



Sepsis Train the Trainer: Sepsis & Its Effects On The Body

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Who is at Risk

Anyone can get an infection, and any infection can lead to sepsis. However, there are some people more at risk than others.

- Chronic medical conditions like HIV, diabetes, lung disease, kidney disease
- Older Adults aged 65+
- Immunosenescence
- People with cognitive impairment
- People with weakened immune systems
- People with cancer
- Sepsis survivors
- Hospitalized patients

≡ Most Common infections leading to Sepsis

- Pneumonia
- Urinary Tract Infections
- Gastrointestinal Infections
- Skin and Soft Tissue Infections

≡ Most Common Organisms Causing Sepsis

- Staphylococcus
- E. Coli
- Streptococcus

≡ Without prompt treatment sepsis can lead to:



≡ **Being a survivor of Sepsis is a Risk Factor for Sepsis**

- Physical and psychological effects on sepsis survivors can leave a devastating impact on quality of life after sepsis;
- Effects can include cognitive and functional impairments; increased risk of hospital readmission; increased risk of mortality
- More than 50% of survivors of sepsis experience these effects
- Sepsis survivors have residual immunosuppression in sepsis survivors
- This contributes to risk of reinfection, not only of sepsis, but of other recurrent infections

≡ What is sepsis?

“Life-threatening organ dysfunction caused by a dysregulated host response to infection.”

- Sepsis is the body’s extreme reaction to an infection. It happens when a current infection triggers a chain reaction throughout your body that can have deadly results (cytokine storm)
- Sepsis starts with infection.
- If this infection is not recognized and treated promptly it can lead to sepsis
- Sepsis is a medical emergency and is life threatening
- Without timely treatment sepsis can lead to organ failure and death
- This is often referred to as Septic Shock.

≡ **How does the Immune System react during Sepsis?**

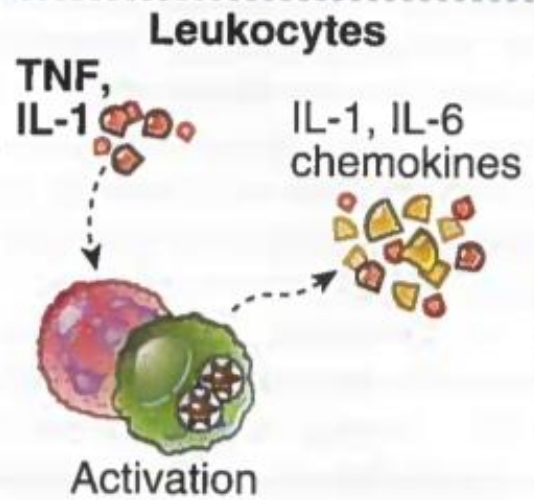
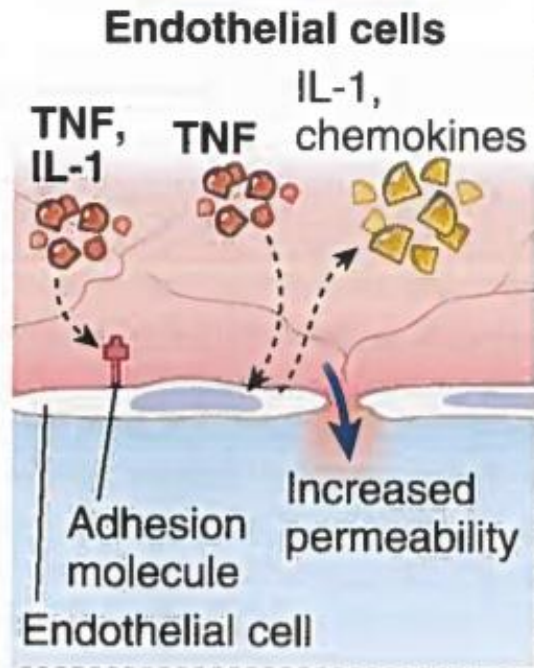
- The immune system mobilizes infection fighting cells.
- Some are local in the tissue that is injured or at the site of infection.
- Some travel there through the blood
- Those that travel leave the blood vessels to get to the infection site.

