**Indications for Hemoperfusion**

**Broad generalization:**
- Hemoperfusion should only be used in situations where
  - there is severe life-threatening intoxication with substances which are not going to be
    well removed by the liver or kidneys.
  - There is an impairment of liver and kidneys, preventing clearance

If a toxin is equally well cleared by hemodialysis and hemoperfusion, then hemodialysis is preferred, because it will also correct any underlying acid-base disturbance.

**Specific Indications**
- **End stage renal failure with aluminium intoxication** where it is used along a chelating agent
- **Liver Failure:** as bridging therapy, to remove the toxins that would otherwise cause coma, when waiting for a transplant. This indication is debated.

**Specific Toxicities**
- The following drugs are well cleared (at least in animal models):

  **Suicide favourites**
  - Paracetamol
  - Barbiturates
  - Aspirin
  - Tricyclics
  - Phencyclidine (PCP)
  - Theophylline
  - Phalloidin (from Amanita Phalloides, the death cap mushroom)

  **Antibiotics**
  - Vancomycin
  - Gentamycin
  - Ampicillin
  - Clindamycin
  - Isoniazid

  **Accidental industrial toxins**
  - Paraquat
  - Diquat
  - Parathion
  - Methylparathion
  - Organophosphates
  - Trichloroethylene
  - Ethylene oxide
  - Carbon tetrachloride

  **Elemental metals**
  - Iron
  - Thallium
  - Aluminium

  **Chemotherapy agents**
  - Doxorubicin
  - Cisplatin
  - Methotrexate

  **Accidental hospital toxins**
  - Digoxin
  - Diltiazem
  - Metoprolol
  - Promethazine
  - Chlorpromazine
  - Valproate
  - Tramadol
  - Colchicine

**Removal of specific substances of interest**

- **Lipopolysaccharide endotoxin:**
  - The cell wall component of gram-negative bacteria, which is responsible for much of the nastiness you see in septic shock

- **Superantigen:**
  - The secreted exotoxin of gram-positive bacteria, which directly activates T cells by binding to the MHC class II molecules.

- **Various cytokines:**
  - Both proinflammatory and antiinflammatory ones are cleared by hemoperfusion