

DMEK Step-by-Step

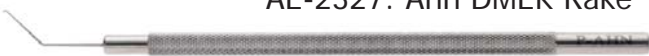


“DMEK is the next step in the progression of surgical treatment for endothelial disease. Transplantation of Descemet’s membrane with the absence of stroma is what sets DMEK apart from the other endothelial keratoplasties. The advantages of this procedure have convinced me to consider DMEK as not only an alternative surgical treatment for DSAEK, but a replacement for my patients.”
 - Dr. Charles Ahn, MD

AE-7002: Ahn DMEK Cannula, 23g



AE-2327: Ahn DMEK Rake



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Steps to Descemet’s Membrane Endothelial Keratoplasty

1. Measure horizontal diameter of the host cornea to determine the diameter of the trephine for the donor graft. Subtract 3 mm from the horizontal diameter of the host cornea for the size of the trephine.
2. Stain the endothelial surface of the donor tissue with Trypan Blue.
3. Score the peripheral edge of Descemet’s membrane of the donor tissue for 360 degrees using Sinsky hook while grasping the scleral rim of the donor cornea with 0.12 forceps.
4. Place the donor tissue on the Barron Donor Block and submerge it in Optisol GS.
5. Carefully tease away Descemet’s membrane from stroma using the DMEK rake, using the Submerged Cornea Using Backgrounds Away (SCUBA) technique as described by Art Giebel. Separate a rim of 2-3 mm of Descemet’s membrane for 360 degrees.
6. Lightly trephine the donor tissue in order to score Descemet’s membrane.
7. Submerge the donor tissue under Optisol GS and carefully complete the separation of Descemet’s membrane from the stroma using the DMEK rake and smooth tipped forceps.
8. Soak Descemet’s membrane in Trypan Blue in the Barron Donor Block.
9. Ink and mark the anterior surface of the host cornea with the donor trephine.
10. Create 1-3 paracentesis sites for use during placement of the graft.
11. Create a 2.8 to 3.0 mm clear cornea incision using a keratome.
12. Score Descemet’s membrane of the host cornea using the Reverse Sinsky Hook (ASICO Instrument AE-2207).
13. Carefully strip and remove Descemet’s membrane from the stroma using the DMEK/DSAEK Dextatome Spatula (ASICO Instrument AE-2872).
14. Place donor graft into a Staar™ IOL cartridge with BSS and Ocucoat.
15. Inject the donor into the anterior chamber using the Staar™ IOL injector.
16. Place a 10-0 nylon safety suture at the clear cornea wound.
17. Carefully orient the graft so that it is centered and positioned with the “dead sea scrolls” method.
18. Inject a small air bubble (0.1 cc) under the graft using a 30-gauge cannula.
19. Inject more air and use a cannula to further open the graft using quick sweeping strokes across the anterior surface of the cornea.
20. Completely fill the anterior chamber with air to secure the graft and promote adherence.