

# Helix Reversible Lacrimal Canalicular Occlusion Device and Associated Materials and Methods for Delivery and Recovery

Published date: Sept. 21, 2018

## Technology description

### Unmet Need

Patients with dry eye currently get a treatment called Punctal Occlusion. This procedure consists of inserting punctal plugs into the tear drainage area of the eye to keep the tears in the eyes longer. Dry eye syndrome affects between 7.4% and 33.7% of the population. Current solutions are permanent punctal occlusion devices, in which they are largely static in shape and necessitate multiple different size devices to accommodate for patient variation. In addition, punctal plugs have a large plate extending beyond the punctal os and cause discomfort. There is a need for solution that is flexible and variable in size, along with reducing the discomfort that accompanies this surgery.

### Technology Overview

The inventors have proposed a self-expanding lacrimal canalicular occlusion apparatus designed to be one-size fits all. It includes a predetermined pattern of memory metal covered in a biocompatible membrane. This device has the feature of that it can be collapsible within a delivery device that returns to its predetermined shape when ejected. It also includes an alignment platform that increases the accuracy and a button that can deploy a self-retracting mechanism. This design allows for it to be flexible and vary in size, making it both cost efficient and extremely useful. It's safety features that take into account patient comfort are extremely sought after as it would reduce cost of post-operative checkups and treatment and increase overall surgical outcomes.

## Institution

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