Conclusion

To prevent VDT syndrome, habitually perform preventive and other measures to protect your important eyes. If you experience any abnormalities in your eyes while performing relevant work, don’t hesitate to see an ophthalmologist.

VDT Syndrome
People in the Modern Era Have Tired Eyes

Edited under the supervision of Dr. Shigeru Kinoshita, Professor, Department of Ophthalmology, Kyoto Prefectural University of Medicine

The term VDT refers to a type of equipment for visual display, such as computer screens. In the current modern era, VDTs have spread in workplaces, homes, and children’s play areas, and this dissemination can be described as a major event for human eyes.

VDT: Visual Display Terminal

Consult an ophthalmologist for guidance on protecting your important eyes.
What is VDT Syndrome?

A large amount of VDTs exist around us, including personal computers, mobile terminals, game devices, and portable game displays!

Currently, the incidence of a new disease called VDT syndrome is increasing. VDT syndrome, also known as IT ophthalmopathy, is a disease that affects our eyes, body, and mind as a consequence of prolonged work using VDTs.

There are so many VDT!

- Personal computers
- Mobile terminals
- Game devices and portable game displays

Symptoms such as stiff shoulders and pain, and dullness in the neck to shoulders and arms are often observed, and may progress to a wide variety of chronic symptoms, including back pain and manual digital numbness.

VDT syndrome may induce irritation and anxiety, even causing depression.

What are the ocular symptoms of VDT syndrome?

The major symptom is eye fatigue due to stress from accommodative function or exercise. In severe cases, pathologic eye fatigue (eye strain) is observed, which cannot easily be relieved by resting the eyes. In addition, the progression of dry eyes can lead to conjunctival hyperemia.

Eye fatigue
Decreased visual acuity
Hazy vision and blurred vision
Eye pain
Dryness of the eyes

Q: Are there any differences on the influence on the eye between writing a manuscript and VDT work?
A: Writing and reading a manuscript and other tasks can also cause eye fatigue. On the other hand, VDT work forces the operator to stay in the same position for a long period of time, such that the muscles on our necks, shoulders, arms, hands, and other parts of the body become tense. In addition, eye fatigue is more likely to occur because the operator’s gaze frequently moves among the screen, keyboard and documents. While concerns regarding the impact of electromagnetic fields include cataracts and pregnancy/delivery abnormalities, electromagnetic waves from VDTs are reportedly nearly unproblematic at low levels.
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Physical Symptoms

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Mental Symptoms

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A
Eye-friendly Measures for Office Workers

While doing VDT work, bear in mind the following five key points:

1. **Adequate rest for the eyes**
   Take breaks to rest your eyes for at least 10 to 15 minutes per hour. During this rest period, look at an object located a fair distance from your location and keep your eyes closed while maintaining a relaxed mood.

2. **Exercise**
   Get in adequate physical exercise every now and then to lessen your eye tension.

3. **Eyeglasses**
   Use eyeglasses and contact lenses that are at a suitable strength.

4. **Patients with dry eyes or glaucoma**
   Pay attention to avoid excessive VDT work because it can worsen your disease.

5. **Early consultation**
   If you feel anything unusual in your eyes, see an ophthalmologist as soon as possible.

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**The Following is the Ideal Work Style:**

- Minimize the dark-bright contrast in the room to prevent you from being dazzled.
- Keep the distance between the document and your eyes similar to the distance between the screen and your eyes.
- Sit back in your chair with its back support in contact with your back while keeping the entire soles of your feet in contact with the floor.
- Be careful of the dry air in the room.
- Keep a distance of at least 40 cm between the computer screen and your eyes.
- Adjust the screen angle to allow you to look slightly downward at the screen.
- Position the screen at a level that causes minimal light reflection.
- Use an anti-reflection screen.

Source: MHLW Guidelines for the Occupational Health Management of VDT Workers

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**Q&A**

**What treatments are administered at the ophthalmologic clinic?**

**A**
VDT syndrome is treated with eye drops that mitigate eye fatigue and moisten eyes and/or oral medications that lessen the tension of the body and eyes. In some cases, suitable eyeglasses or contact lenses may be used to correct visual acuity, or eyeglasses may be prescribed for VDT work.
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Currently, most children play games using not only televisions and portable game displays, but also personal computers and mobile terminals. Prolonged game play may cause symptoms, such as severe eye fatigue, stiff shoulders, and headache. Problematic effects on the eye that have recently become common topics include the following:

**Development of myopia (shortsightedness)**

Playing a game on VDTs for a long period of time every day reportedly increases the likelihood of causing the player to become shortsighted.

**Epilepsy**

Mass media has recently reported very rare cases of epilepsy attacks due to excessive game play among people predisposed to photosensitive epilepsy; however, the data is preliminary and much remains unclear.

Games on VDTs will no longer be enjoyable if your eyes are affected. Play smartly and ensure due care for your eyes.

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**Anti-VDT-Syndrome Measures to Protect the Eyes of Children**

1. **Playing a Game on a VDT for a Long Period of Time Should be Prohibited!**
   
   While playing a computer game may be continued for 30 minutes or less, the playing time should be limited to a maximum of 1 hour.

2. **Let Your Children Play Vigorously Outdoors.**
   
   Playing outdoors lessens the physical tension of children, thus mitigating their ocular symptoms.

3. **Avoid Unbalanced Diets.**
   
   It is also important for your children to consume diets with good nutritional balance and to not have likes and dislikes with food.

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**Q&A**

**Does VDT-based learning and game play on VDTs cause the same degree of fatigue?**

**A**

As VDT-based learning displays have recently been developed, the anticipation is that VDT-based learning will become more common in the future. VDT-based learning, similar to games on VDTs, sometimes requires the learner to quickly move his or her fingertips, hands, and arms and make instantaneous decisions, resulting in an increased ocular burden.
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