

# Surviving Sepsis Campaign®

## SURVIVING SEPSIS CAMPAIGN: GUIDELINES ON THE MANAGEMENT OF CRITICALLY ILL ADULTS WITH CORONAVIRUS DISEASE 2019 (COVID-19)

### HEMODYNAMICS RECOMMENDATIONS TABLE

#### FLUID THERAPY

RECOMMENDATION #8	STRENGTH & QUALITY OF EVIDENCE
In adults with <b>COVID-19 and shock</b> , we <b>suggest</b> using dynamic parameters skin temperature, capillary refilling time, and/or serum lactate measurement over static parameters in order to assess fluid responsiveness.	<ul style="list-style-type: none"><li>• Weak</li><li>• Low-Quality of Evidence</li></ul>
RECOMMENDATION #9	STRENGTH & QUALITY OF EVIDENCE
For the <b>acute resuscitation</b> of adults with <b>COVID-19 and shock</b> , we <b>suggest</b> using a conservative over a liberal fluid strategy.	<ul style="list-style-type: none"><li>• Weak</li><li>• Very Low-Quality of Evidence</li></ul>
RECOMMENDATION #10	STRENGTH & QUALITY OF EVIDENCE
For the <b>acute resuscitation</b> of adults with <b>COVID-19 and shock</b> , we <b>recommend</b> using crystalloids over colloids.	<ul style="list-style-type: none"><li>• Strong</li><li>• Moderate-Quality of Evidence</li></ul>

RECOMMENDATION #11	STRENGTH & QUALITY OF EVIDENCE
For the <b>acute resuscitation</b> of adults with <b>COVID-19 and shock</b> , we <b>suggest</b> using buffered/ balanced crystalloids over unbalanced crystalloids.	<ul style="list-style-type: none"> <li>• Weak</li> <li>• Moderate-Quality of Evidence</li> </ul>
RECOMMENDATION #12	STRENGTH & QUALITY OF EVIDENCE
For the <b>acute resuscitation</b> of adults with <b>COVID-19 and shock</b> , we <b>recommend</b> against using hydroxyethyl starches.	<ul style="list-style-type: none"> <li>• Strong</li> <li>• Moderate-Quality of Evidence</li> </ul>
RECOMMENDATION #13	STRENGTH & QUALITY OF EVIDENCE
For the <b>acute resuscitation</b> of adults with <b>COVID-19 and shock</b> , we <b>suggest against</b> using gelatins.	<ul style="list-style-type: none"> <li>• Weak</li> <li>• Low-Quality of Evidence</li> </ul>
RECOMMENDATION #14	STRENGTH & QUALITY OF EVIDENCE
For the <b>acute resuscitation</b> of adults with <b>COVID-19 and shock</b> , we <b>suggest against</b> using dextrans.	<ul style="list-style-type: none"> <li>• Weak</li> <li>• Low-Quality of Evidence</li> </ul>
RECOMMENDATION #15	STRENGTH & QUALITY OF EVIDENCE
For the <b>acute resuscitation</b> of adults with <b>COVID-19 and shock</b> , we <b>suggest against</b> the routine use of albumin for initial resuscitation.	<ul style="list-style-type: none"> <li>• Weak</li> <li>• Moderate-Quality of Evidence</li> </ul>

## VASOACTIVE AGENTS

RECOMMENDATION #16	STRENGTH & QUALITY OF EVIDENCE
For adults with <b>COVID-19 and shock</b> , we <b>suggest</b> using norepinephrine as the first-line vasoactive agent, over other agents.	<ul style="list-style-type: none"> <li>• Weak</li> <li>• Low-Quality of Evidence</li> </ul>

RECOMMENDATION #17	STRENGTH & QUALITY OF EVIDENCE
<p>If norepinephrine is not available, we <b>suggest</b> using either vasopressin or epinephrine as the first-line vasoactive agent, over other vasoactive agents, for adults with <b>COVID-19 and shock</b>.</p>	<ul style="list-style-type: none"> <li>• Weak</li> <li>• Low-Quality of Evidence</li> </ul>
RECOMMENDATION #18	STRENGTH & QUALITY OF EVIDENCE
<p>For adults with <b>COVID-19 and shock</b>, we <b>recommend against</b> using dopamine if norepinephrine is available.</p>	<ul style="list-style-type: none"> <li>• Strong</li> <li>• High-Quality of Evidence</li> </ul>
RECOMMENDATION #19	STRENGTH & QUALITY OF EVIDENCE
<p>For adults with <b>COVID-19 and shock</b>, we <b>suggest</b> adding vasopressin as a second-line agent, over titrating norepinephrine dose, if target mean arterial pressure (MAP) cannot be achieved by norepinephrine alone.</p>	<ul style="list-style-type: none"> <li>• Weak</li> <li>• Moderate-Quality of Evidence</li> </ul>
RECOMMENDATION #20	STRENGTH & QUALITY OF EVIDENCE
<p>For adults with <b>COVID-19 and shock</b>, we <b>suggest</b> titrating vasoactive agents to target a MAP of 60-65 mmHg, rather than higher MAP targets.</p>	<ul style="list-style-type: none"> <li>• Weak</li> <li>• Low-Quality of Evidence</li> </ul>
RECOMMENDATION #21	STRENGTH & QUALITY OF EVIDENCE
<p>For adults with <b>COVID-19 and shock with evidence of cardiac dysfunction and persistent hypoperfusion despite fluid resuscitation and norepinephrine</b>, we <b>suggest</b> adding dobutamine, over increasing norepinephrine dose.</p>	<ul style="list-style-type: none"> <li>• Weak</li> <li>• Very Low-Quality of Evidence</li> </ul>
RECOMMENDATION #22	STRENGTH & QUALITY OF EVIDENCE
<p>For adults with <b>COVID-19 and refractory shock</b>, we <b>suggest</b> using low-dose corticosteroid therapy (“shock-reversal”), over no corticosteroid. <b>Remark:</b> A typical corticosteroid regimen in septic shock is intravenous hydrocortisone 200 mg per day administered either as an infusion or intermittent doses.</p>	<ul style="list-style-type: none"> <li>• Weak</li> <li>• Low-Quality of Evidence</li> </ul>