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**DEPARTMENT BS MLT 2ND SEMESTER SECTION B**

Q1.What is shock?Explain it with types.

**ANS Shock**

 Is the state of insufficient [blood flow](https://en.m.wikipedia.org/wiki/Blood_flow) to the [tissues](https://en.m.wikipedia.org/wiki/Tissue_(biology)) of the body as a result of problems with the [circulatory system](https://en.m.wikipedia.org/wiki/Circulatory_system). Initial symptoms of shock may include weakness, [fast heart rate](https://en.m.wikipedia.org/wiki/Fast_heart_rate), [fast breathing](https://en.m.wikipedia.org/wiki/Fast_breathing), [sweating](https://en.m.wikipedia.org/wiki/Sweating), anxiety, and increased thirst. This may be followed by confusion, [unconsciousness](https://en.m.wikipedia.org/wiki/Unconsciousness), or [cardiac arrest](https://en.m.wikipedia.org/wiki/Cardiac_arrest), as complications worsen.

**TYPES**

**VOLUME DEPLETION**

**Hypovolemia**, also known as **volume depletion** or **volume contraction**, is a state of decreased intravascular volume This may be due to either a loss of both salt and water or a decrease in blood volume Hypovolemia refers to the loss of extracellular fluid and should not be confused with [dehydration](https://en.m.wikipedia.org/wiki/Dehydration). Dehydration refers to excessive total body water loss that results in cellular [hypertonicity](https://en.m.wikipedia.org/wiki/Hypertonicity" \o "Hypertonicity) (a relatively substantial loss of fluid within individual cells.

**CARDIOGENIC SHOCK**

**Cardiogenic shock** (**CS**) is a medical emergency resulting from inadequate blood flow due to the dysfunction of the ventricles of the heart. Signs of inadequate blood flow include low urine production (<30 mL/hour), cool arms and legs, and altered level of consciousness. People may also have a severely low blood pressure and heart rate.

**OBSTRUCTIVE SHOCK**

**Obstructive shock** is a form of [shock](https://en.m.wikipedia.org/wiki/Shock_(circulatory)) associated with physical obstruction of the [great vessels](https://en.m.wikipedia.org/wiki/Great_vessels) or the [heart](https://en.m.wikipedia.org/wiki/Heart) itself. [Pulmonary embolism](https://en.m.wikipedia.org/wiki/Pulmonary_embolism) and [cardiac tamponade](https://en.m.wikipedia.org/wiki/Cardiac_tamponade) are considered forms of obstructive shock.

Obstructive shock has much in common with [cardiogenic shock](https://en.m.wikipedia.org/wiki/Cardiogenic_shock), and the two are frequently grouped together.

**DISTRIBUTIVE SHOCK**

**Distributive shock** is a [medical](https://en.m.wikipedia.org/wiki/Medicine) condition in which abnormal distribution of [blood flow](https://en.m.wikipedia.org/wiki/Blood_flow) in the [smallest blood vessels](https://en.m.wikipedia.org/wiki/Microvessel) results in inadequate supply of blood to the body's [tissues](https://en.m.wikipedia.org/wiki/Tissue_(biology)) and [organs](https://en.m.wikipedia.org/wiki/Organ_(anatomy)). It is one of four categories of [shock](https://en.m.wikipedia.org/wiki/Shock_(circulatory)), a condition where there is not enough [oxygen](https://en.m.wikipedia.org/wiki/Oxygen)-carrying blood to meet the [metabolic](https://en.m.wikipedia.org/wiki/Metabolism) needs of the [cells](https://en.m.wikipedia.org/wiki/Cell_(biology)) which make up the body's tissues and organs. Distributive shock is different from the other three categories of shock in that it occurs even though the [output of the heart](https://en.m.wikipedia.org/wiki/Cardiac_output) is at or above a normal level The most common cause is [sepsis](https://en.m.wikipedia.org/wiki/Sepsis) leading to type of distributive shock called [septic shock](https://en.m.wikipedia.org/wiki/Septic_shock), a condition that can be fatal.

Q2.What do u know about Granulomatous inflammation?Explain in detail.

