

Microlearning Topics

SIRS vs Sepsis—What's the Difference and Why It Matters?

Key Definitions

SIRS (Systemic Inflammatory Response Syndrome):

A non-specific inflammatory response to an insult (infection, trauma, pancreatitis, etc.).

SIRS Criteria (Need ≥ 2):

- Temp $>38.3^{\circ}\text{C}$ (100.4°F) or $<36^{\circ}\text{C}$ (96.8°F)
- HR >90 bpm
- RR >20 or PaCO₂ <32 mmHg
- WBC $>12,000$ or $<4,000$ or $>10\%$ bands

✓ REMEMBER...SIRS is a sign — not a diagnosis.

Sepsis:

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

Sepsis = SIRS + Infection + Organ Dysfunction

Organ Dysfunction Indicators:

- SBP <90 , MAP <65 , or drop in SBP >40
- Creatinine >2
- Lactate >2
- Platelets $<100,000$
- INR >1.5 or aPTT >60 sec
- Bilirubin >2
- Resp failure as defined as need for invasive/non-invasive ventilation (e.g. intubation/bipap)

Criteria	What It Means
SIRS + Infection	Suspicion of Sepsis
SIRS + Infection + Organ Dysfunction	Sepsis (meets CMS definition)
Sepsis + Persistent Hypotension + Lactate ≥ 2	Septic Shock

Why It Matters

- SIRS \neq Sepsis unless organ dysfunction is present
- CMS SEP-1 bundle timing starts at Time Zero — when sepsis criteria are met
- Misidentifying SIRS as sepsis can lead to overuse of resources

✳ Missing sepsis can delay life-saving interventions

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Pro Tips

- Use SIRS to screen — not diagnose
- Look for new organ dysfunction, not just vital sign changes
- Use lactate and creatinine as early indicators