

Вышеперечисленное говорит о необходимости постоянного внимания со стороны руководителей аптек к человеческому фактору как основному предиктору качества и доступности услуг отрасли здравоохранения.

#### **Литература**

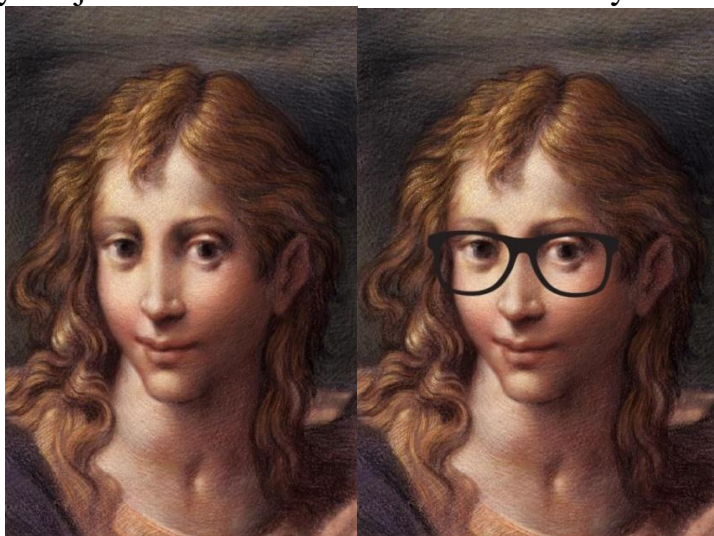
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### **MY VIEW ON EYES FROM BOTH SIDES OF THE GLASSES**

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The worst prosthesis ever invented is glasses. In medicine, prosthesis is an artificial device that replaces or enhances natural functions lost or reduced as a result of disease, damage, or congenital conditions. While the failure of glasses as a beneficial prosthetic relates in part to their clumsy construction, their most egregious fault stems from their negative influences on the physiology of the head and face, which in turn promote the development of pathological conditions affecting the entire human body. The placement of eyeglasses is additionally detrimental, obscuring approximately one third of the most distinctive and attractive features of the face. This distortion of the natural human visage results in an infelicitous loss of personality and originality. Furthermore, the use of eyeglasses presents a unique example of voluntary subjection to an inconvenient and lifestyle altering prosthesis.



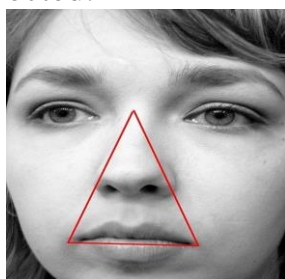
**Figure 1.** Here you see two images of the same person, the first being the natural visage, the second containing the addition of eyeglasses. Observe the way in which the eyeglasses alter perception of the facial image. Detail of St. John by Kurt Wenne

Retrieved from <http://kurtwenner.com/blog/topics/pavement-art-history/>

Researchers have demonstrated that facial appearance affects social perceptions and interactions. Appearance factors directly into both conscious and unconscious judgments of others, shaping impressions and attitudes concerning critical characteristics such as intelligence, trustworthiness, attractiveness, warmth, dominance, and so forth. Humans are social creatures, acting and interacting based on a variety of observations, inferences, and opinions. The association between the face and social perception and interaction is particularly strong, encompassing not only the way in which the world perceives the individual, but also the way in which the personality of the individual is affected by the reactions of others. Social feedback, received from the reactions and behaviors of others in response to facial appearance, may influence the personality of the individual through either self-fulfilling or self-defeating behaviors as the individual develops the personality that other people expect them to exhibit.

