Understanding Vision  Oct 16, 2017

**Take part in the ZEISS Online Vision Screening Check and test the quality of your vision.**

Check here online if it's time you have another eye test.

Our eyes are our most important sensory organ. That's why optimum vision is an absolute must. When was the last time you had your eyes tested? Many people don't have their eyes tested regularly; only this can ensure that we can always benefit from optimum vision. After all, our eyes, and hence our vision, are subject to a process of constant change as we get older, and this often goes unnoticed. The first sign that our vision is deteriorating is not always blurred or unfocused vision. Headache or eye strain in the evening could also indicate defective vision.

More than 100 years of better vision with ZEISS – over 100 years of high-quality, precision lenses and innovations in the field of ophthalmic optics. Use the online ZEISS Online Vision Screening Check[1], which was developed by ZEISS experts to allow you to test your eyes in an easy and fast way – for free. At the end of the test you will then receive a recommendation indicating whether you should consult a ZEISS optician for professional advice.

**Check your vision online**

Better vision also means more quality of life, as sight is our most important sensory organ. 80 percent of the impressions we receive of our environment are obtained through our eyes. The eye is called our "window to the world" for a very good reason. Having our eyes regularly tested by
qualified optician should be an integral part of preventive health care. Not only for yourself, but also for the safety of other people if you are driving in traffic, for example. In general, provided you do not have any existing or known eye problems, you should have your eyes tested every two years. The ZEISS Online Vision Screening Check will provide you with an initial idea of the current performance of your eyes.

How often should you have your eyes tested?

**Adults (without existing or known eye problems) should have their eyes tested regularly**

- ✔ between the ages of 20 and 39 at least three times during this period
- ✔ from the age of 40 onwards once every 2-3 years
- ✔ from the age of 65 onwards every 1-2 years.

**Children should have their eyes tested regularly by an optician:**

1. First examination: between the ages of 2 and 3 1/2 at the latest
2. Second examination: before they start school
3. Then every two years – even if they have no obvious eye problems – to ensure that the early warning signals of any deterioration in their vision are detected at an early stage.
4. All premature babies and all children whose parents or siblings have squints or have highly defective vision should be examined as early as possible – between the ages of 6 and 12 months – and then regularly afterwards.

What screening checks are available?

**The Online Vision Screening check is divided into three parts:**

1. **Visual Acuity Check**
2. **Contrast Vision Check**
3. **Colour Vision Check**

**The Visual Acuity Check**

This is certainly the most important check. All spectacle wearers are familiar with this test. The optician asks you to read letters or numerals and to identify the direction of the opening in special rings (Landolt rings) – each with a different size on a projection surface. The optician checks the size of the various elements you can identify them without difficulty. A process known as subjective refraction is also performed after this by the optician. After various lenses with different powers have been inserted in a device known as a trial frame, we indicate whether we see better or worse with each lens. The optician begins to optimize the lens first for one eye, and then for the other. It is then important to check the interaction of the eyes by using a binocular test. Other tests can also be used to identify a condition known as associated heterophoria, which can then be corrected and, in some cases, treated.

In **Part 1** of our free online check we simulate the testing of your visual performance on the screen. This is not intended as a replacement for the tests conducted by your optician. However, you do receive an initial impression of the quality of your vision.

During eye examinations, the refractive power required to correct defective vision is determined without accommodation (the eye’s automatic adaptation to various distances).

<table>
<thead>
<tr>
<th>0.00 D (dioptres)</th>
<th>normal vision (emmetropia)</th>
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<tbody>
<tr>
<td><strong>Powers other than 0.00 D (dioptres)</strong></td>
<td>defective vision (ametropia)</td>
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<tr>
<td>e.g. sph +2.00 D (diopters)</td>
<td>long-sightedness (hyperopia) – also with presbyopia (gradual loss of ability to focus on near objects with increasing age). Here the term addition (Add) is used</td>
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The Contrast Vision Check

Initially, you may think that this test is not really important. However, contrast vision is of major significance for comfortable vision. If we cannot distinguish differences in contrast, eye fatigue may be the result. We all know what it’s like when the contrast isn’t properly set on our computer screen, or if we try to read in poor light.

Checking contrast vision is important to identify any changes that have occurred to our vision. Changes in contrast sensitivity may, for example, be an indication of glaucoma.

In Part 2 of our online screening check we simulate contrast vision. The test may provide you with an initial indication that your contrast vision is not as good as it could be. Your optician will be pleased to look into this in more detail.

Colour vision test

What we all know as “colour blindness” affects many more men than women. This is a genetic defect that affects as many as 180 million people worldwide. Various types of lenses are available.

1. People with this condition have only a limited ability to recognize certain colours. All the sensory cells – the red, green and blue cones – are present within the retina, but some of them do not function correctly. The most common form of the condition is red/green blindness.

2. Partial colour blindness: In this form of the disorder some of the sensory cells are not present at all or are not functioning. The people affected have only two types of still functioning receptors. The result: colour vision is significantly impaired. This can sometimes be dangerous especially for red-weak and red-blind car drivers. In fog, for example, they see only black instead of the red rear light of a vehicle in front of them.

3. Total colour blindness: The disorder known as achromatopsia is very rare. People with this condition cannot perceive any nuances in colour at all.

To diagnose the condition, the eye care professional uses three different tests: pseudoisochromatic plates, the Farnsworth test and Nagel’s anomaloscope.

In Part 3 of our free online check you can test your colour vision with colour charts.
blindness and total colour blindness

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1 This Online Vision Screening Check is not a medical test and cannot take the place of eye care by a trained professional. It is not intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease. This exam is only meant to give you a general idea of your eye power and whether a professional eye test is advisable.

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