≡ **How does the Immune System react during Sepsis?**

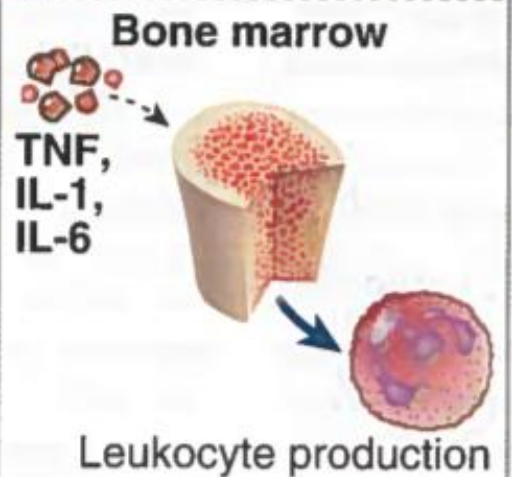
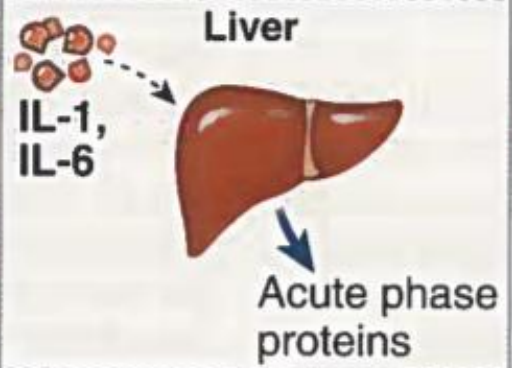
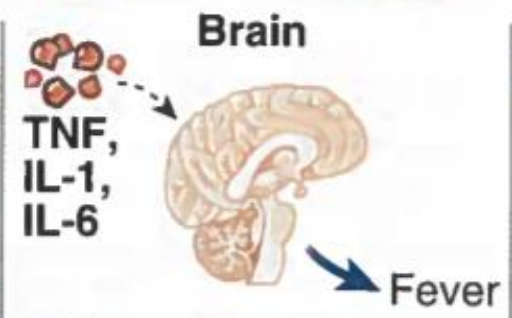
- There can be local tissue damage that occurs as the infection is being fought.
- Blood vessels typically dilate and can later form small clots.
- These clots are the body's attempt to wall off the infection and keep it from spreading.



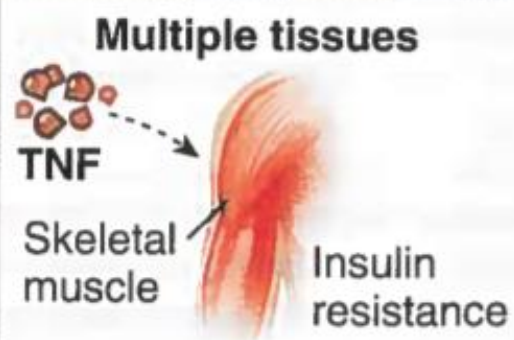
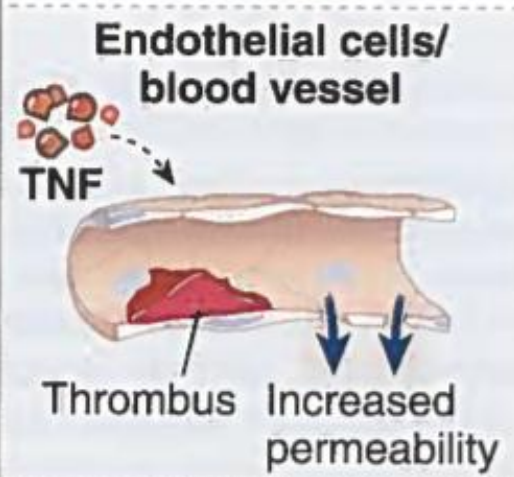
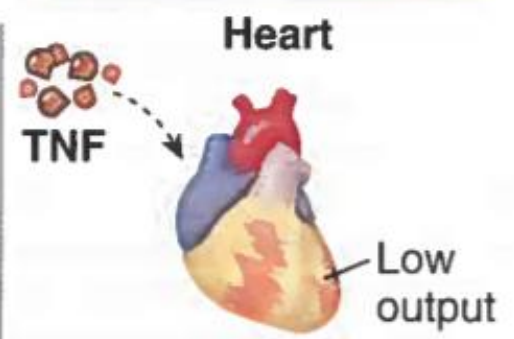
Local inflammation