The effects of glasses on the wearer extend well beyond the psychological into the area of medicine and pathology. The construction of glasses includes a bridge located at the top of the nose that together with nose pads constantly exerts pressure on the skin. Cartilage and nasal conches with their reservoir of venous blood lie directly beneath. With the constant pressure and mechanical stress of prolonged wearing, anatomical architectonics is altered and the blood and lymph circulation of the facial area are disturbed. This is of particular concern with respect to the reservoir of venous blood associated with the nasal conches. This reservoir is directly connected via the Vena Angularis with the cavernous sinuses, which provides circulation from the brain and interconnections between anterior and posterior cerebral circulation. Response to changes in blood circulation as well as the disturbance of blood flow, such as those associated with the wearing of eyeglasses, lead to a high probability of thrombosis.

The negative consequences of long-term eyeglass wear do not end with circulatory issues. Several cranial nerves, such as branches of the trigeminal nerve passing through the wall of the cavernous sinuses, are subject to compression and various peripheral circulatory effects brought on by the wearing of eyeglasses, which may be the cause of migraine spells or recurrent idiopathic headaches. In this same anatomical area, the nasal conches preserve the delicate olfactory epithelium responsible for the sense of smell. When the lymph and blood circulation of this highly innervated vascular area is disturbed, the mitosis of the cells responsible for the sense of smell is adversely affected.



**Figure 2.** The Danger Triangle of the face

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The danger triangle of the face includes the area from the corners of the mouth to the bridge of the nose. Due to the unique nature of the blood supply of the human nose and surrounding areas it is possible for retrograde infection originating here to spread to the brain, resulting in thrombosis of the cavernous sinuses, meningitis, or brain abscess. Venous communication between the facial veins and the cavernous sinus, which lies within the cranial cavity and is a major conduit of venous drainage from the face and brain, is achieved via the ophthalmic veins. Eyeglasses, designed to be worn in this most sensitive vascular area, pose clear risks to the wearer, with friction from the bridge or any scratch being potentially life threatening.

The dangers associated with eyeglass wear extend to parts of their construction affecting human features beyond the nose. Temples, part of the frame located just behind and around the ears, in the region where branches of the Vagus and Temporal nerves and carotid and temporal arteries disperse, exert pressure. Bradycardia brought on by the mechanical stress of pressure at the temples is a well-documented consequence of long-term eyeglass wear. In fact, eyeglass wearers with pacemakers should be thoroughly monitored.

Another negative effect of long-term eyeglass wear and the mechanical pressure it exerts is the destruction of the architectonics and anatomy of the nose with subsequent alteration of the breathing function. Distorted nasal passages may result in insufficient inhalation and, therefore, a deficit in oxygenation of the blood with a commensurate reduction in oxygen delivery to the body and brain. In addition, inhaled air is both warmed and cleansed in the nasal cavity, a process adversely affected by any distortion or damage to it. Clearly, eyeglass wear is detrimental to two of the body's most necessary functions, breathing and the defense provided by the natural immune system.

Having examined some medical, pathological, and physiological drawbacks of wearing glasses, we now turn to the aesthetics – natural originality, peculiarities, and attractiveness of the face – as it is impacted by current prosthetic design. Modern couture and fashion houses such as Gucci have tried to make glasses more popular by changing the design of the frames. Unfortunately, this has not eliminated or reduced the consequences of wearing eyeglasses, leaving wearers with no option beyond looking for alternatives, such as contact lenses or refractive surgery. While modern eyeglass design appears to have reached an impasse, history does, in this case, offer a solution: the pince-nez. Its application of a spring bridge and the absence of pressure on the temples and nose pads make the pince-nez healthier and safer for the human body.



**Figure 3.** Pince-nez.

Retrieved from <http://eyeantiques.com/product-category/store/spectacles/pince-nez/>

Despite a history spanning more than six centuries the pince-nez spent the past 200 years relegated to archaic status. However, this eyewear artifact is rapidly regaining popularity, chosen by people who value comfort. A convenient modernization of the pince-nez style is the vertical or horizontal piercing or clipping of skin around the base of the nose, with lenses fixed to the piercing bar or clip. We will call this new style “Eyerings”. The studs and clamps minimize the pathological complications and potential dangers associated with the glasses most commonly in use today.

