NR283 PATHO EDAPT WK2

INFLAMMATION

What are the signs of acute inflammation?

- PAIN
- HEAT
- REDNESS
- SWELLING

(**PRISH**: **P**ain, **R**edness, **I**mmobility, **S**welling, **H**eat)

Which immune chemical mediators contribute to the swelling associated with acute inflammation?

- Histamine
- Leukotrienes
- Prostaglandins
- Kinins

Which item causes chronic inflammation?
A: Foreign material that remains in the body

Characteristics of Acute Versus Chronic Inflammation

	Acute Inflammation	Chronic Inflammation
Cause	Pathogens Allergies Injury	Persistent acute inflammation Persistent foreign body Autoimmune reaction
Onset/Duration	Immediate/Several days	Delayed/Up to months or years
Primary Chemical Mediators	Complement system Kinins Leukotrienes Interferon-gamma	Cytokinin's
Primary Immune Cells	Infection: neutrophils, monocytes, macrophages Allergy: eosinophils, mast cells	Monocytes Macrophages Lymphocytes Fibroblasts
Lesion	Rash Pus Abscess	Rash Fibrosis Granuloma
Outcomes	Resolution Abscess formation Chronic inflammation	Tissue destruction Fibrosis
Examples	Abscess (skin, organ) Allergic reaction (anaphylaxis)	Autoimmune disorders (rheumatoid arthritis) Cystic fibrosis

Healing by _____intention occurs when a wound is clean, free of foreign material, and the edges are held close together.

A: Primary

A client is seen in the emergency clinic after jumping off a ski lift and injuring their ankle. Which steps can the client take to reduce inflammation and pain? Select all that apply.

- Wrap the ankle
- Rest the affected area
- Apply an ice pack
- Elevate the injured site

R-I-C-E is the correct option.

- **Rest** the affected area, which will protect the area from additional injury.
- **Ice** the ankle to reduce inflammation that is causing swelling or pain. Applying heat will not reduce inflammation and swelling.
- **Compression** by wrapping the ankle can reduce the swelling.
- **Elevate** the ankle to reduce swelling.

Which factor can delay tissue healing from inflammation and injury?
A: Advanced age

Can delay tissue healing from inflammation and injury due to reduced mitosis.

Scar tissue is _____and tends to _____over time, which can result in _____

- Nonelastic
- Shrink
- Complications

A 72-year-old is recovering two days after having knee replacement surgery. The incision is going through which type of healing?

A: Primary intention

A client who has been experiencing stomach pains for the past three months visits the healthcare provider to receive the results of their diagnostic test. The client is informed the test revealed an ulcer with fibrosis, fibroblasts, and macrophages

present. The client's treatment plan should address the _____inflammation pathologic process.

A: Chronic

On post-op day one following abdominal surgery, a client is experiencing pain, heat, and redness at the incision. Based on these findings, what conclusion can be made about the incision?

A: This is a normal inflammatory response.

Which characteristics below are expected during an acute or chronic inflammatory episode?

	Acute Inflammation	Chronic Inflammation
The immediate response to tissue injury, which lasts from minutes to days.	X	
The repeated destruction and repair of tissue for weeks to years after the initial injury.		X
Used to describe diseases characterized by long duration and slow progression.		X
Used to describe diseases characterized by sudden onset with a short, relatively severe	X	

course.		

Acute inflammation is the immediate response to tissue injury, which lasts from minutes to days, and is used to describe diseases characterized by a sudden onset with a short, relatively severe course.

Chronic inflammation is the repeated destruction and repair of tissue for weeks to years after the initial injury and is used to describe diseases characterized by long duration and slow progression.

A client is seen in the clinic with a wrist injury. Which findings indicate clinical manifestations of systemic inflammation?

- Client states, "I'm tired all the time and have no energy."
- Client's white blood cell count is elevated.
- Client's temperature is 101.8F (38.8C).

The nurse reviews the client's complete blood count (CBC) results and notes that the neutrophil levels are elevated, but the monocytes are still within normal limits. This indicates what type of inflammatory response?

A: Acute inflammatory response

A college student comes to the health clinic with a complaint of red, painful, and itchy feet. During assessment of the health history, the client tells the nurse that they live in a dorm and share a bathroom with other students. What teaching should the nurse provide to this client?

A: "Avoid sharing personal items and wear non-skid shoes in the bathroom."

A client with inflammation generally presents with one or more of the classic signs. Identify the classic signs that are clinical manifestations of inflammation.

- Swelling
- Pain

- Redness
- Loss of function
- Warmth

IMMUNITY

Which immune cells are activated first when suspicious cells are identified in the blood stream?

A: B cells
lymphocytes from human bone marrow, support humoral immunity to identify cells that are non-self and are activated when they come into contact with non-self-substances. The B cells are responsible for alerting the rest of the body to the presence of a foreign invader.

Match each element of the immune system to the correct description of its action in the body.

Antigens	Activate the immune system to produce specific antibodies produced by the B lymphocytes
Antibodies	Binds to the specific matching antigen to destroy it
Macrophage	Cells critical to the initiation of the immune response
Complement system	Initiate an inflammatory response
Lymphocytes	Primary cells in the immune

	response that recognize and react with antigens in the body
Chemical mediators	Signal a cellular response or cause cellular damage

Indicate whether the process is active or passive.

Naturally Acquired

Antigens enter the body naturally; body induces anti- bodies and specialized lymphocytes	**ACTIVE**
Antibodies pass from mother to fetus through the placenta or to infants from mother's milk	**PASSIVE**

Artificially acquired

Antigens are introduced in vaccines; the body produces antibodies and specialized lymphocytes	**ACTIVE**
Performed antibodies in immune serum are introduced by injection	**PASSIVE**

Examples of nonspecific defenses are the _____and antibacterial _____. These natural barriers prevent external substances, like bacteria, viruses, chemicals, and air pollution from entering our bodies.

- Skin
- Mucous membranes

Which reason supports a healthcare provider ordering antibody testing in a client?

- A diagnosis of hepatitis B
- Tissue matching prior to organ transplant
- To identify the number of lymphocytes
- Determine Rh incompatibility
- An individual with German measles

A _____immune response occurs when an individual is exposed to an antigen for the first time, and it generally can take up to two _____to develop antibodies.

- Primary
- Weeks

Drag and drop each type of immunity to its description.

Passive Immunity	Short-term immunity produced by the transfer of antibodies from one person to another; an infant receives antibodies from the mother before birth.
Natural Immunity	Species-specific; humans are not susceptible to many diseases common to other animals.
Innate Immunity	Gene-specific and related to ethnicity; often associated with a population's tendency to have an increased incidence of disease.