

spoilt by prism glasses and the auto balance will be forgotten. Actually the permanent compensation of the faulty position of the eyes demands energy, which is lacking elsewhere in the system, leading to the mentioned noticeable problems (Friederichs, Edgar: "Pestalozzi und die Vision vom Gehirn - Fortsetzung einer Geschichte", DOZ 3/2005, S. 36-38).

On the basis of these facts it was formerly postulated that every existing heterophoria has to be fully corrected by means of prism glasses, irrespective of trouble. However, for many years the IVBS recommend to only dispense prism glasses when there are corresponding troubles. In doing so it has to be decided in every single case whether the full correction or a selective under correction is appropriate.

There is also the fact that time and again irrelevant criticism will unfortunately provoke uncertainty with persons concerned. As a general rule this frequently by profession politics motivated criticism turns up from ophthalmologists who have no personal experience with MCH. Compared to that there are ophthalmologists as well who test the MCH unprejudiced and after these experiences they apply the MCH regularly and effectively to their patients.

### **Your prospects as therapist**

The prism spectacle shall not replace your therapeutic procedures in no case. Rather there is the experience that the relief of the visual system by wearing prism glasses will reasonably complete your therapy. Recommend to corresponding patients an examination on associated heterophoria at an optometrist or ophthalmologist both of whom being specialized in that field of activity.

On the website "www.ivbs.org" you will find a list of members, arranged for postcode area, which enables you to contact a user of MCH in your vicinity. Furthermore there you will find further reading concerning associated heterophoria and prism glasses.

## Information for therapists

This information is addressed to members of various therapeutic occupational groups, e.g. pediatricians, pain therapists, ergo therapists, remedial teachers, dyslexia therapists and speech therapists.

With best regards:

### ***Associated heterophoria***

#### ***Possible noticeable problems are:***

- Behavioral occurrences, e.g. AD(H)D
- Trouble with gross and fine motor skills
- Concentration problems
- Trouble with reading and spelling
- Strenuous vision (asthenopia)
- Headache

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## Associated heterophoria – problem or no problem?

Associated heterophoria is a deviation from ideal binocular vision, being present with most people, but in many cases does not cause problems.

In other cases this visual defect leads to various noticeable problems, e.g.

- strenuous or fatiguing vision (with existing eyeglasses and good visual acuity as well)
- difficulties with screen handling
- problems with driving at night and with reading for a longer time

In addition to visual problems there may be e.g.

- constrained head postures
- trouble with hand-eye-coordination
- trouble with balance and walking

All these Problems may partially be caused or increased by an associated heterophoria.

Frequently those disturbance come along with

- eye pain, headache, migraine as well as
- hardening in the area of neck and shoulder

With children the following distinctive features are typical:

- **At school:** Problems with reading, spelling and calculation, high inclination to slips, poor handwriting, concentration difficulties, disinclination to learn, poor ability to work under pressure and similar problems.
- **Body control:** Defective gross motor skills (e.g. clumsiness at ball games, bicycling, ascending stairs) und insufficient fine motor skills (e.g. at painting, coloring, cutting-out).
- **Noticeable behavior problems:** Behavior symptomatology comparable to that with AD(H)D (attention deficit disorder).

There are numerous therapeutic approaches in order to help in these cases.

As the eyes represent the most important sensory organ of man it is obvious that disturbances in the visual system should be considered as a cause for this and many other problems, on the elimination of which you are working on as therapist.

Testing whether there exists an associated heterophoria is particularly reasonable if previous therapeutic activities did not yield the success desired.

According to experience distinct improvements regarding the described problems can be achieved in many cases by the correction of an associated heterophoria.

### What is behind all this?

When binocular vision is to function perfectly, both eyes have to align exactly to the object looked at. This is even possible when associated heterophoria is present, however only by "re-adjusting" the position of the eyes. Thereby double vision is prevented, but it demands a permanently increased effort in energy.

To relieve people with associated heterophoria from the strenuous "readjusting" of the ocular muscles, specific spectacle lenses with additional prismatic effects are used. Behind such prism glasses the eyes are enabled to take up their position of least strain and the prismatic deviation secures that the images nevertheless meet the correct spots in both eyes.

Associated heterophoria is no disease but a visual defect. Prism glasses do not alter anything concerning the existence of this visual defect. They compensate for it – but only as long as they are worn. This is the same as with any other kind of visual defect, for instance with shortsightedness. Already existing cooperation with therapists show that the correct prism glasses can effectively support previous therapeutic activities.

### How shall associated heterophoria be determined?

Associated heterophoria can be determined with the **M**asuring and **C**orrecting Methodology after H.-J. **Haase (MCH)**, which has been successfully used for more than 50 years by optometrists and ophthalmologists both of whom being specialized in that field of activity. With this measurement, formerly also called "Polatest-method", the exam-

iner determines the position of least strain for the eyes. The measured values obtained in this way form the basis for manufacturing prism glasses.

Prism glasses which are determined according to the classical – even today still common – methods often prove to be incompatible as the measurement is carried out under other visual conditions which are less natural. This leads to great resistance concerning the prescription of prism glasses by ophthalmologists who were conventionally trained.

With associated heterophoria of high magnitude the prism glasses may after a sufficient and successful period of wearing be replaced by an operation of the ocular muscles, if nothing else because of the thickness and weightiness of the lenses.

### Criticism on MCH

Critics often make persons concerned insecure with the predication, prism glasses may lead to squint and therefore to an unnecessary operation of the ocular muscles. However, statistics on the basis of a large number of cases have shown that operations are only indicated in 2,4% of the cases (Günthert, Kurt: "Heterophorien im Spiegel der Statistik", Der Augenoptiker 12 (1980) 8-15).

Other critics refer to associated heterophoria as artifact of the measurement process and question the theoretical approach of the MCH. Though the practical successes with eyeglasses after MCH are beyond question, they cannot be considered as academic proof of the effectiveness of such eyeglasses, but according to the frequency of successes it appears highly unlikely that it is solely a placebo effect. This could only be clarified by highly complex studies.

Further on it is said, the compensation capability of the visual system is in any case sufficient to trouble-free compensate such a faulty position of the eyes. The system would merely be