



# Endoscopic Dacryocystorhinostomy: Basic Technique and Keys to Success

Developed in collaboration



DukeHealth

## Learning Objective

Upon completion, participants should be able to:

- Describe the basic steps of endoscopic dacryocystorhinostomy



## DCR Definition

- Fistulization of the lacrimal sac into the nasal cavity



American Academy of Ophthalmology. 2007-2008 Basic and Clinical Science Course, Section 7: Orbit, Eyelids, and Lacrimal System; American Academy of Ophthalmology. <http://eyewiki.aao.org/Dacryocystorhinostomy>.



## DCR Indications

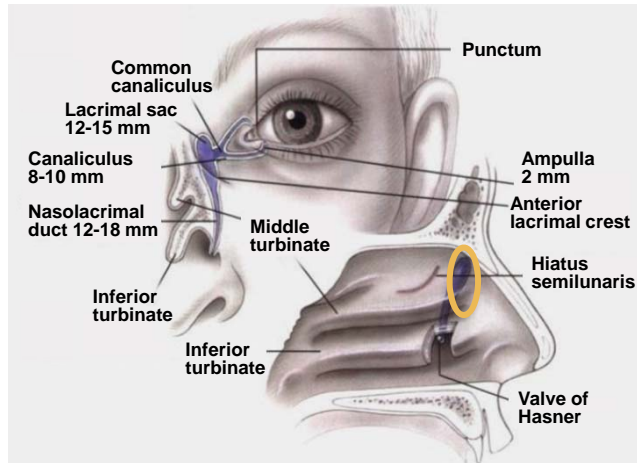
- 1) Symptomatic epiphora due to NLDO
- 2) Dacryocystitis
- 3) Resection of the duct (eg, maxillectomy)



American Academy of Ophthalmology. 2007-2008 Basic and Clinical Science Course, Section 7: Orbit, Eyelids, and Lacrimal System; American Academy of Ophthalmology. [http://eyewiki.aao.org/Nasolacrimal\\_Duct\\_Obstruction,\\_Congenital](http://eyewiki.aao.org/Nasolacrimal_Duct_Obstruction,_Congenital).



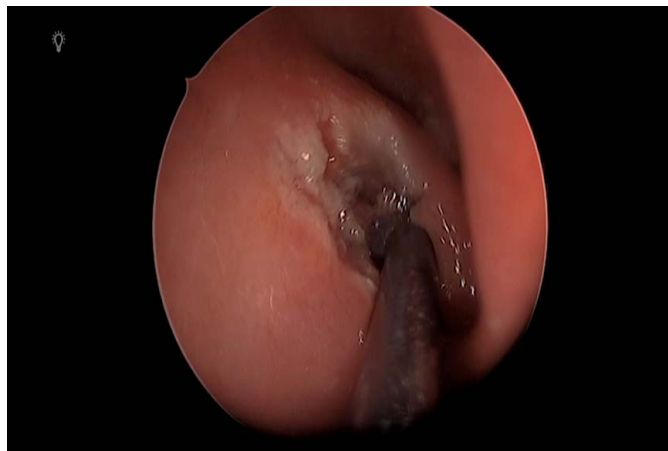
# Anatomy



American Academy of Ophthalmology. 2007-2008 Basic and Clinical Science Course, Section 7: Orbit, Eyelids, and Lacrimal System.



# Endoscopic DCR



Courtesy of Dr. Leyngold.



## Advantages of Endoscopic DCR

- No external incision
- Better visualization of anatomy
- Easier to supervise trainees
- Less postoperative swelling
- No lacrimal pump disruption
- Simultaneous correction of intranasal pathology
- Higher patient acceptance (eg, younger women, children)



American Academy of Ophthalmology. 2007-2008 Basic and Clinical Science Course, Section 7: Orbit, Eyelids, and Lacrimal System; American Academy of Ophthalmology. <http://eyewiki.aao.org/Dacryocystorhinostomy>; Grob SR, et al. *Int Ophthalmol Clin*. 2015;55:51-62.



## Keys to Successful DCR

- Adequate rhinostomy
- Clear common canalicular opening (superior and inferior)
- Adequate marsupialization of the lacrimal sac
- Removal of anatomic obstruction (eg, septoplasty)



American Academy of Ophthalmology. 2007-2008 Basic and Clinical Science Course, Section 7: Orbit, Eyelids, and Lacrimal System; American Academy of Ophthalmology. <http://eyewiki.aao.org/Dacryocystorhinostomy>; Grob SR, et al. *Int Ophthalmol Clin*. 2015;55:51-62; personal communications, Dr. Leyngold.



## Complications

- Persistent epiphora (average 5%-10%)
- Sump syndrome (if lacrimal sac is not adequately opened)
- Stent complications
- Epistaxis
- Orbital injury and hematoma (rare)



Marcel MM, et al. *Curr Opin Ophthalmol*. 2014;25:443-8.



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## **Abbreviations and Acronyms: Dacryocystorhinostomy**

DCR = dacryocystorhinostomy

NLDO = nasolacrimal duct obstruction