Intravitreal injection is a method of delivering medication directly into the back part of the eye, the vitreous cavity. The retina lines the vitreous cavity, and medications delivered into the vitreous cavity can act directly on the retina and adjacent tissues. Intravitreal injections are given in the office using topical anesthesia (drops or gel placed on the surface of the eye).

Medications delivered by intravitreal injection include ranibizumab (Lucentis), bevacizumab (Avastin), triamcinolone (Kenalog), and dexamethasone (Ozurdex implant). These medications are used in the treatment of various diseases including age-related macular degeneration, diabetic macular edema, proliferative diabetic retinopathy, central retinal vein occlusion, branch retinal vein occlusion, and cystoid macular edema. The success of intravitreal medications has led to an increasing number of diseases treated in this manner.

Before receiving an intravitreal injection, your retinal physician will examine your eye. Our staff may ask you to confirm which eye is being injected, and a sticker will be placed above that eye to ensure that the correct eye is always injected. Numbing drops will be placed in your eye along with antiseptic and antibiotic solutions. You may have a number gel placed on the surface of the eye, or you may have cotton tips soaked in numbing medicine placed in the corner of your eye. These numbing agents are left in place for several minutes to minimize discomfort during the injection.

Every procedure has risks associated with it. The greatest risks of intravitreal injection are infection and retinal tears or detachment. Large studies have shown that the risk of these complications is less than 1 in 2,000. While these complications are rare, they may result in permanent vision loss. For this reason, it is important for patients who have undergone intravitreal injection to call the office immediately if they experience eye pain, decreased vision, sensitivity to lights, increasing redness, or abnormal eye discharge during the week following injection.

While intravitreal injection is safe and well tolerated, some minor inconveniences cannot be avoided. In order to reduce the risk of infection, the surface of the eye is cleaned with an antiseptic solution prior to injection. This solution irritates the surface of the eye, and as a result many patients experience a foreign body sensation after injection (dryness, scratchiness, or the sensation of a foreign object such as sand in the eye). This sensation may last the rest of the day following injection but almost always resolves by the next morning. In addition, the white part of the eye will frequently have a red blood spot in the location of the injection. The surface of the eye is covered with fine blood vessels, and one of these small vessels will frequently break during injection. The blood spot may be small and barely noticeable, or it may take on a rather dramatic appearance. Patients taking aspirin or blood thinners may experience larger blood spots, but this is not a reason to stop or decrease such medications.