

LacriCATH® PROCEDURE BROCHURE

Providing doctors the solution to chronic tearing & blocked lacrimal ducts

NORDSON MEDICAL SURGICAL SOLUTIONS

Your outcomes — our inspiration.

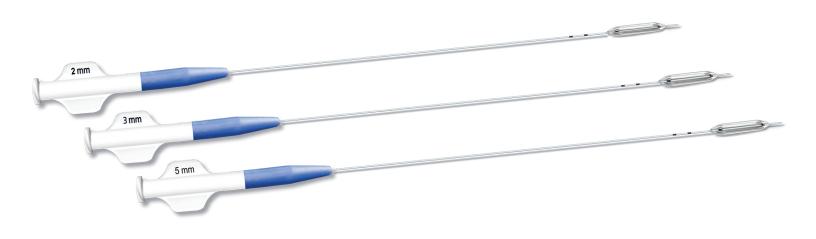
LacriCATH® balloon catheters have revolutionized the treatment of blocked tear ducts (chronic epiphora and nasolacrimal duct obstruction) in children and adults.

Our LacriCATH® balloon catheters are used in a similar manner as ordinary probing with the added benefit of an expandable balloon. The catheter also provides more options to patients who have been told only an incisional DCR surgery will solve their blocked tear duct and chronic tearing problem. Our patented design of balloon catheters allows surgeons to achieve highly-effective results while reducing the post-operative trauma patients may experience. Our ophthalmic products are easy to use and provide a cost-effective treatment of chronic epiphora in both pediatric and adult patients.

Benefits of the LacriCATH® lacrimal duct balloon catheter:

- 1. Outpatient procedure
- 2. Eliminates placement of tubes
- 3. High success rate¹
- **4.** Quick recovery
- **5.** Simultaneous bilateral inflation designed to reduce O.R. and anesthesia time





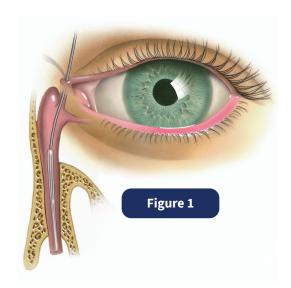
1 Balloon catheter dilation for treatment of persistent nasolacrimal duct obstruction. American Journal of Ophthalmology March 2002, Volume 133, Number 3:337-340; Greg T. Lueder, MD

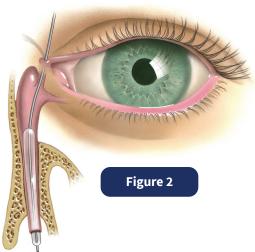
DACRYOPLASTY (DCP) PROCEDURE OVERVIEW

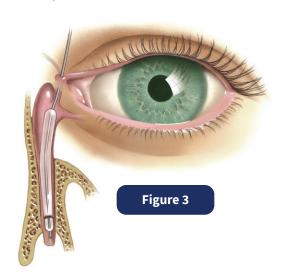
2mm & 3mm DCP Balloon Catheters

Low-profile balloon catheters for treating nasolacrimal duct obstruction in children and adults

- 1. The puncta and canaliculi are dilated.
- 2. The lacrimal system is probed in the customary fashion and presence of the probe in the nose is confirmed. The probe is removed
- 3. The LacriCATH® balloon catheter is passed through the superior punctum, canaliculus, sac and into the nasolacrimal duct down to the nasal floor presence of the LacriCATH® catheter in the nose is confirmed (figure 1).
- 4. A balloon catheter inflation device is primed to the "fill range" of sterile saline, connected to the balloon catheter and used to inflate the balloon is inflated to 8 atm for 90 seconds (figure 2). The balloon is then deflated by releasing the lock mechanism on the inflation device. The inflation procedure is repeated a second time for 60 seconds again, the balloon is deflated.
- 5. The balloon is pulled proximally and positioned iwthin the lacrimal sac and nasolacrimal duct junction.
- **6.** The balloon is inflated again using the method described above (figure 3).
- 7. The balloon is deflated fully by drawing all fluid out of the balloon. To do this, the locking lever on the inflation device is released and the handle is pulled to draw vacuum. Once all fluid is aspirated out of the balloon, the lock lever is once again moved to the locked position.
- **8.** The catheter is then rotated clockwise to minimize the profile of the deflated balloon and the catheter is gently withdrawn from the lacrimal system.
- Fluorescein may be used to irrigate the lacrimal system and recovered in the nose with a flexible clear feeding tube used as a suction catheter.
- 10. Suggested medication regimen:
 - Antibiotics to resolve infection before surgery
 - IV steroid during surgery
 - Antibiotics and steroids postoperatively to reduce larimal tissue edema, post-dilation edema and fibrosis
 - Nasal decongestant post-op





