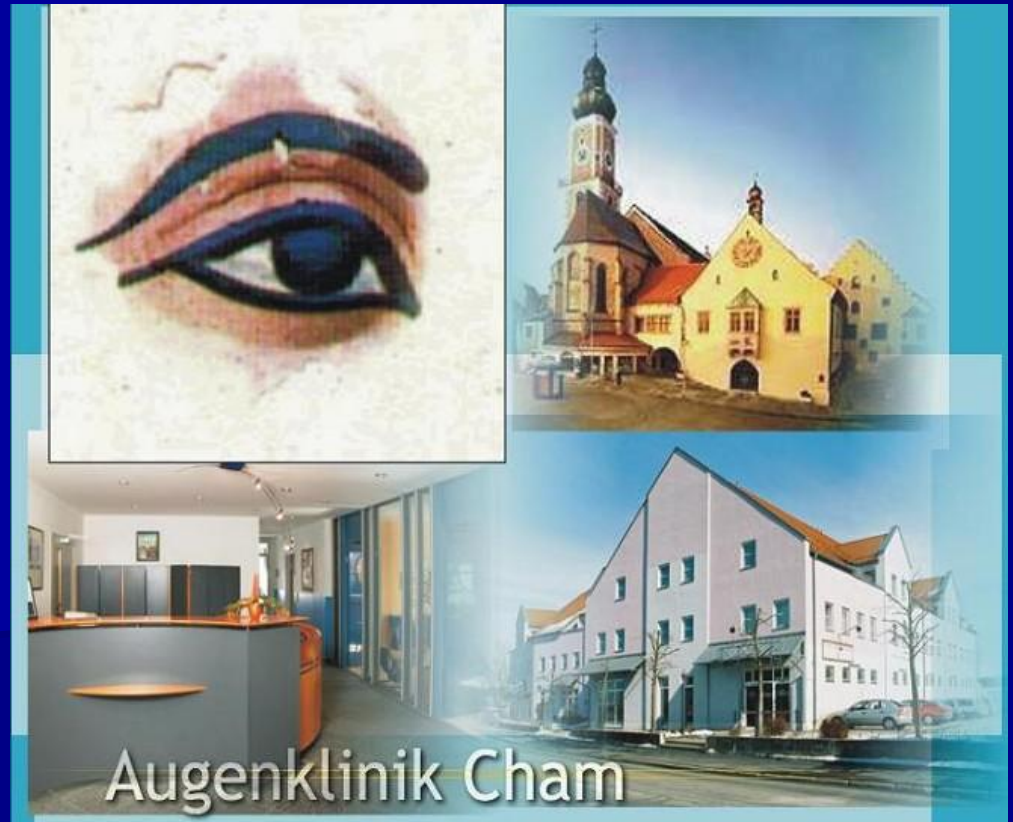


Comparison of the results three months and twelve months after the implantation of the trifocal IOL Fine Vision

Dr. Magda Rau,
Augenlinik Cham
Germany

No financial interest



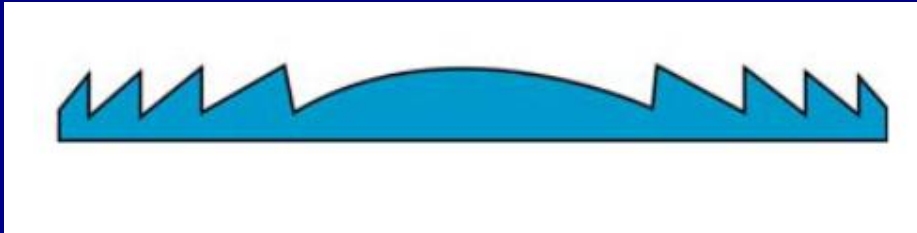
FineVision® (Physiol)

The idea of Daniel Gatinel with the FineVision IOL was to combine two IOL designs that would result in a true three-foci design.