**Ans . Granulomatoua Inflammation.**

 is a histologic pattern of tissue reaction which appears following cell injury. Granulomatous inflammation is caused by a variety of conditions including infection, autoimmune, toxic, allergic, drug, and neoplastic conditions. The tissue reaction pattern narrows the pathologic and clinical differential diagnosis and subsequent clinical management. Common reaction patterns include necrotizing [granulomas](https://www.sciencedirect.com/topics/immunology-and-microbiology/granuloma), non necrotizing granulomas, suppurative granulomas, diffuse [granulomatous](https://www.sciencedirect.com/topics/medicine-and-dentistry/granulomatosis) inflammation, and [foreign body giant cell](https://www.sciencedirect.com/topics/immunology-and-microbiology/foreign-body-giant-cell) reaction. Prototypical examples of necrotizing granulomas are seen with mycobacterial infections and non-necrotizing granulomas with [sarcoidosis](https://www.sciencedirect.com/topics/medicine-and-dentistry/sarcoidosis). However, broad differential diagnoses exist within each category. Using a pattern based algorithmic approach, identification of the etiology becomes apparent when taken with clinical context.

The pulmonary system is one of the most commonly affected sites to encounter granulomatous inflammation. Infectious causes of granuloma are most prevalent with [mycobacteria](https://www.sciencedirect.com/topics/medicine-and-dentistry/mycobacterium) and [dimorphic fungi](https://www.sciencedirect.com/topics/medicine-and-dentistry/dimorphic-fungus) leading the differential diagnoses. Unlike the lung, skin can be affected by several routes, including direct inoculation, endogenous sources, and hematogenous spread. This broad basis of involvement introduces a variety of infectious agents, which can present as necrotizing or non-necrotizing granulomatous inflammation. Non-infectious etiologies require a thorough clinicopathologic review to narrow the scope of the [pathogenesis](https://www.sciencedirect.com/topics/medicine-and-dentistry/pathogenesis) which include: [foreign body reaction](https://www.sciencedirect.com/topics/medicine-and-dentistry/foreign-body-reaction), autoimmune, neoplastic, and drug related etiologies. Granulomatous inflammation of the kidney, often referred to as granulomatous [interstitial nephritis](https://www.sciencedirect.com/topics/medicine-and-dentistry/interstitial-nephritis) (GIN) is unlike organ systems such as the skin or lungs. The differential diagnosis of GIN is more frequently due to drugs and sarcoidosis as compared to [infections (fungal](https://www.sciencedirect.com/topics/medicine-and-dentistry/mycosis) and mycobacterial).

Herein we discuss the pathogenesis and histologic patterns seen in a variety of organ systems and clinical conditions.

Q3.What are the effects of use of tobacco on health?

**ANS.** Smoking leads to disease and disability and harms nearly every organ of the body.  
More than 16 million Americans are living with a disease caused by smoking. For every person who dies because of smoking, at least 30 people live with a serious smoking-related illness. Smoking causes cancer, heart disease, stroke, lung diseases, diabetes, and chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis. Smoking also increases risk for tuberculosis, certain eye diseases, and problems of the immune system, including rheumatoid arthritis.

Secondhand smoke exposure contributes to approximately 41,000 deaths among nonsmoking adults and 400 deaths in infants each year. Secondhand smoke causes stroke, lung cancer, and coronary heart disease in adults. Children who are exposed to secondhand smoke are at increased risk for sudden infant death syndrome, acute respiratory infections, middle ear disease, more severe asthma, respiratory symptoms, and slowed lung growth.

Q4.What do u know about Malignant tumor?How to diagnose and what is its treatment?

**ANS. Malignant tumors are cancerous**

They develop when cells grow uncontrollably. If the cells continue to grow and spread, the disease **can** become life threatening. **Malignant tumors can** grow quickly and spread to other parts of the body in a process called metastasis.

**Malignant Diagnose**

When the cells are abnormal and can grow uncontrollably, they are **cancerous** cells, and the **tumor** is **malignant**. To determine whether a **tumor** is benign or **cancerous**, a doctor can take a sample of the cells with a **biopsy** procedure.

**Malignant Treatment**

**Types of Cancer Treatment**

* Surgery. When used to treat cancer, surgery is a procedure in which a surgeon removes cancer from your body. ...
* Radiation Therapy. ...
* **Chemotherapy**. ...
* Immunotherapy to Treat Cancer. ...
* Targeted Therapy. ...
* Hormone Therapy. ...
* Stem Cell Transplant. ...
* Precision Medicine.

Q5.Write a detail note about haemorrhage.

