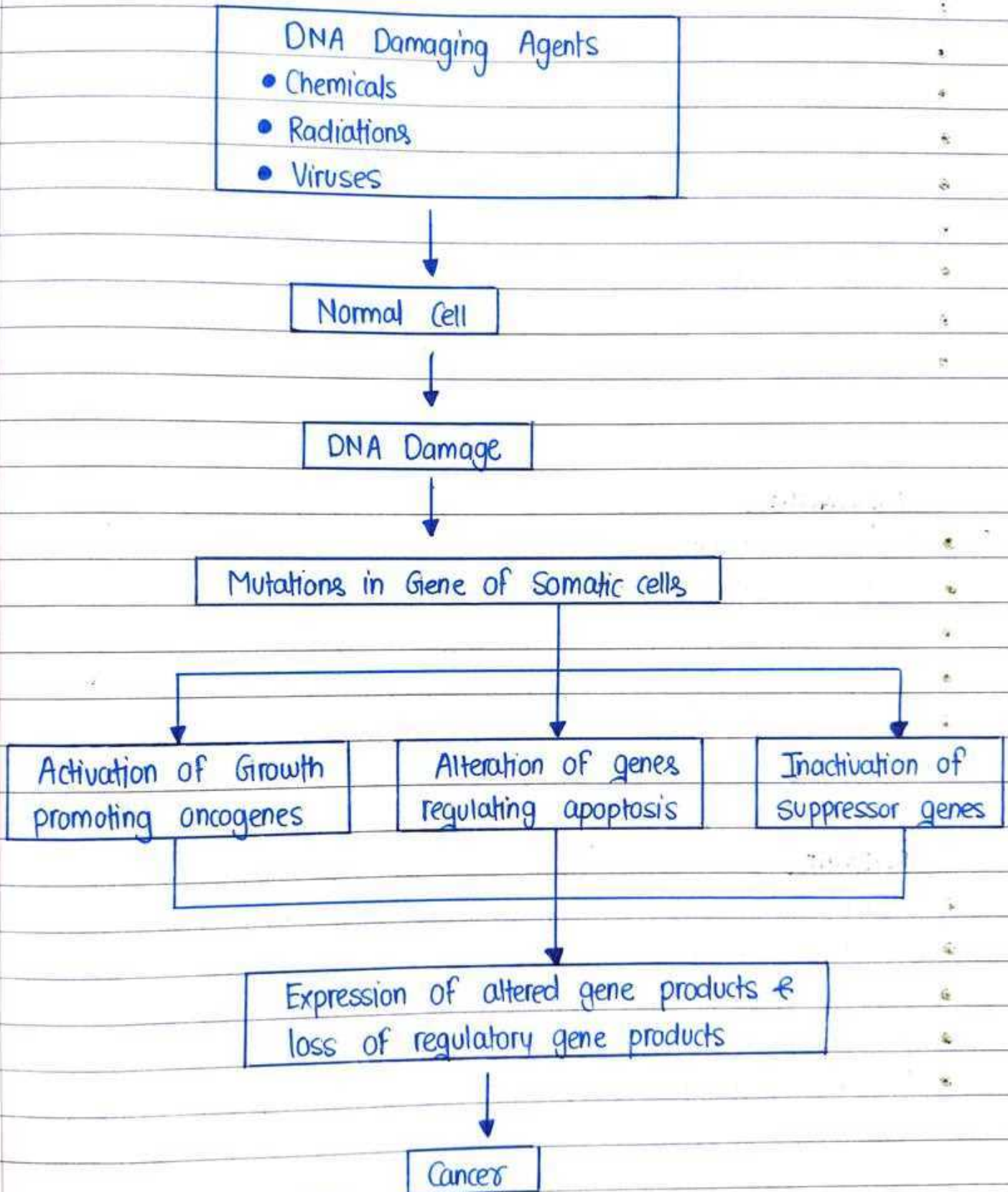
- It begins in the lymphatic system

Causes

The main cause of cancer is change / mutation in DNA, other factors are:

- Radiations
- Smoking
- Alcohol
- Air pollution
- Contamination
- Virus, Bacteria, Parasites
- Diet & Nutrition
- Industrial Carcinogens
- Environmental Carcinogens
- Obesity, Hormones etc.

Pathophysiology of Cancer



Sign & Symptoms

- Fatigue
- Weight Changes
- Skin Changes
- Bowel Changes
- Persistent Cough
- Breathing Trouble
- Unexplained Joint pain
- Night Sweats
- Unexplained Breathing.

Complications

- Hormonal Imbalance
- Breathing Difficulty
- Diarrhoea
- Constipation
- Weight Loss

Treatment

- Surgery
- Radiation Therapy
- Chemotherapy
- Biotherapy
- Hormone Therapy

