

PUNCTAL OCCLUSION FOR THE TREATMENT OF DRY EYES

The tear glands normally make tears all the time. If they did not, the eye would dry out. This would damage vision and be very painful. Once made, tears need to drain somewhere. They drain through tiny openings (one in each eyelid) called *puncta*. Sometimes, for patients who make very few tears, we recommend closing one or more of the *puncta*, a procedure called *punctal occlusion*.

An easy way to think about this situation is to imagine a sink where a certain amount of water must be maintained in the sink. There is an open faucet (tear gland) at the top, a drain (puncta) in the bottom, and some amount of evaporation. If the faucet at the top is closed down, so that only a few drops fall, then the sink will empty, as the rate of flow down the drain is too fast. Since we can't turn the faucet up any more, the solution is to plug up the drain and hope that the rate of water dripping into the sink will equal the rate of evaporation. If the rate of evaporation is too slow, then the water will spill out over the edge of the sink.

The same is true for the eye. We can't turn up the normal tear production, but we can close the puncta. However, this may cause your tears to build up and spill out of your eye and onto your cheek. To find out whether your rate of tear production is greater than the rate of tear evaporation in **your** eye, we recommend a trial of collagen plugs. This is a 5-minute, painless procedure performed in the office. The collagen plugs will block up your puncta for anywhere from 8 hours to 5 days, depending upon how quickly your body dissolves them. During this time, it is very important for you to make note of any tearing or change in the comfort of your eyes. Based upon **your** observations, we may then proceed with "permanent" punctal occlusion where we seal the punctum closed. This is also a brief procedure in the office, but it requires the administration of local anesthetic. Importantly, with our technique, even the "permanent" punctal occlusion can be reversed, if necessary.

You may read or hear about "permanent" punctal plugs that can be put in and taken out of the puncta. These are generally made out of silicone, and we advise against their routine use. In a minority of patients, they can cause significant problems, requiring extensive surgery.