

## Systemic Inflammatory Response Syndrome (SIRS) Criteria

Systemic Inflammatory Response Syndrome (SIRS) is an inflammatory state affecting the whole body, which is a subset of cytokine storm. It is the body's response to an infectious or non-infectious insult, and there are specific diagnostic criteria to be met.



PLAY PICMONIC

**Must have 2 or more of the following:**

**Temperature  $< 36^{\circ}\text{C}$  or  $> 38^{\circ}\text{C}$**

**Thermometer with Less Than Cold 36 and Greater Than Hot 38**

Patients must display either a temperature below  $36^{\circ}\text{C}$  or above  $38^{\circ}\text{C}$ .

**Pulse  $> 90$  beats per minute**

**Heart-timer Greater Than 90**

Though it is not classified as tachycardia, patients with a heart rate greater than 90 beats per minutes (bpm) fit this part of the SIRS criteria.

**Respirations  $> 20/\text{min}$  or  $\text{PCO}_2 < 32$**

**Lung-respirations Greater Than 20 or Partial-pressure-gauge blowing  $\text{CO}_2$  Less Than 32**

Patients must be either tachypneic, with a respiratory rate greater than 20, or must have an arterial partial pressure of carbon dioxide less than 32.

**WBC  $< 4,000$  or  $> 12,000$  or 10% bands**

**White-mac-man Less Than (4) Fork-thousand or Greater Than (12) Carton-thousand or (10) Tin Band of young WBC**

Another manifestation of SIRS is that patients have leukocytes below 4,000 cells/ $\text{mm}^3$  or above 12,000 cells/ $\text{mm}^3$  or greater than 10% bands (immature neutrophils), which is called left shift.

### Mechanism

**Subset of Cytokine Storm and Related to Sepsis**

**Side-toe-kite in Storm and Sepsis-snake**

SIRS is a subset of cytokine storm, where there is abnormal regulation of various cytokines. Furthermore, it is related to sepsis, an illness which fulfills the SIRS criteria, and is related to infection.