

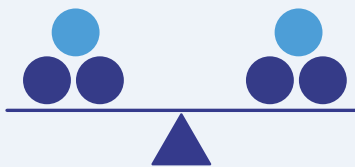
CytoSorb®

Expanding the dimension of blood purification



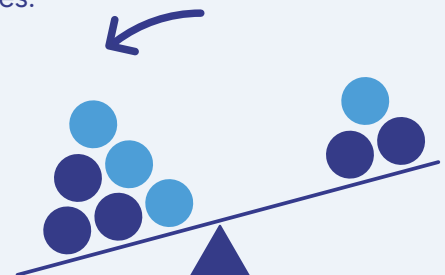
CytoSorb® briefly explained

Normal body function is focused on maintaining a healthy balance.



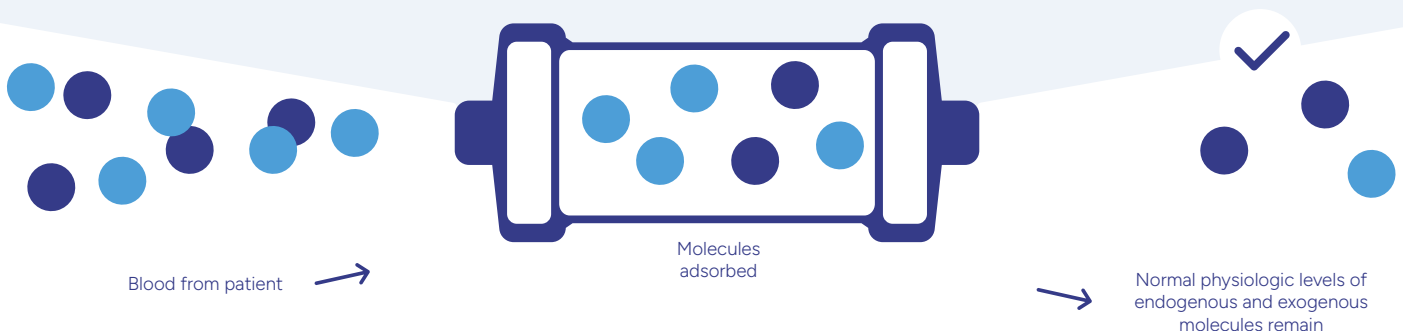
However, many factors can cause potentially harmful imbalances:

- Uncontrolled over production of substances after triggers, like e.g. infection
- High release of substances due to significant cellular damage
- Insufficient removal due to organ dysfunctions
- High presence of externally introduced substances
- A combination of causes



CytoSorb® can help restore the balance and prevent damage by removing:

- Cytokines in intensive care and cardiac surgery ^(1,2)
- Myoglobin in rhabdomyolysis ⁽⁴⁾
- Bilirubin in liver dysfunction ⁽³⁾
- Antithrombotics during CPB ⁽⁵⁾



START

Excessive levels of **cytokines, bilirubin, myoglobin** with clinical consequences not responding to SOC*, e.g.:

- refractory vasoplegic/septic shock
- severe liver dysfunction
- severe acute rhabdomyolysis

SOC*
Continuation

NO

Potential criteria to decide on CytoSorb®



Septic / Vasoplegic shock

- CytoScore > 6 pts
- NE > 0.2 µg/kg/min and/or rising
- Lactate > 2 mmol/l and/or rising (< 8 mmol/l)
- IL-6** > 500 pg/ml (if available)

Therapeutic Goals:

- Shock reversal or
- Stop of further deterioration



Rhabdomyolysis

- Myoglobin > 10,000 ng/ml and presence or risk of AKI***
- Hyperinflammation
- Vasoplegic shock

Therapeutic Goals:

- Prevention of AKI or
- Support of renal recovery



Liver dysfunction

- Bilirubin ≥ 10 mg/dl = 170 µmol/l
- Hepatic encephalopathy ≥ 2
- Hyperinflammation
- Vasoplegic shock

Therapeutic Goals:

- Support of liver function or
- Stop of further deterioration

YES Integrate CytoSorb®
Hemoperfusion / CRRT / ECMO

BEGIN
CytoSorb®

Ideally start within
24 hrs after onset
of clinical problem

No expected
progress towards
therapeutic goal

Progress
towards
therapeutic goal

Increase dose by
Early new
adsorber

Clinical
evaluation
After 8-12
hours

Continue with
adsorber therapy
(max use per
adsorber 24 hrs)

Consider end
of adsorber therapy after
use of 2-3 adsorbers

Therapeutic goal
reached

STOP
CytoSorb®



CytoScore

Decision support for initiating CytoSorb® Therapy

This dynamic score is intended to provide support in the decision to initiate CytoSorb® Therapy in refractory septic/vasoplegic shock.



	0 Points	1 Point	2 Points	Score (at hour 6)
Lactate mmol/l	< 2.0		≥ 2.0	
Lactate change / 6hrs	↓ decrease	↑ ≤ 50%	↑ > 50%	
NE* µg/kg/min (MAP** ≥ 65)	< 0.1		≥ 0.1	
NE* change / 6hrs	↓ decrease	↑ ≤ 50%	↑ > 50%	
2 nd catecholamine / 2 nd vasopressor	No	Yes		
Hydrocortisone use	No	Yes		
Volume Bolus 30 ml/kgbw***	No	< 2 Boli	≥ 2 Boli	
				Total

* Norepinephrine, ** Mean Arterial Pressure, *** Kilogram Body Weight

Use our online CytoScore calculator

cyto.news/cytoscore

Download the CytoScore pdf

cyto.zone/score/eng

Visit our quick set up page and learn how to integrate CytoSorb®



cyto.zone/setup

1. Hansen et al., Crit Care 2023; 27(1):117
2. Diab et al., Circ 2022; 145(13):959-968

3. Scharf et al., Sci Rep 2021; 11(1):10190
4. Albrecht et al., Blood Purif 2024; 53(2):88-95

5. Hassan et al., JTCVS Open 2023; 15:190-196