



Unique Benefits of the Eyegaze Edge®

The Eyegaze Edge® is safe and comfortable to use. Unlike other systems that use multiple sources of infrared light shining on the user's eyes, the Eyegaze Edge® illuminates the eye with a single LED. Other systems use as many as 8 to 20 LEDs, which are not in the visible spectrum, but do generate heat which can dry the eyes. Dry eyes cause the user to blink more often, which can be fatiguing. To view a video showing the amount of IR light shining on a user's eyes with various eye tracking devices go to this link: <https://youtu.be/pGCcXg4P9Zs>

The Eyegaze Edge® was designed for use with only one eye. Many people with eye injuries or strabismus are unable to use most eye-operated systems with a high degree of accuracy over an extended time period. From its inception, the Eyegaze Edge® Camera was designed for robust eye tracking with just one eye, even when that eye may have a number of medical complications that might make eye difficult otherwise.

The Eyegaze Edge® enables patients to communicate in any position including side-lying without tipping the screen. Because it only tracks one eye and doesn't need to see the entire pupil of that one eye, the Eyegaze Edge® accommodates people who are comfortable in a variety of positions. Many people with disabilities find sitting erect uncomfortable or impossible. They may choose to lean to one side, or even lie on their side while operating the Eyegaze Edge®. There is no need to turn the screen for a user who is side-lying. Our brains find a tipped screen more difficult to manage. Consider how it would feel to turn your television screen sideways because you're lying on the couch!

The Eyegaze Edge® uses unique algorithms to accurately locate the center of partially blocked pupils. Eye tracking is dependent on the observation of the pupil and locating its center. Typically the entire pupil must be visible in order for most eye tracking devices to be able to predict the patient's gaze point reliably. Patients with ptosis (drooping) of the eyelid may be unable to operate other eye tracking devices. Our unique "droopy eyelid compensation" feature was developed specifically for individuals who are most often affected by this problem.

The Eyegaze Edge® works accurately with extremely large pupils. Mydriasis (abnormally large pupils), a side effect of many medications, may also result in a partially blocked pupil that can be accommodated. Many children normally have extremely large pupils which may be blocked by their eyelids.

The Eyegaze Edge® tracks unusually small pupils accurately. Many narcotic pain medications cause the pupils to constrict and may prevent patients from using some eye tracking devices.

The Eyegaze Edge® works well with most eyeglasses and contact lenses. Our software compensates for the eyes that have artificial lenses placed in the eye after cataract removal surgery, allowing the user to maintain accuracy after this procedure.