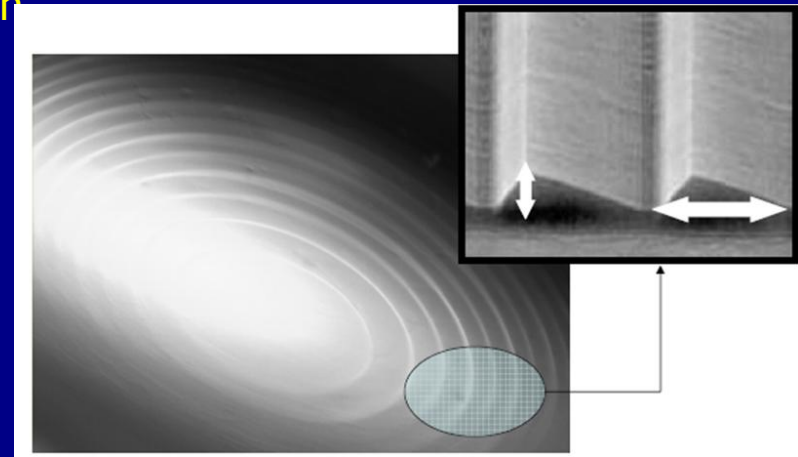
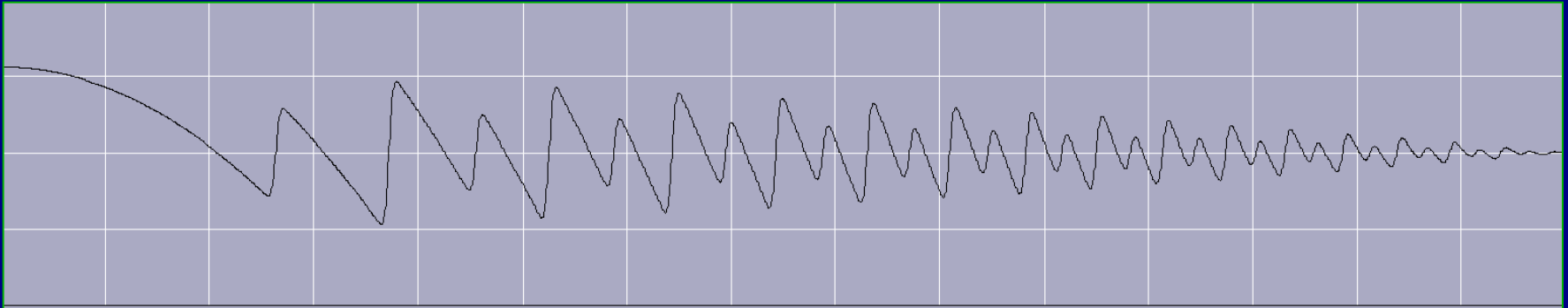
The trifocal diffractive multifocal IOL FineVISION® combines two diffractive structures over the whole optic to achieve true three focalities:

one with a 3.50 D addition for near vision
and one with a 1.75 D addition for intermediate vision

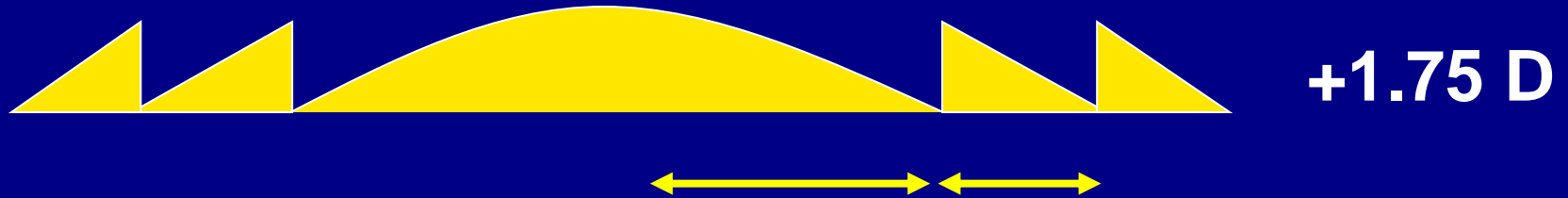
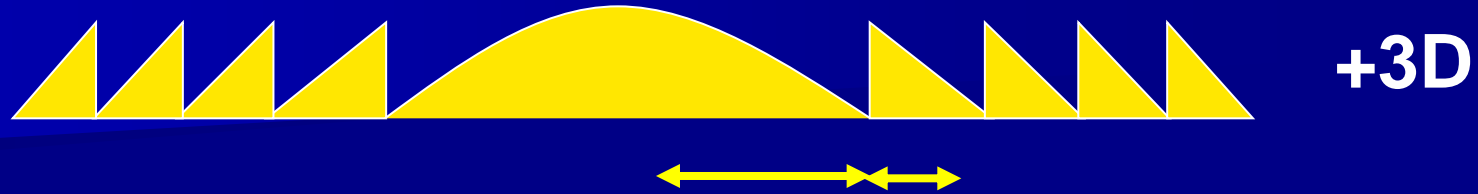
Bifocal diffractive lens



