



Conjunctivitis
ADAM

GPC

Information about Giant Papillary Conjunctivitis (GPC)

What Is GPC?

The conjunctiva is the mucous membrane that lines our eyelids and outer structures of the eye. Conjunctivitis refers to an inflammation or infection of the conjunctiva. Giant papillary conjunctivitis (GPC) is an inflammatory condition in which large bumps (known as papillae) form on the inside of the eyelids.



What Causes GPC?

GPC is commonly associated with over wearing dirty contact lenses with surface deposits. All contact lens materials are different and interact differently with each individual's tear chemistry. Current studies suggest that GPC is likely an immune or an allergic response to an individual's own protein and lipid that has accumulated on the surface of the contact lens. Before receiving FDA approval, all lens materials go through rigorous performance testing. Based on testing results, each material receives a recommended wearing and replacement schedule (for example, two week or monthly wear) that helps to reduce an individual's risk for developing potentially harmful lens coatings/deposits.

In addition to contact lens wear, GPC may occur from wearing an ocular prosthesis (artificial eye) or as the result of a protruding end of a suture ("stitch") after eye surgery.

What are the symptoms of GPC?

In early or mild stages, most individuals will notice reduced contact lens comfort. As GPC progresses, an individual may experience lens awareness, dryness, excessive lens movement, blurred vision, redness, itching and possibly mucous discharge. Many other factors can influence comfortable contact lens wearing time, including lack of sleep, overall health, medications, dry eyes, and environmental irritants. Progressive and/or persistent loss of wearing time may indicate early giant papillary conjunctivitis.

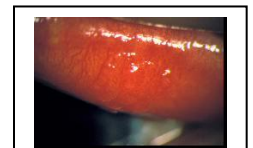
Four Stages of GPC:

Stage 1: Pre-clinical

Patients begin to notice more discomfort with their lenses, but there is no obvious sign of build-up of deposits on the contact lenses. There might be an increase in the amount of mucous present in the morning along with mild itching when lenses are removed.

Stage2: Early Clinical

At this stage, deposits are forming on the lens and papillae on the inner eyelids begin to enlarge. Mucous begins to cover the papillae and deposit on lenses. Individuals often notice a mild redness to their eyes and that their lenses are more difficult to wear for long periods. Itching on removal of contact lenses may become more intense.



Stage 3: Moderate

Contact lenses are becoming much more quickly coated with heavier deposits and may start to move around when blinking. The number, size, and elevation of the papillae increase at this stage, resulting in more redness and swelling of the inner eyelid surfaces. Moderate to heavy mucous is often present in the morning. Itching on lens removal may be moderate to severe and may vary from day to day.



Stage 4: Severe

Lenses usually become heavily coated with deposits. Disposable lens wearers often notice that their lenses feel too dirty to wear, after only a few hours or days. Papillae continue to increase in size and number. Redness, swelling and mucous production can be severe. Blurred vision and corneal changes can also occur. Eyelids may start to stick together upon



awakening due to heavy mucous discharge. In some cases, severe lid disease can progress to scarring of the conjunctival surface.

How is GPC Diagnosed?

The only way to properly diagnose GPC is with a thorough examination of the eyelids. Your doctor will look closely at your lenses with a microscope and then invert (flip) your eyelids to exam the conjunctiva for enlarged papillae and/or scarring.

How Is GPC Treated?

Giant Papillary conjunctivitis can be difficult to treat and may take weeks or months to improve. Since GPC is a reaction to coatings and deposits on contact lenses, the most effective and easiest treatment is simply to discontinue wearing contact lenses. Patients with stage 3 or 4 disease usually are required to discontinue wear. In most cases, individuals will notice an improvement in their symptoms very quickly after discontinuing wear. For many contact lens wearers, this is not a very popular or practical long term solution. Individuals should understand that when properly treated most contact lens wearers can resume lens wear.

In mild to moderate cases, the doctor may prescribe medicated eye drops to reduce symptoms, recommend a different cleaning solution, and allow limited lens wear. In more severe cases, the doctor may need to prescribe steroid eye drops and prescription allergy medications to reduce the size and number of papillae. When symptoms disappear and the eyelids are clear, the doctor may allow a limited contact lens wearing schedule. Often, however, this may require wearing a different lens material, limiting wearing schedules, and/or switching to daily disposable or rigid gas permeable lenses. In some individuals giant papillary conjunctivitis does not completely resolve and symptoms can return when lens wear is resumed.

Preventing GPC

The best way to avoid developing GPC is to practice good lens care and lens wearing habits. You should always follow the manufacturers and/or doctor's recommended wearing schedule. Since lens deposits are a contributing factor, you should thoroughly clean lenses daily. Hydrogen peroxide-based systems like ClearCare, AoSept, or Oxysept generally clean lenses the best. In addition, well-fitting lenses made of the most appropriate lens material for your eye and wearing habits is essential to prevent problems. Therefore, if you wear contact lenses you should have your eye health and eyelids examined at least annually. Your doctor can determine if the lens material that you are wearing is proper for you.

For more information about GPC, or other eye conditions, please contact our office at (248) 427-9620.