

Information for Doctors

The South African National Blood Service (SANBS) manufactures and supplies

Autologous and Allogeneic Serum

Eyedrops (SEDs) for patients with various ocular surface

diseases, as requested by their ophthalmologist. SEDs closely resemble natural tears due to growth factor and cytokine content which aid ocular surface repair and improve symptoms associated with dry eye disease.⁽¹⁻⁴⁾



Your blood saves lives

Toll-free 0800 11 90 31
www.sanbs.org.za

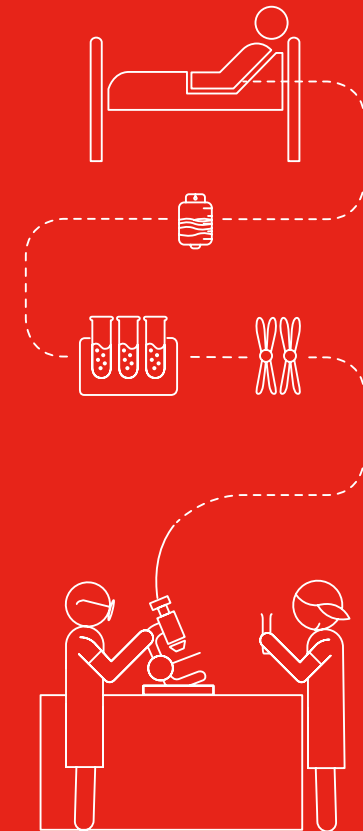
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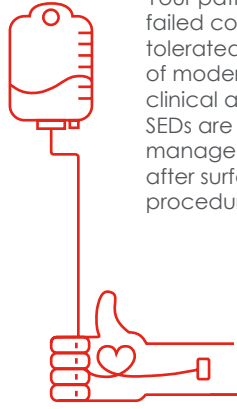
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**Serum EyeDrops:
Information for Doctors**

Is my patient eligible for SEDs?

Your patient may be eligible if they have failed conventional therapies at maximum tolerated doses and have ongoing symptoms of moderate to severe dry eyes based on a clinical assessment by an ophthalmologist. SEDs are also found to be useful in the management of post-operative recovery after surface based corneal laser refractive procedures.



Clinical indications for SEDs may include ⁽⁵⁾:

- Sjögren's Syndrome related dry eye
- Ocular Mucous Membrane Pemphigoid
- Stevens-Johnson-Syndrome/ Toxic Epidermal Necrolysis
- Graft Versus Host Disease
- Ulcerative keratitis
- Neurotrophic cornea such as Diabetic cornea
- Herpetic aetiology and other neuropathic disease including secondary to non-ocular, extra-ocular and neuro surgery
- Acute management of corneal injury (mechanical, chemical, thermal, surgery)
- Supportive such as Ocular surface reconstruction, Corneal transplantation, Other supportive e.g. critical care unit/high dependency/burns unit
- Inherited Ocular Surface Disease
- Other indications on a case-by case basis



How do I request SEDs for my patient?

You will complete and submit a SANBS SED request form (FRM-DSC-036) which can be received by emailing CTLTeam@sanbs.org.za . This form includes your details, the patient details, indication for SEDs and whether your patient should be considered for Auto-SEDs or Allo-SEDs. Once we have received the request form, we will contact the patient and arrange blood donation, testing, production and transport of the SEDs to your patient.



Do I request allogeneic or autologous SEDs for my patient?

Auto-SED should be considered for patients who are fit to donate one unit of blood and are able to travel to a blood donor centre. Allo-SED are used in patients who are unable to donate a unit of blood such as those who are in poor general health, less than age 16 years or more than 75 years, or if there is a clinical requirement for urgent treatment. Allo-SED are used in patients with uncontrolled diabetes, refractory immune-mediated diseases, those on cytotoxic agents where their bi-products are known to damage proliferating cells (e.g. cyclophosphamide) and patients with sepsis. SANBS has blood donor centres throughout South Africa with the exclusion of the Western Cape and therefore for logistical reasons Allo-SEDs are preferred for patients from this region. As SEDs do not need to be ABO-matched, a directed blood donation such as from a family member is permissible. All Auto-SEDs and Allo-SEDs donors are required to fulfill routine blood donor criteria.

How are SEDs produced?

SEDs are produced from whole blood donations under sterile conditions in a biological safety cabinet in line with international SED production guidelines.⁽⁵⁾ Routine infectious disease marker testing including HIV, HepB, HepC and Syphilis is performed. The whole blood unit is centrifuged to separate it into different components and the serum removed. The serum is filtered, diluted with saline and aliquoted into dropper bottles under sterile conditions and frozen at -20°C.



Transport and storage of SEDs

The frozen SEDs are transported on dry ice to the blood donor centre most convenient for the patient. Once collected, the SEDs need to be stored in the freezer. The patient removes a single bottle at a time and keeps this in the fridge. Each SED bottle may be used for three days and discarded thereafter. The remaining SEDs are stable in the home freezer for at least three months. While each blood donation provides 34 dropper bottles of SEDs, directions for use are dependent on indication and patient symptoms, with frequency of use ranging from every 15 minutes to twice per day.⁽⁶⁾



Questions and Feedback?

If you have any questions about the process or your patient's eligibility, please contact us on CTLTeam@sanbs.org.za or 011 761 9264.

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3. Raut S, Saw VP. Serum eye drops, amniotic membrane and limbal epithelial stem cells--tools in the treatment of ocular surface disease. *Cell Tissue Bank*. 2010;11(1):13-27.
4. Levy N, Wang Yin GH, Noharet R, Ghazouane R, Grimaud F, Aboudou H, et al. A retrospective analysis of characteristic features of responder patients to autologous serum eye drops in routine care. *Ocul Surf*. 2019;17(4):787-92.
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6. Yamada C, King KE, Ness PM. Autologous serum eyedrops: literature review and implications for transfusion medicine specialists. *Transfusion*. 2008;48(6):1245-55.