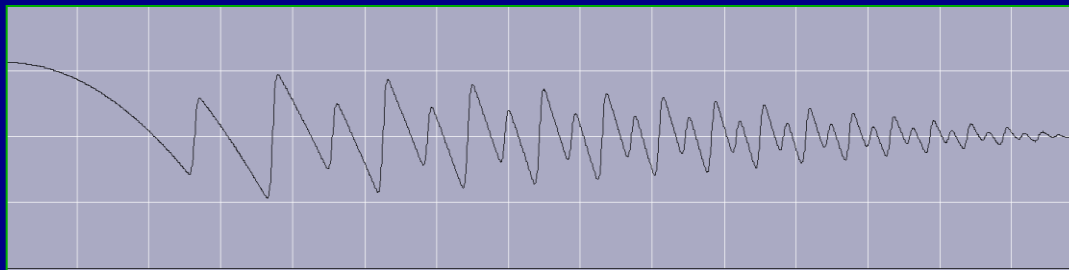
Trifocal diffractive lens



The size of diffractive steps intended the addition



The Fine Vision is apodized: the step height decreases from the center towards the periphery. This diffractive pattern is then pupil dependent allocating more energy to far vision in mesopic conditions (large pupil)



FineVision® (Physiol)



Material :

- Hydrophilic Acrylate with 25 % water content

Yellow: UV and blue light blocker

Dimensions : Overall 10.75 mm
Optic body 6.15 mm

Angulation : 5°

A-constant : 118.72 (IOL-Master), 118.5 (US)

Optic is biconvex and aspheric

Power range: 10.00 to 30.00 D in 0.50 D steps

Prospective consecutive clinical study

- August 2011 – May 2013
- Fine Vision in 44 eyes of 22 Patients
- mean age : 63
- IOL Power +12,5 to +26,5 D
- Follow up 3 and 12 months after the second Implantation

