

# Suspected Sepsis

## History

- Duration and severity of fever
- Past medical history
- Medications / Recent antibiotics
- Immunocompromised (transplant, HIV, diabetes, cancer)
- Indwelling medical device
- Last acetaminophen or ibuprofen
- Recent Hospital / healthcare facility
- Bedridden or immobile
- Elderly and very young – at risk
- Prosthetic device / indwelling device

## Signs and Symptoms

- Warm
- Flushed
- Sweaty
- Chills / Rigors
- Delayed cap refill
- Mental status changes

### Associated Symptoms (Helpful to localize source)

- myalgias, cough, chest pain, headache, dysuria, abdominal pain, rash

## Differential

- Infections: UTI, Pneumonia, skin/ wound
- Cancer / Tumors / Lymphomas
- Medication or drug reaction
- Connective tissue disease: Arthritis, Vasculitis
- Hyperthyroidism
- Heat Stroke
- Meningitis
- Hypoglycemia/hypothermia
- MI / CVA

Consider: Contact, Droplet, and Airborne Precautions	
Temperature Measurement Procedure <i>if available</i>	
	Fever / Infection Control Protocol UP 10 <i>if needed</i>
	Altered Mental Status Protocol UP 4 <i>if needed</i>
<b>B</b>	12 Lead ECG Procedure
<b>A</b>	IV / IO Procedure <i>if indicated</i>
<b>P</b>	Cardiac Monitor

Exit to  
Age Appropriate  
Condition Appropriate  
Protocol(s)

**Sepsis Screen Positive**

**SEPSIS ALERT**  
Notify Receiving Facility  
Immediately

**MAP**  
(Mean Arterial Pressure)

**SBP + 2(DBP)**  
**3**

Monitor usually calculates this value on screen

**Adult SIRS Criteria**  
Temperature  
≥ 100.4° F (38° C)  
Or  
≤ 96.8° F (36° C)  
**AND**  
Any 1 of the following:  
HR > 90  
RR > 20  
EtCO < 25 mmHg

**Adult qSOFA Criteria**  
SBP ≤ 100 mmHG  
RR ≥ 22  
AMS or new mental status change

**Pediatrics SIRS Criteria**  
Temperature  
Same as adult

**AND**  
Heart Rate  
1 month – 1 year > 180  
2 – 5 years > 140  
6 – 12 years > 130  
13 – 18 years > 120

**A**

Venous Access Blood Draw  
*if applicable*

**Normal Saline 500 mL Bolus**  
Repeat as needed  
Titrate SPB ≥ 90 mmHg  
MAP > 65 mmHg  
**Maximum 2 L**

**Peds: 20 mL/kg IV / IO**  
Repeat to titrate  
Age Appropriate  
SBP ≥ 70 + 2 x Age  
**Maximum 60 mL/kg**

**P**

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Age Appropriate  
Hypotension / Shock  
Protocol AM 5 / PM 3

**Notify Destination or Contact Medical Control**

Universal Protocol Section

# Suspected Sepsis

## • Pearls

- **Recommended Exam: Mental Status, Skin, HEENT, Neck, Heart, Lungs, Abdomen, Back, Extremities, Neuro**
- **Recommended Exam Pediatrics: In childhood, physical assessment reveals important clues for sepsis. Look for mental status abnormalities such as anxiety, restlessness, agitation, irritability, confusion, or lethargy. Cardiovascular findings to look for include cool extremities, capillary refill >3 seconds, or mottled skin.**
- **Sepsis is a life threatening condition where the body's immune response to infection injures its own tissues and organs.**
- **Severe sepsis is a suspected infection and 2 or more SIRS criteria (or qSOFA) with organ dysfunction such as AMS or hypotension.**
- **Septic shock is severe sepsis and poor perfusion unimproved after fluid bolus.**
- **Agencies administering antibiotics should inquire about drug allergies specific to antibiotics or family of antibiotics.**
- **Following each fluid bolus, assess for pulmonary edema. Consider administration of agency specific vasopressor.**
- **Supplemental oxygen should be given and titrated to oxygenation saturation  $\geq 94\%$ .**
- **EKG should be obtained with suspected sepsis, but should not delay care in order to obtain.**
- **Abnormally low temperatures increase mortality and found often in geriatric patients.**
- Quantitative waveform capnography can be a reliable surrogate for lactate monitoring in detecting metabolic distress in sepsis patients. EtCO<sub>2</sub> < 25 mm Hg are associated with serum lactate levels > 4 mmol/L.
- Patients with a history of liver failure should not receive acetaminophen.
- **Droplet precautions:**
  - Include standard PPE plus a standard surgical mask for providers who accompany patients in the back of the ambulance and a surgical mask or NRB O2 mask for the patient.
  - This level of precaution should be utilized when influenza, meningitis, mumps, streptococcal pharyngitis, and other illnesses spread via large particle droplets are suspected.
  - A patient with a potentially infectious rash should be treated with droplet precautions.
- **Airborne precautions:**
  - Include standard PPE plus utilization of a gown, change of gloves after every patient contact, and strict hand washing precautions.
  - This level of precaution is utilized when multi-drug resistant organisms (e.g. MRSA), scabies, or zoster (shingles), or other illnesses spread by contact are suspected.
- **All-hazards precautions:**
  - Include standard PPE plus airborne precautions plus contact precautions.
  - This level of precaution is utilized during the initial phases of an outbreak when the etiology of the infection is unknown or when the causative agent is found to be highly contagious (e.g. SARS).
- All patients should have drug allergies documented prior to administering pain medications.
- Allergies to NSAIDs (non-steroidal anti-inflammatory medications) are a contraindication to Ibuprofen.
- Agency Medical Director may require contact of medical control prior to EMT / MR administering any medication.
- **Sepsis Screen:**
  - Agencies may use Adult / Pediatric Systemic Inflammatory Response Syndrome (SIRS) criteria or quickSOFA (qSOFA) criteria.
  - Receiving facility should be involved in determining Sepsis Screen utilized by EMS.