Bleeding, also called hemorrhage, is the name used to describe blood loss. It can refer to blood loss inside the body, called [internal bleeding](https://www.healthline.com/health/internal-bleeding), or to blood loss outside of the body, called external bleeding.

Blood loss can occur in almost any area of the body. Internal bleeding occurs when blood leaks out through a damaged blood vessel or organ. External bleeding happens when blood exits through a break in the skin.

Blood loss from bleeding tissue can also be apparent when blood exits through a natural opening in the body, such as the:

* [mouth](https://www.healthline.com/health/bleeding-gums)
* [vagina](https://www.healthline.com/health/vaginal-bleeding-between-periods)
* [rectum](https://www.healthline.com/health/rectal-bleeding)
* [nose](https://www.healthline.com/health/nosebleed)

**Common Causes**

Bleeding is a common symptom. A variety of incidents or conditions can cause bleeding. Possible causes include

### Traumatic bleeding

An injury can cause traumatic bleeding. Traumatic injuries vary in their severity.

Common types of traumatic injury include:

* [abrasions](https://www.healthline.com/health/abrasion) (scrapes) that don’t penetrate too far below the skin
* hematoma or [bruises](https://www.healthline.com/health/bruise)
* lacerations ([cuts](https://www.healthline.com/health/cuts-scratches))
* puncture wounds from items like needles, nails, or knives
* crushing injuries
* gunshot wounds

**Medical Coditions**

There are also some medical conditions that can cause bleeding. Bleeding due to a medical condition is less common than traumatic bleeding.

Conditions that can cause bleeding include:

* [hemophilia](https://www.healthline.com/health/hemophilia)
* [leukemia](https://www.healthline.com/health/leukemia)
* [liver disease](https://www.healthline.com/health/liver-diseases)
* [menorrhagia](https://www.healthline.com/health/menstrual-problems), heavy or prolonged menstrual bleeding, like what’s sometimes seen in [endometriosis](https://www.healthline.com/health/endometriosis)
* [thrombocytopenia](https://www.healthline.com/health/thrombocytopenia), low blood platelet count
* [von Willebrand disease](https://www.healthline.com/health/von-willebrand-disease)
* [vitamin K deficiency](https://www.healthline.com/health/vitamin-k-deficiency)
* brain trauma
* [colon diverticulosis](https://www.healthline.com/health/diverticulitis)
* [lung cancer](https://www.healthline.com/health/lung-cancer)
* [acute bronchitis](https://www.healthline.com/health/bronchitis)

**Medicines**

Some medicines and certain treatments can increase your chances of bleeding, or even cause bleeding. Your doctor will warn you about this when they first prescribe the therapy. And they’ll tell you what to do if bleeding occurs.

Medications that may be responsible for bleeding include:

* [blood thinners](https://www.healthline.com/health/heart-disease/blood-thinners)
* [antibiotics](https://www.healthline.com/health/infection/antibiotic-side-effects), when used on a long-term basis
* [radiation therapy](https://www.healthline.com/health/radiation-therapy)
* [aspirin](https://www.healthline.com/health/pain-relief/is-aspirin-nsaid) and other [NSAIDs](https://www.healthline.com/health/side-effects-from-nsaids)

**When is bleeding a sign of an emergency?**

If bleeding is severe, seek help immediately. You should seek emergency help if you suspect internal bleeding. This can become life-threatening.

People who have bleeding disorders or take blood thinners should also seek emergency help to stop bleeding.

Seek medical help if:

* the person has gone into [shock](https://www.healthline.com/health/shock) or has a [fever](https://www.healthline.com/health/fever-symptoms)
* the bleeding cannot be controlled using pressure
* the wound requires a tourniquet
* the bleeding was caused by a serious injury
* the wound may need [stitches](https://www.healthline.com/health/when-to-get-stitches) to stop bleeding
* foreign objects are stuck inside the wound
* the wound appears to be [infected](https://www.healthline.com/health/infected-cut), such as swelling or leaking a whitish-yellow or brown [pus](https://www.healthline.com/health/pus), or has redness
* the injury occurred due to a bite from an [animal](https://www.healthline.com/health/animal-bites) or [human](https://www.healthline.com/health/human-bites)

When you call for help, emergency services will tell you what to do and when they’ll arrive.

In most cases, emergency services will tell you to continue to put pressure on the wound and keep reassuring the person who’s bleeding. You may also be told to lay the person down to reduce their risk of fainting.