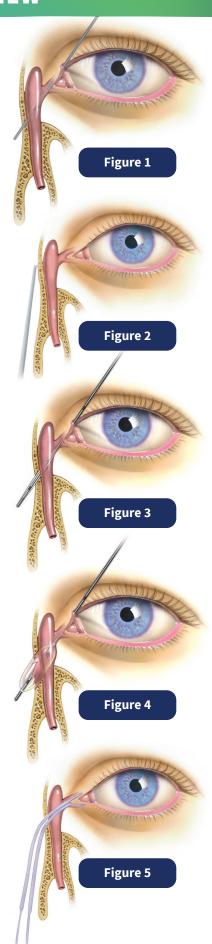


TRANSCANALICULAR (DCR) PROCEDURE OVERVIEW

5mm DCR Balloon Catheters

Low-profile balloon catheter for primary and revisional dacryocystorhinostomy

- 1. Under local or general anesthesia, a 3-4 reinforced Bowman probe is passed through the superior canaliculus into the lacrimal sac, pushed through the medial wall of the sac, and the inferior part of the lacrimal fossa into the nose (figure 1).
- 2. In a primary DCR procedure, the probe is pushed through an additional three or four adjacent spots in the inferior part of the lacrimal fossa. In a secondary DCR, the probe is brought through only one spot of the obstructed ostium.
- **3.** The openings in the fossa are then joined using the probe or by reaching up the nose and inserting a nerve hook (*figure 2*).
- 4. The nerve hook is removed.
- **5.** The balloon catheter is inserted through the superior canaliculus, lacrimal sac, and out the ostium into the nose. The balloon should be visible just past the opening in the lateral nasal wall (*figure 3*).
- **6.** The LacriCATH® catheter is connected to a primed inflation device filled with 6-9 cc of sterile water or saline. The balloon is inflated to 8 atm for 90 seconds, then deflated by relesing the locing mechanism on the inflation device (*figure 4*).
- 7. Deflate and withdraw the catheter slightly. Visualize the ostium intranasally after dilation, and confirm that a good opening has been achieved. If not, reposition the balloon and redilate.
- 8. A second dilation is performed at 9 atm for 60 seconds.
- **9.** The balloon is fully deflated by aspirating all fluid out of the balloon. To do this, the locking lever on the inflation device is released and the handle is pulled to draw vaccum. Once all fluid is aspirated, the lock lever is reset to the locked position.
- **10.** Gently rotate the catheter clockwise and withdraw the LacriCATH® catheter from the lacrimal system.
- **11.** Bone chips and hanging mucosal flaps in the nose should be removed using Takahashi forceps.
- 12. In a primary DCR procedure, a STENTube® large diameter lacrimal intubation tube is placed through the ostium. Once in place, the STENTube® extends from the nose through the ostium into the lacrimal sac. Ensure the thin central segment is positioned in the interpalpebral space (*figure 5*). For secondary DCR, the STENTube® is used at the discretion of the physician.
- **13.** Secure the ends of the STENTube® with a 4-0 or 5-0 non-absorbable suture or knot.
- **14.** The STENTube® large diameter silicone tube is generally removed within 90 days post-op, but can be left in up to 11 months if necessary.



LACRICATH® PRODUCTS

Sterile, single use, disposable products for the treatment of nasolacrimal duct obstruction

2mm Dacryoplasty (DCP)	PRODUCT CODE	DESCRIPTION	CONTENTS
	DCP213-UNIT Unilateral	For patients 12 months of age and older	(1) 2mm catheter (1) AQL® inflator
	DCP213-BIT Bilateral	For patients 12 months of age and older	(2) 2mm catheters (1) AQL® inflator (1) 4-way stopcock
3mm Dacryoplasty (DCP)	PRODUCT CODE	DESCRIPTION	CONTENTS
	DCP315-UNIT Unilateral	For patients 12 months of age and older	(1) 3mm catheter (1) AQL® inflator
	DCP315-BIT Bilateral	For patients 12 months of age and older	(2) 3mm catheters (1) AQL® inflator (1) 4-way stopcock
5mm Dacryocystorhinostomy (DCR)	PRODUCT CODE	DESCRIPTION	CONTENTS
	DCR508-UNIT Unilateral	For primary or revisional DCR	(1) 5mm catheter (1) STENTube® (1) AQL® inflator
	DCR508-BIT Bilateral	For primary or revisional DCR	(2) 3mm catheters (2) STENTubes® (1) AQL® inflator
Intubation Sets & Product Components	PRODUCT CODE	DESCRIPTION	CARTON QUANTITY
	LIS27T	Crawford-type silicone lacrimal intubation set, 0.025 in. tube diameter x 12.0 in. length, 4.5 in. probes olive tip ends	3
	LIS052	STENTube® large diameter silicone lacrimal intubation set for primary or revisional DCR Developed by Bruce B. Becker, M.D.	2
	AQL1015	10cc inflation device for balloon catheter dilation. Lock design and gauge for accurate pressure control and monitoring Measures pressures to 15 atm	1
	K12-01811	4-way stopcock for bilateral balloon DCP procedures, attaches to AQL inflation device for simultaneous bilateral inflation, included in 2mm and 3mm bilateral procedure kits	10









