

# SCHAPHOOTH MACULA LENS

**MEDI****NTUR**  
Vision of Expertise

THE MAGNIFIER IN THE EYE  
The new hope for patients with Macular Degeneration

During my ophthalmological practice macular diseases always have been my special concern, especially Age-related Macular Degeneration. However, I had to find again and again that patients evaluate treatment outcomes different from us doctors. While a patient maintains his ability to focus and orientate himself, he is usually not able to read anymore. These observations finally led to the development of our Macula Lens in cooperation with the Hungarian company Medicontur Medical Engineering.

*Prof. Gábor B. Scharioth*





# WHAT

# IS SML?

SML - THE “MAGNIFYING GLASS” IN THE EYE

SML - the Scharioth Macula Lens is an intraocular lens with a special central optic providing a high addition of +10 Diopters, developed by **Prof. Gábor B. Scharioth.**



# SML - THE MAGNIFIER IN THE EYE

SML is SAFE\*  
and EFFICIENT

01

Easy & safe  
surgery

02

Independent  
from lens status

03

Sufficient  
magnification

04

No reduction  
of visual field

05

Distance vision  
not affected

07

Affordable

06

Reversible



\* Proven Platform of Sulcus intraocular lens  
(present on the market since 2010; over 2500 pcs implanted).





# THE SML ACTS LIKE A MAGNIFIER IN THE EYE

## THE SML...

- enables you to read again and distinguish small details
- does not affect your distance vision
- will not influence your regular eye-checkup

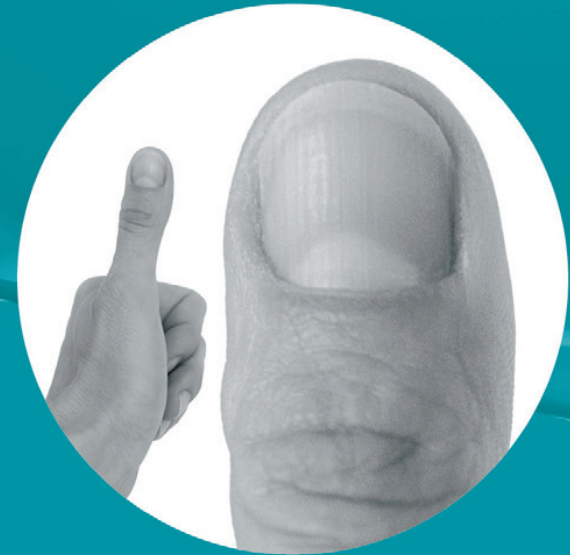
**NO MORE MAGNIFYING GLASSES -  
JUST FREE HANDS**

# Mode of Action: MAGNIFICATION

MAGNIFICATION  
(2-times)



Enlargement  
by zooming



## For Whom Is the SML recommended?

The SML has been developed for patients with MACULAR DEGENERATION – preferably DRY AMD but it might be helpful for patients with other macular diseases, for example myopic maculopathy, diabetic maculopathy or hereditary retinal diseases.

# YOUR QUESTION OUR ANSWER

## HOW DOES THE SML DIFFER FROM OTHER LENSES?

- SML is the only macular lens that can be implanted through a microincision – a tiny 2.2 mm corneal incision. All other AMD lens implants require a larger incision, which might affect post-surgery recovery.
- Surgery is easy and safe – takes only 15 min.
- Distance vision and visual field are not impaired after implantation of the SML.
- The SML is designed for pseudophakic patients – having an intraocular lens already. Therefore the SML is a secondary lens to be placed in front of a primary

intraocular lens. The SML can be implanted simultaneously during cataract surgery or years later.

## I KNOW THAT THESE LENSES ARE EXTREMELY EXPENSIVE. WHAT ABOUT SML?

The SML is less expensive than other AMD implants (in some cases 7–10 times less). The SML is affordable!



# Zoom In On Macular Degeneration

## WHAT IS MACULAR DEGENERATION?

- The term macular degeneration is used synonymously for a number of diseases affecting the “point of sharpest vision”, the macula.

### There are different types of Macular Degeneration:

- Age related macular degeneration
- Diabetic maculopathy
- Myopic macular degeneration
- And many others.

**Age-related macular degeneration (AMD) is the most common cause of vision loss in those aged over 55.**

For reasons that are unclear AMD tends to be more common in women than men. People of Caucasian or Chinese ethnicity are more likely to get AMD than other ethnic groups. As would be expected by its name, age is one of the most important risk factors for AMD. It is estimated that around 1 in 10 people aged between 55–64 years have AMD. This ratio rises to 1 in 2 people aged 85 years or over.

