



## World Ophthalmology Congress 2010

### Can new artificial intraocular lenses replace reading glasses?

**Berlin, March 2010 – More and more frequently patients can dispense with glasses after cataract surgery. This is made possible by modern lens implants, which enable both near and distant vision. In the meantime, this type of lens can replace glasses in cases of classic presbyopia. Progress in lens technology is one of the topics at the World Ophthalmology Congress (WOC® 2010). The world's largest ophthalmologic congress takes place in June in Berlin.**

We humans can focus on objects close up and far away because the lens of the eye changes its curvature. This ability, so-called accommodation, is lost with ageing. The diagnosis: presbyopia. "From the age of about 45, most people need a pair of reading glasses," says Thomas Kohnen, Deputy Director of the Clinic of Ophthalmology of the Goethe University Frankfurt on the Main, Germany. The artificial intraocular lens (IOL), which doctors implant in the eye during cataract surgery, can not actively steepen or flatten curvature. Patients also require reading glasses after this operation.

A multifocal IOL could help both groups. "This lens is shaped so that it guides light to two focal points," Kohnen explains in the run-up to WOC® 2010. This enables patients to focus clearly both near and far. The first multifocal IOL did not become established as it posed limitations, particularly regarding contrast sensitivity. Such problems now occur only to a minor degree with the latest generation of so-called apodized IOL. "A change in design has minimized optical side effects such as halos, glare and over exposure," Kohnen states.

This new type of IOL is used in Germany too. In a European multi-center study, in which the University Clinic Frankfurt took part, most patients were satisfied with the results. "Patients can not only focus near and far. Visual performance in the intermediate area, important for work at the computer, is often satisfactory. A total of 88% of patients are able to dispense with glasses completely following the operation," Kohnen reported. Patience is

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required after the operation, nevertheless. It can take up to twelve months for patients to become fully accustomed to the new lens. “During this time, the eyes and brain adjust to the IOL so that the visual result can improve further”, Kohnen explains.

Taking part in the study were chiefly those patients who required new lenses in any case as they had a cataract. Some had decided in favor of the operation themselves owing to presbyopia, and as they wished to do away with their reading glasses. According to experts, this is currently still the exception. However, as experience grows, the number of operations should also increase according to Kohnen, who will present the latest lens implant options at WOC® 2010.

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**Literature:**

Thomas Kohnen, Rudy Nuijts, Pierre Levy, Eduard Haefliger, Jose´ F. Alfonso: Visual function after bilateral implantation of apodized diffractive aspheric multifocal intraocular lenses with a D3.0 D addition. In: Journal of Cataract & Refractive Surgery 2009; 35:2062–2069

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*Germany plays host in 2010 to the largest international ophthalmologic congress with the World Ophthalmology Congress (WOC® 2010). In addition to the International Congress of Ophthalmology (ICO), the Annual Congress of the German Society of Ophthalmology (DOG) and the German Academy of Ophthalmology (AAD) will take place under the umbrella of WOC® 2010. From 3 to 6 June, 2010, AAD courses will be held in German. The international program in English will follow from 5 to 9 June. The organizers expect over 8,000 attendees from some 120 countries.*