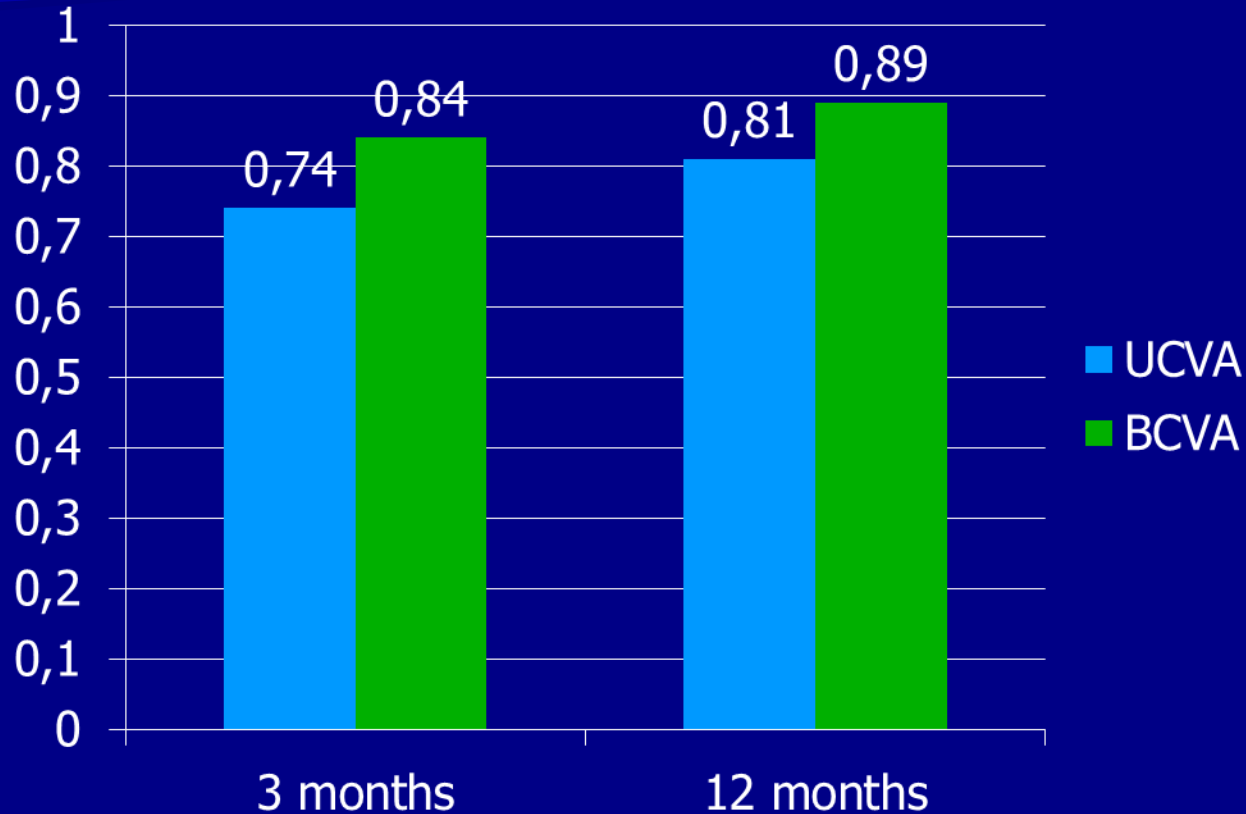
Selection criteria

- No retinal and optic nerve pathology
- Strong considered desire to achieve spectacle independence
- Willingness to accept potential optical side effects and longer optical adaptation period after surgery

- Exclusion criteria:

- Patients who had never been satisfied with prescription of multifocal glasses
- Patients with overly high expectations for postoperative vision, anxious or demanding persons
- Patients whose jobs demand high visual acuity in the near or people who work at night.
- Astigmatism higher than 1.25 D

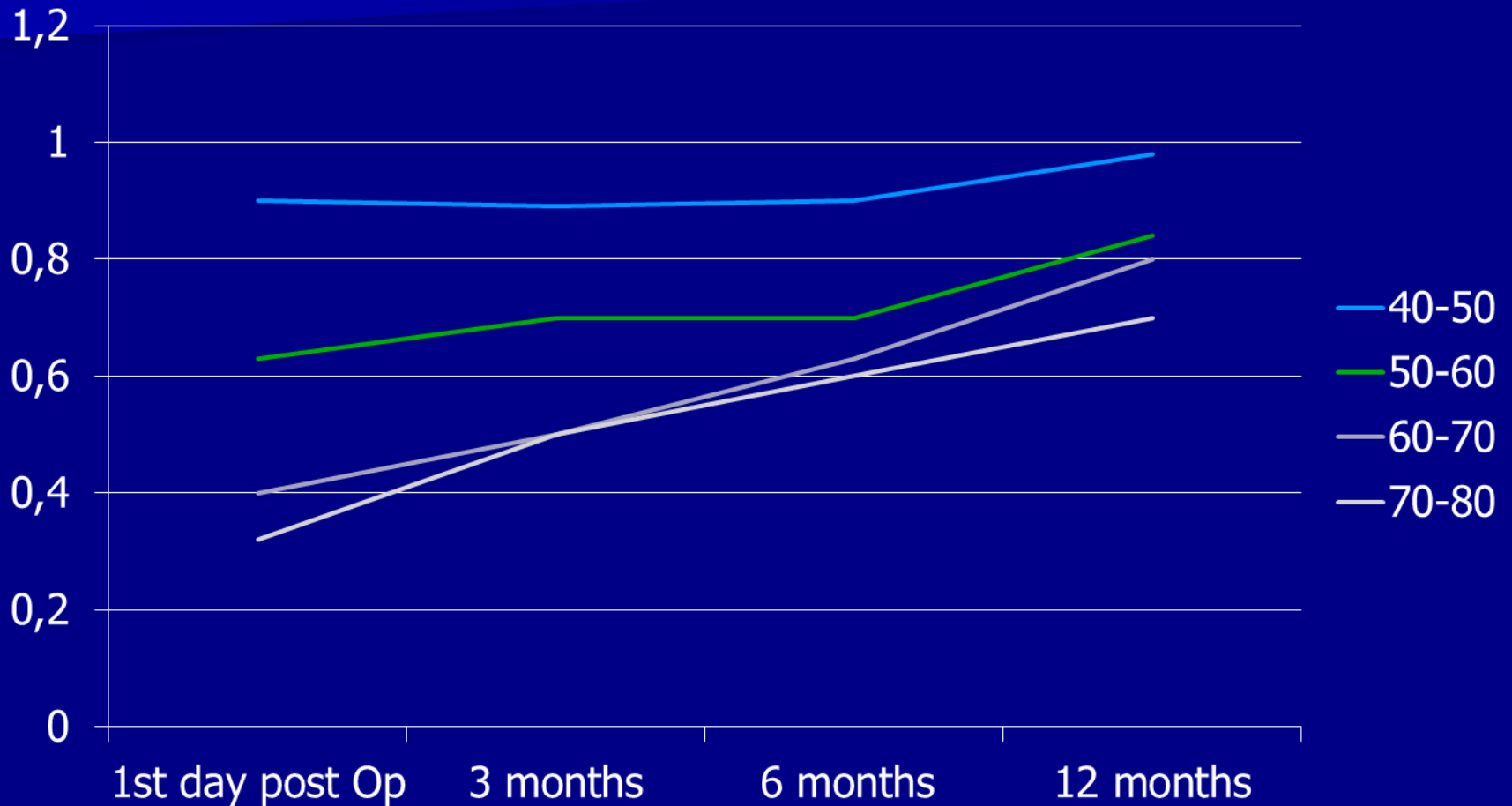
Mean UCVA and BCVA Distance (3 and 12 months post-OP)