## WHAT IS THE MACULA ?

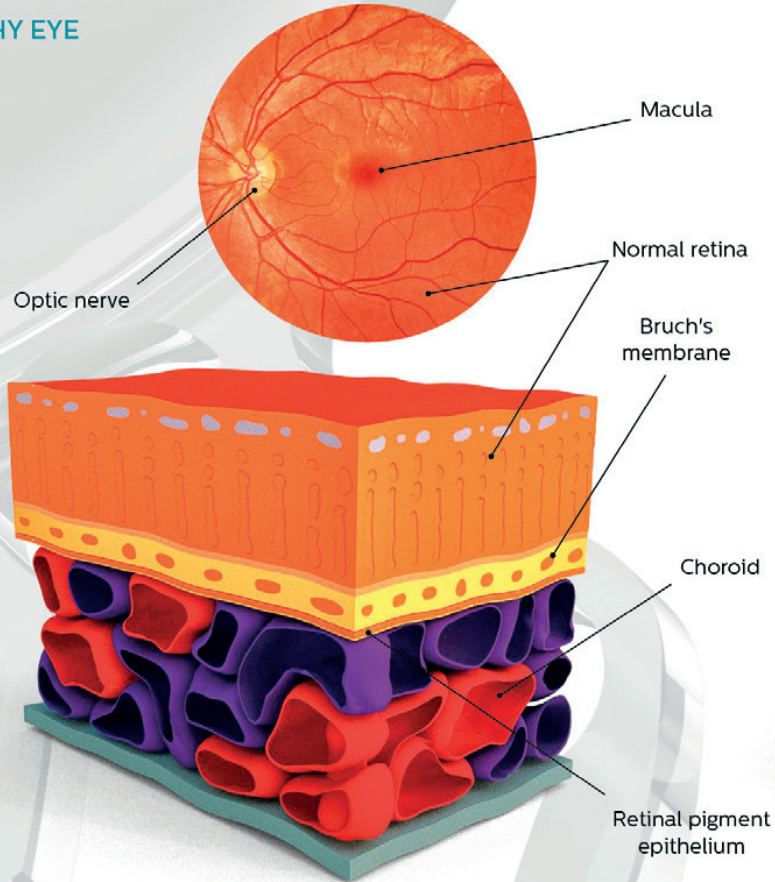
Macula: the few square millimeters wide area of sharpest vision. The [macula is essential for central vision](#). AMD comes with deposits that occur at an early stage of the disease, usually unnoticed by the patient. In the further course of the disease there is a downfall of the retinal tissue in the macula, resulting in a more or less reduced visual performance. [This first form is referred to as dry macular degeneration](#).

Alternatively, blood vessel membranes can grow under the retina in the course of the disease. These membranes easily leak or rupture, causing fluid retention (edema) or bleeding. This latter form is referred to as [wet macular degeneration](#).

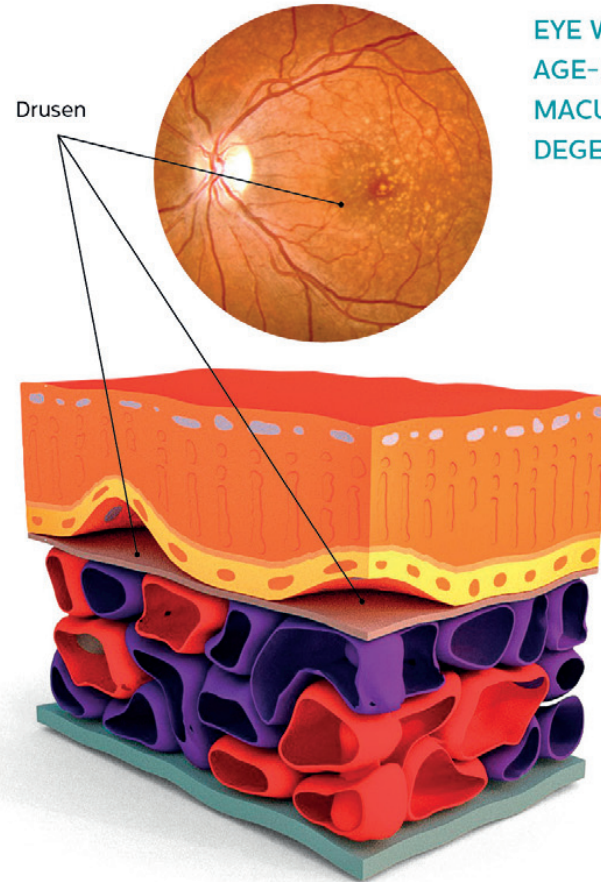
# Age-Related Macular Degeneration

Age-related macular degeneration (AMD) is an eye condition that occurs when cells in the macula degenerate. Macula, the most sensitive part of retina, can not function as it should normally, which leads to deterioration of central vision.

