selenase®
Plastic surgery

Scientific information on

Plastic surgery

Causes of ischaemia:

- Complete (no perfusion) unpredictable ischaemia, micro and macro amputations (fingers, arms, legs etc.)
- Incomplete (some residual perfusion) unpredictable ischaemia, contusions, avulsions
- Predictable ischaemia, free flaps (pedicled flaps, muscles, fascia, adipose tissue, intestine)
- Special case: burns

Risks after reperfusion:

- Microthrombosis
- Inflammation
- Necrosis

➡ **death of tissue / amputation**

Conventional measures to prevent SIRS:

Surgical:

- restoration of patency

Pharmacological:

- anticoagulants (heparin, NSAR), thrombolytic substances, anti-inflammatory drugs, free radical scavengers, vasodilators (Ca-channel inhibitors), immunomodulators

➡ **poor efficacy**

Physical:

- application of cold before reperfusion, heat treatment after completion of anastomoses

Data on selenium (selenite):

- In animal models: Ebselen derfers arterial and prevents venous thrombus formation *[Lindenblatt et al. Thromb Haemost 2003; 90: 882-892]*
- In clinical studies: selenite modulates pulmonary infection rates after major burns and leads to an increase in selenium under the skin *[Berger et al. Am J Clin Nutr 2007; 85: 1293-1300.]*

Possible actions of selenium/selenase® supplementation:

- Prevention or minimisation of cell death after reperfusion
- Conservation of the tissue / body part
- Minimisation of “after burning” in burns

Suggested timing and dosage for selenium supplementation:

Time point	Dosage
Pre-operative bolus	1000 µg Se as selenase® solution for injection
Intra-operative	1000 µg Se/24h as selenase® solution for injection
Post-operative	1000 - 500 µg Se/d as selenase® solution for injection

Information sheet on PLASTIC SURGERY, biosyn Arzneimittel GmbH, RSi 2008. According to a lecture given by Prof Dr med H Homann, Thieme Workshop 2008 entitled “Ischaemia and reperfusion an interdisciplinary challenge”. For personal use only.

selenase®

a chance for your intensive care patients

selenase® –

- protects from endothelial, organ and reperfusion damage
- modulates inflammatory and coagulation pathways
- is very well tolerated

Abbreviated Prescribing Information
selenase® 100 micrograms, solution for injection (50 micrograms/ml)
selenase® 500 micrograms, solution for injection (50 micrograms/ml)
Active ingredient: sodium selenite pentahydrate. **Composition:** Each 2 ml ampoule/10 ml injection vial contains 100 micrograms/500 micrograms selenium as 333 micrograms/1.66mg sodium selenite pentahydrate ($Na_2SeO_3 \times 5H_2O$), corresponding to 50 micrograms/ml. **Excipients:** Sodium chloride, hydrochloric acid, Water for Injections. **Indication:** Proven selenium deficiency that cannot be offset from food sources. **Posology and Administration:** selenase® solution for injection is administered as an intramuscular or intravenous injection at a daily dose of 100 – 200 µg (1.27 – 2.53 µmol) selenium. If necessary, this dose can be increased to 500 µg (6.33 µmol) for a typical adult. No dosage adjustment is required for paediatric, renal or hepatic impairment patients. **Contraindications:** Selenosis. **Interactions:** Ensure that the pH value does not fall below 7.0 and that the solution is not mixed with reducing substances (e.g. vitamin C). **Pregnancy and Lactation:** There are no data from the use of selenase® in pregnant or lactating women. **Undesirable Effects:** None known to date when used as directed. **Overdose:** Counter measures include gastric lavage, forced diuresis, dialysis or administration of high doses of vitamin C. **Pharmaceutical Precautions:** Store below 25°C. **Legal Category:** POM. **Presentation:** Cartons containing 10 x 2ml ampoules / 10 x10ml glass vials for single use. **MA Numbers:** PL 20437/0003, PL 20437/0004. **MA Holder:** biosyn Arzneimittel GmbH, Schorndorfer Str 32, D-70734 Fellbach, Germany. **Date of Preparation:** November 2004

selenase® corrects selenium deficiency

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We would be pleased to send you any further information.

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