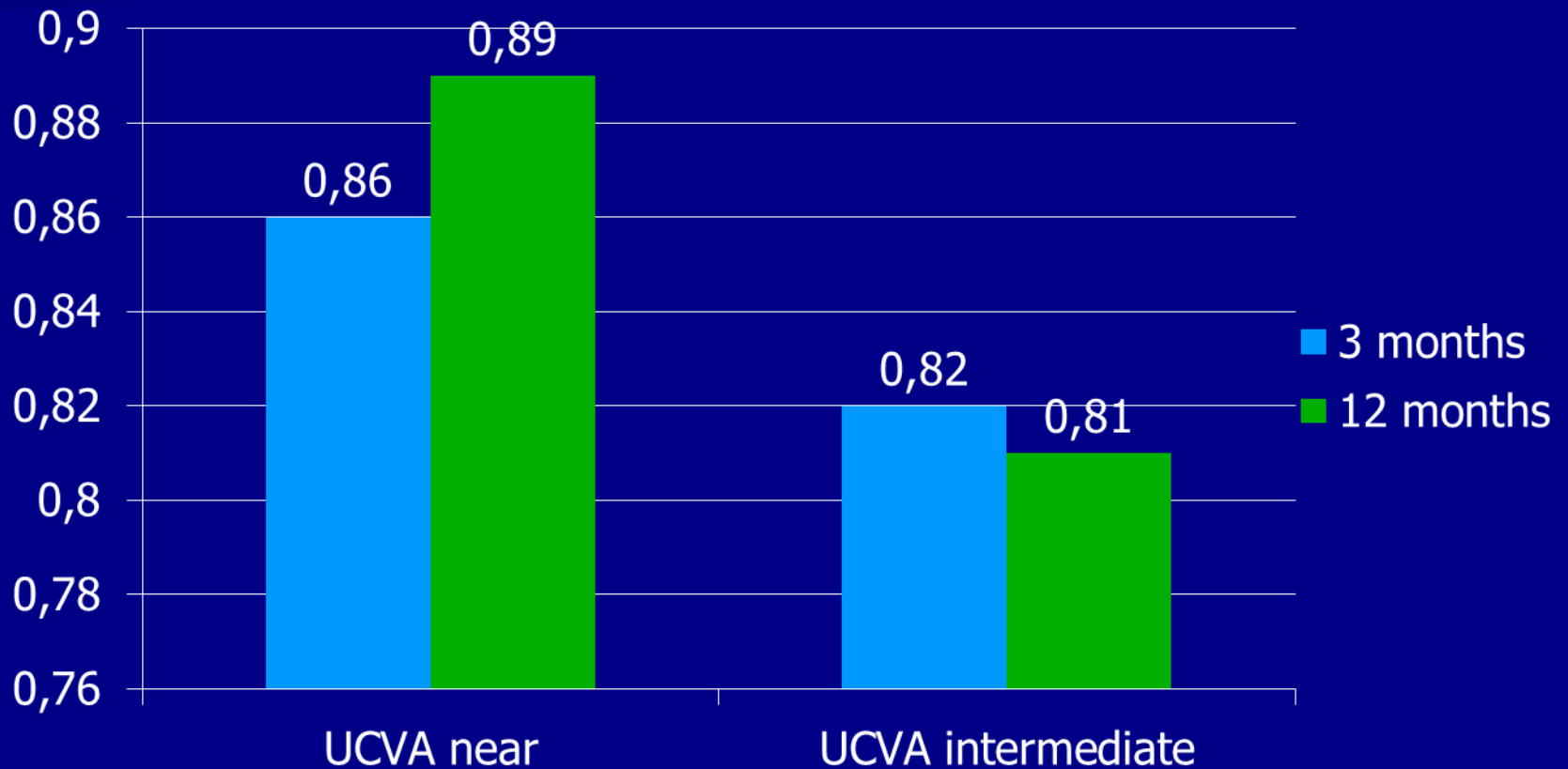
Mean correction after 3 months: -0,35 D

Mean correction after 12 months: -0,25 D

UCVA after 3, 6 and 12 months



Mean UCVA for intermediate / for near (3 and 12 months post-OP)