## HEALTHY EYE



## EYE WITH AGE-RELATED MACULAR DEGENERATION



With AMD, dark areas may appear  
in your central vision



Damage to the macula affects your central vision, which is needed for reading, writing, driving, recognizing people's faces and doing other fine tasks. It also affects your color vision and leads to lower contrast sensitivity.



# YOUR QUESTION OUR ANSWER

## **MY MACULAR DEGENERATION WILL BE CURED AFTER IMPLANTATION OF THE SML?**

The SML does not cure the AMD. The SML will improve your visual acuity, your ability to read and to see more detailed. Remember: After SML implantation you still have to follow the medication & procedures prescribed by your doctor in order to stop or slow down the progression of your AMD. However, the SML will significantly improve your near vision, adding quality to your life.

## **HOW CAN I KNOW THAT SML WILL WORK IN MY CASE?**

Talk to your doctor who underwent a special SML training. He will do the necessary examinations and simulation tests. These tests will show if any improved vision can

be reached in your case. After this you can decide whether the SML is the right choice for you.

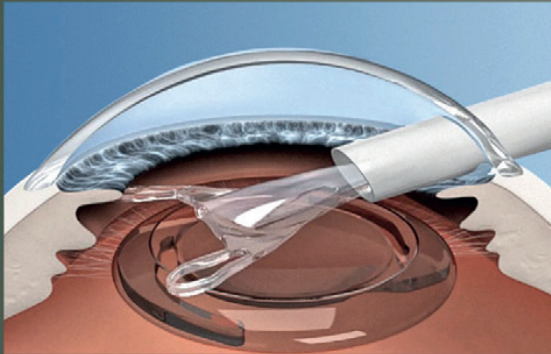
## **CAN I DO SOMETHING TO DECREASE THE RISK OF DEVELOPMENT OR TO STOP THE PROGRESSION OF MY AMD?**

The development of AMD depends on many factors. If you follow the prescriptions and recommendations you might be able to improve or stabilize your AMD condition:

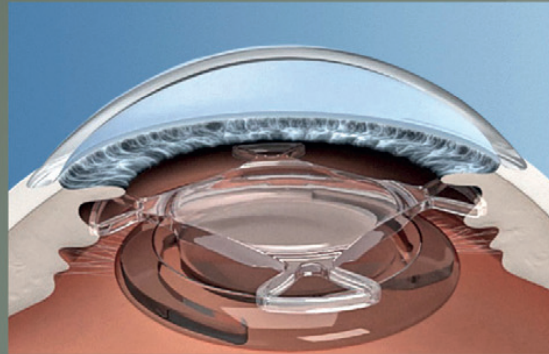
- moderate your consumption of alcohol
- eat a healthy diet with at least five portions of fruit and vegetables a day
- try to achieve or maintain a healthy weight
- consider taking vitamin and mineral supplements
- consult your doctor

# SML Surgery

- The **implantation SML** is performed **under sterile conditions**.
- For high precision the surgery is performed **under microscope**.
- The SML, just like any other foldable intraocular lens, will unfold during implantation and can easily be **placed into the ciliary sulcus, the space in-between the primary artificial intraocular lens and the Iris** (the colorful part of your eye).
- A suture is not required, since the wound closes by itself.
- The implantation of SML **takes only 15 minutes**.
- Surgery may be performed simultaneously with cataract surgery, or years later  
- **the SML may be implanted anytime**.



Implantation of the SML into the ciliary sulcus.