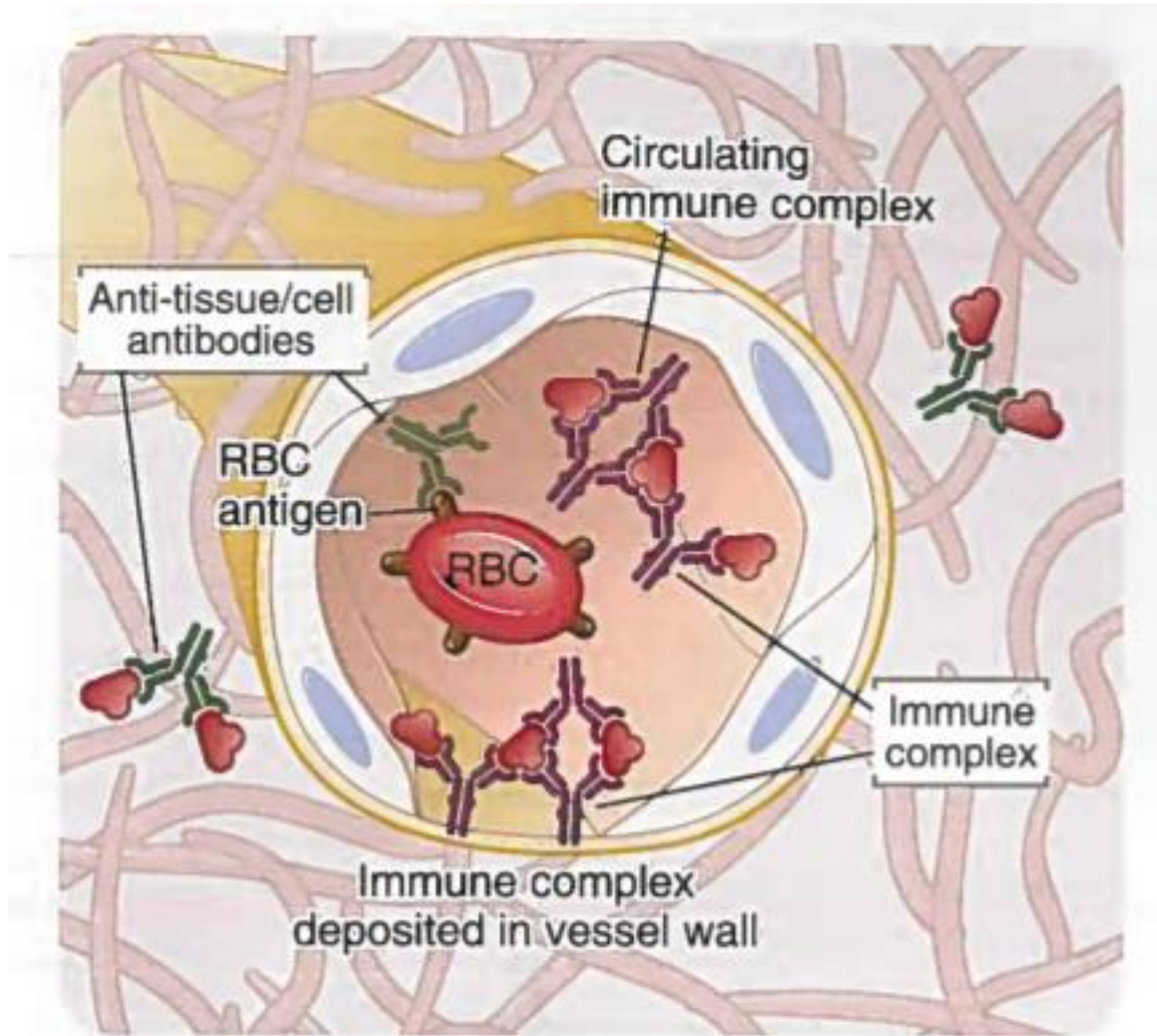


Systemic protective effects



Systemic pathologic effects





COVID-19 CAN CAUSE SEPSIS

“Septic shock is a subset of sepsis when circulatory and cellular dysfunction is associated with a higher risk of mortality.”

Although pneumonia is the most common organ system affected by Covid-19, almost every organ system can be affected.

“Signs of multi organ injury typical of sepsis occur in approximately 2 to 5% of those with Covid-19

If sepsis results from Covid-19 infection it typically occurs 8 to 10 days after onset of symptoms

Early recognition of sepsis symptoms is important in recognizing this in people infected with Covid-19