Non-invasive “Eyerings” options allow lenses to be fastened with grips or studs to the eyebrows or to the skin beneath the eyebrows just above the eyelids. Alternatively, two studs may be placed to the side of each eyebrow or one in the center, to which or by which it is possible to affix lenses. Other variants connect studs with lenses to the spring, which is inserted in the eyebrows or the area below the eyebrows, or connect the lenses with a horizontal bar. It is possible to flip the lenses from the normal wear position in front of the eyes to a resting position above the eyes as needed and clamps or studs with lenses or extra-ocular lenses can be made from non-bio-compatible material. Extensive possibilities exist for the design and creation of a wide variety of “Eyerings” and different forms of lenses.



**Figure 4.** Pince-Nez similar to those of Bausch manufacture in the 1860s.

Retrieved from <http://eyeantiques.com/shop/store/spectacles/pince-nez/pince-nez-ebonite-1860s-strong/>

One especially inventive new variant takes the form of a butterfly. Lenses are clasped separately or together to the base of the glabella in the shape of butterfly

wings with the upper lens-wing housed in the area under the lower edge of the eyebrow and above the upper lid and the lower lens-wing situated in the area under the lower lid. Both of these wing sections will connect, one from the top and other from the bottom, forming a whole or bifocal lens.



**Figure 5.** Butterfly Lenses. Handsigned Lithograph Kabuki Dancer by Salvador Dali, 1973  
Retrieved from: [https://www.liveauctioneers.com/item/32579726\\_dali-salvador-kabuki-dancer-handsigned-lithograph](https://www.liveauctioneers.com/item/32579726_dali-salvador-kabuki-dancer-handsigned-lithograph)

The mobility of the skin of the upper lids and eyebrows renders these areas appropriate for the placement of “Eyerings”. The space between the eyebrows is the optimal position for “Eyerings”, with a very simple attachment fixing them to the skin of the upper lids or eyebrows. A variant is the insertion of string along the eyebrows for future affixing of lenses or “Eyerings”. Lenses may also be placed such that they rest above or along the eyebrows when not in use and move down in front of the eye as required. Alternatively, lenses may be placed under the lower eye lashes, fixed to a piercing bar, studs, or clips such that they may be flipped up and held in front of the eye when needed. One benefit of such placement is opportunity for rest and rehabilitation of the optic analyzer when not in use. An additional option provided by this invention consists of folded lenses, with one part inserted inside under the lower lid and the other located on the outer side of the lower lid. Both parts of the lenses join by a mobile hinge, allowing the lower portion to be lifted and situated in front of the eye. Affixation of lenses and “Eyerings” may be implemented with a variety of designs.



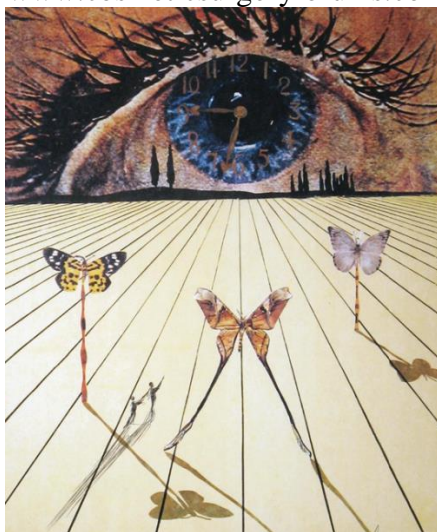


**Figure 6.** The dotted lines illustrate the placement of the lift-up lenses which may be positioned in front of the eyes when needed.