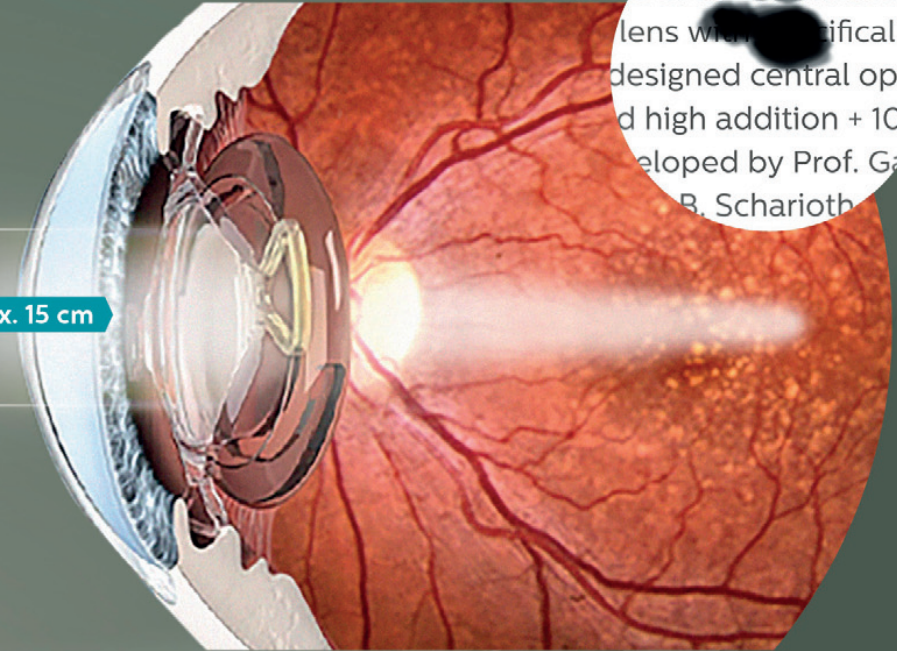
Position of the SML in the ciliary sulcus.



# SML: Microscopic Magnifier in the EYE

Scharioth Macu...  
s SML + 15 Intraocu...  
lens with specifically  
des... optic...  
d high ac... 10.0...  
veloped by Prof. Ga...  
B. Scharioth

Reading distance approx. 15 cm



Scharioth Macu...  
s SML + 15 Intraocu...  
lens with specifically  
designed central optic...  
d high addition + 10.0...  
veloped by Prof. Ga...  
B. Scharioth



DO NOT FORGET:  
WITH THE SML  
YOU HAVE TO READ  
FROM  
A DISTANCE  
OF APPROX.  
15 cm





**AND  
AFTER  
THE  
SURGERY?**

# YOUR QUESTION OUR ANSWER

The recovery after surgery is usually very quick and most probably you will experience a significant improvement in your reading ability from the first day after surgery. Eventually you might need a little bit more time to adapt and to train your brain to use the benefits of your newly implanted SML.

## SHOULD I FOLLOW SPECIAL TRAINING INSTRUCTIONS?

Your doctor will assist you in your rehabilitation, to “train your brain” using the newly implanted SML.

**BUT DO NOT FORGET: After SML implantation you have to read from a distance of approx. 15 cm !**

## THERE IS A LOT OF ON-GOING RESEARCH REGARDING THE TREATMENT OF MACULAR DEGENERATION (E. G. STEM CELL OR GENETICAL TREATMENT).

**I AM AFRAID THAT AFTER I GOT IMPLANTED WITH THE SML I WILL NOT BE ELIGIBLE FOR SUCH TREATMENT IF AVAILABLE IN THE FUTURE.**

The SML implantation is fully reversible and does not represent any obstacle to any other treatment that might be chosen later.





**READ  
THE STORY  
OF THE FIRST  
PATIENT  
IMPLANTED  
WITH THE  
SML**



## Mr E. Beckmann was the first patient – worldwide – implanted with the SML.

Six months after implantation SML  
Mr E. Beckmann describes his life as follows:

*“My vision was getting worse and worse over the years and I have to obtain so many different low vision aids. Recently, before the surgery I had to rely on a very strong magnifier and a screen reader. It made my life very limited.”*

*“Today, I can read small print and take a closer look at delicate woodwork.”*







Talk to your doctor.

Ask for the opportunity to be implanted with SML.

The SML might significantly improve your reading abilities. The SML might allow you to enjoy your hobbies again, improving the quality of your life.

BRING  
BACK  
QUALITY  
TO  
YOUR  
LIFE



A man with dark hair, wearing a white pinstriped shirt and a dark tie with white stripes, is shown in profile, smiling and looking upwards and to the left. The image has a teal overlay on the left side, which contains white text. The background is a light-colored wall with some framed pictures or posters.

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