What is RES™?
Regenerative Epithelial Suspension - RES™ is an autologous suspension composed of the cells¹ and wound-healing factors necessary to regenerate natural healthy skin.
Avita Medical’s unique regenerative technology enables clinicians to rapidly create and apply RES™ at the point of care in a simple 30-minute procedure.

The regenerative mechanism is within the suspension...

Activated
- Disaggregation of skin cells removes contact inhibition, inducing the “free edge” effect,² which initiates a cascade of wound healing cell signals.¹⁴
- Growth factors and cytokines are rapidly secreted by “free edge” keratinocytes and fibroblasts to orchestrate proliferation, migration, angiogenesis and matrix re-modelling processes which are essential for skin regeneration.³-¹³
- In preclinical experiments RES™ has been shown to exhibit the characteristics of cells in the “free edge” state. Investigators found that large numbers of viable cells from RES™ adhere to a wound bed almost instantly and displayed typical proliferative and migratory morphologies as early as day 1 post-harvest. Key proteins associated with activation were shown to increase and decrease, in accordance with the literature.¹⁴

Available
- RES™ is available within minutes at the point of care and delivers non-cultured disaggregated epithelial skin cells which trigger signaling across the surface of the wound, overcoming the usual limitations of the wound edge. (Figure 1).¹,¹⁵-¹⁹

Autologous
- RES™ is safe, as it is produced from the patient’s skin. In addition, there is no risk of graft failure due to rejection.²⁰

Complete
- The multi-phenotype skin cells¹ contained in RES™ are essential in the normal cellular processes for effective wound healing and restoration of normal functionality (e.g. durability, pigmentation, minimal contracture).²¹
- Melanocytes contained in RES™ survive to localize to the epidermal side of the dermal-epidermal junction and evenly distribute melanin throughout the epidermis for pigmentation of the new skin.²²
- Application of RES™ increases the number of resident fibroblasts in the wound to reduce migration and wound tension,²³-²⁵ which reduces the incidence of contracture.
Regenerative healing with RES™

Preparation of RES™

Start regenerative healing at point of care in just 30 minutes