Retrieved from: [http://www.cosmeticsurgeryforums.com/blepharoplasty\\_Methods.html](http://www.cosmeticsurgeryforums.com/blepharoplasty_Methods.html)



**Figure 7.** Temple Eye Lenses can be located in the temple area as shown above, affixed with a vertical piercing bar, hidden within the hair style, and placed properly in front of the eye when desired. Retrieved from: [http://www.cosmeticsurgeryforums.com/blepharoplasty\\_Methods.htm](http://www.cosmeticsurgeryforums.com/blepharoplasty_Methods.htm)



**Figure 8.** The Eye of Surrealist Time, Lithograph by Salvador Dali, 1971.

Retrieved from: <http://www.georgetownframeshoppe.com/the-eye-of-surrealist-time-original-etching-photolith-of-original-gouache-with-collage>

Extraocular lenses are far less noticeable to the observer than regular eyeglasses. They occupy a very limited area of the face and do not disfigure or otherwise interfere with the natural image of the face. They do not obscure distinguishing features and facial expressions, nor do they place any mechanical stress on anatomical features, greatly reducing the probability of medical complications

Occupying only the area of the eye opening and taking up far less space than traditional glasses by a ratio of 1:3, this invention provides a very natural look while offering substantial vision benefits. Extraocular lenses guarantee excellent central and peripheral vision. In addition, it is possible to fine-tune the curvature of the "Eyerings" by changing the geometry of the clips, thus altering the vertex distance. In this way, optimal focus may be achieved without the clumsy shifting and sliding one sees with those who wear traditional glasses.

The purpose of this invention is to remove all negative aspects, both the medical and the aesthetic, found with traditional glasses while providing a superior vision prosthetic. The goals achieved through use of this invention include preservation of the image and personality of the human face, freedom from the incarceration of glasses, and avoidance of all pathological and medical complications and risks, from thrombosis to migraines, associated with traditional eyewear.

Finally, it is important to compare the price of regular glasses and EOL (extraocular lenses). EOL are approximately five to six times less expensive than regular glasses. EOL provide a convenient, natural, inexpensive means to correct vision insufficiency.

It is important to think about the role that vision plays in daily life and the need to protect our eyes and vision. The visual system is the part of the central nervous system, detecting and interpreting information as one builds a representation of the surrounding environment. The visual system carries out several complex tasks, including the reception of light, formation of monocular representations, development of a binocular perception from a pair of two dimensional projections, identification of visual objects and assessment of distances to and between objects. The information about an image received via the eye is transmitted to the brain where the visual cortex, the largest system in the human brain, located in the occipital area at the rear, processes the visual image.

The complexity of the visual system should be considered when considering the use of progressive lenses. The visual system is not an electrical relay and the switch from one visual distance to another is not a primitive action. It is a very complex process with many signals transferring between nerve cells activating differing neurotransmitters. Ordinary progressive lenses can disorder the transference of light. Lack of a real visual border and focus confuse photoreceptors and the subsequent processes of the visual system, which can result in damage to the optic analyzer. To avoid this problem, the use of single lenses or physiological bifocals with clear borders is recommended.

We will end with this final recommendation for those with presbyopia who use iPhone or iPad—covering your screen with a magnifier lens will ease your vision difficulties when using your device. Lenses may be used in front of computer screens in much the same way as they were used when televisions first became available to the public.



**Figure 9.** Dotted lines illustrate the position of the eyering insertion.

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### **Conclusion**

At a time when technology's role is expanding into almost every aspect of daily life, in a world that values and requires accuracy and efficiency, visual acuity is essential. While it is apparent that vision is involved in how well and accurately one performs tasks, vision also affects many other aspects of one's life, including perception which in turn influences how one interacts with others, and one's sense of well-being. Therefore, the correction of visual acuity, which presents challenges that encompass aesthetics, medicine, psychology, and physiology, is imperative and the methods that are used to achieve it should be subject to re-evaluation and alteration as knowledge and technology advance. This article's examination of the negative effects of elements of eyeglass wear on various physiological and pathological processes of the human body clearly indicates that a change is in order and offers some specific recommendations. As the world and technology progress, so should corrective eyewear.

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