Contrast sensitivity

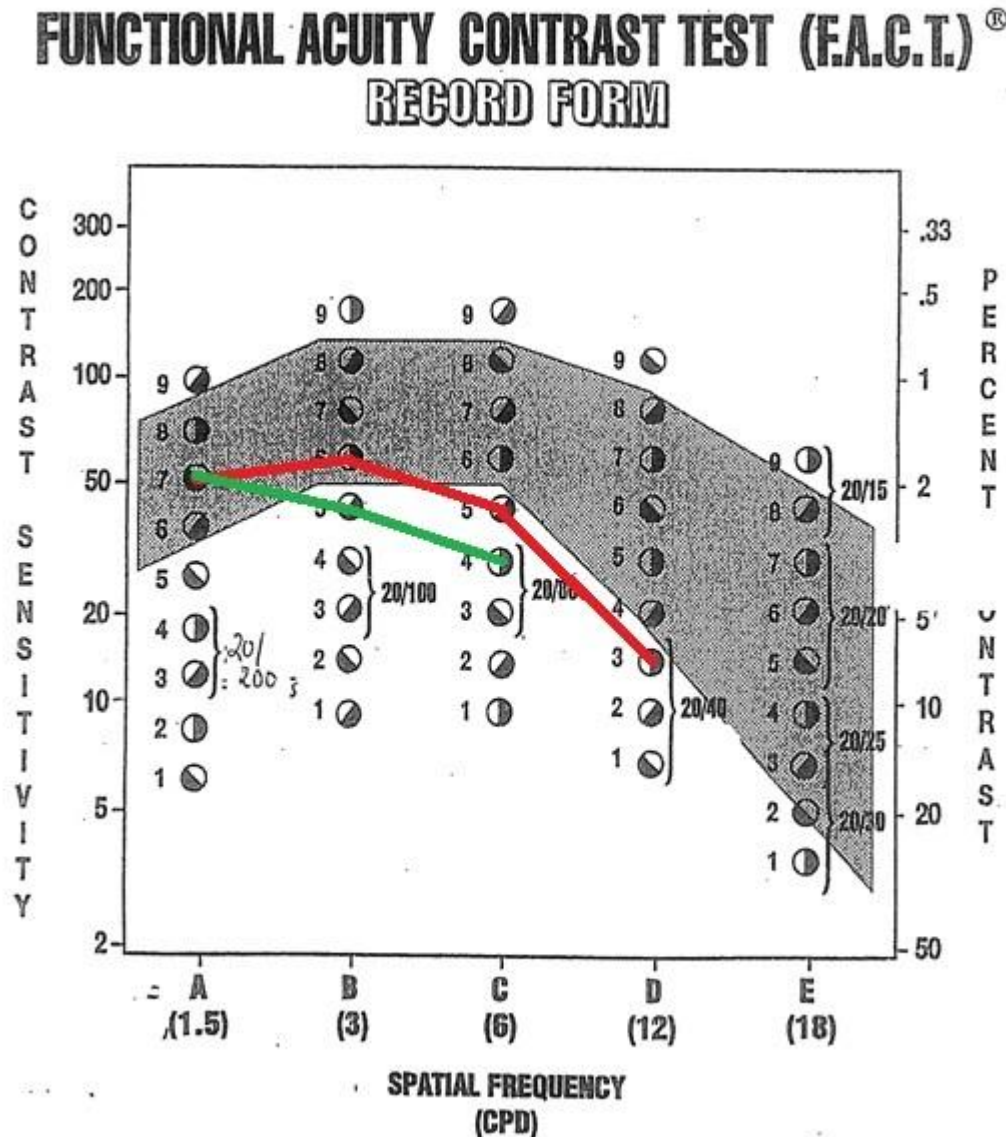
The contrast sensitivity didn't show any changes between 3 and 12 months.

Fine Vision

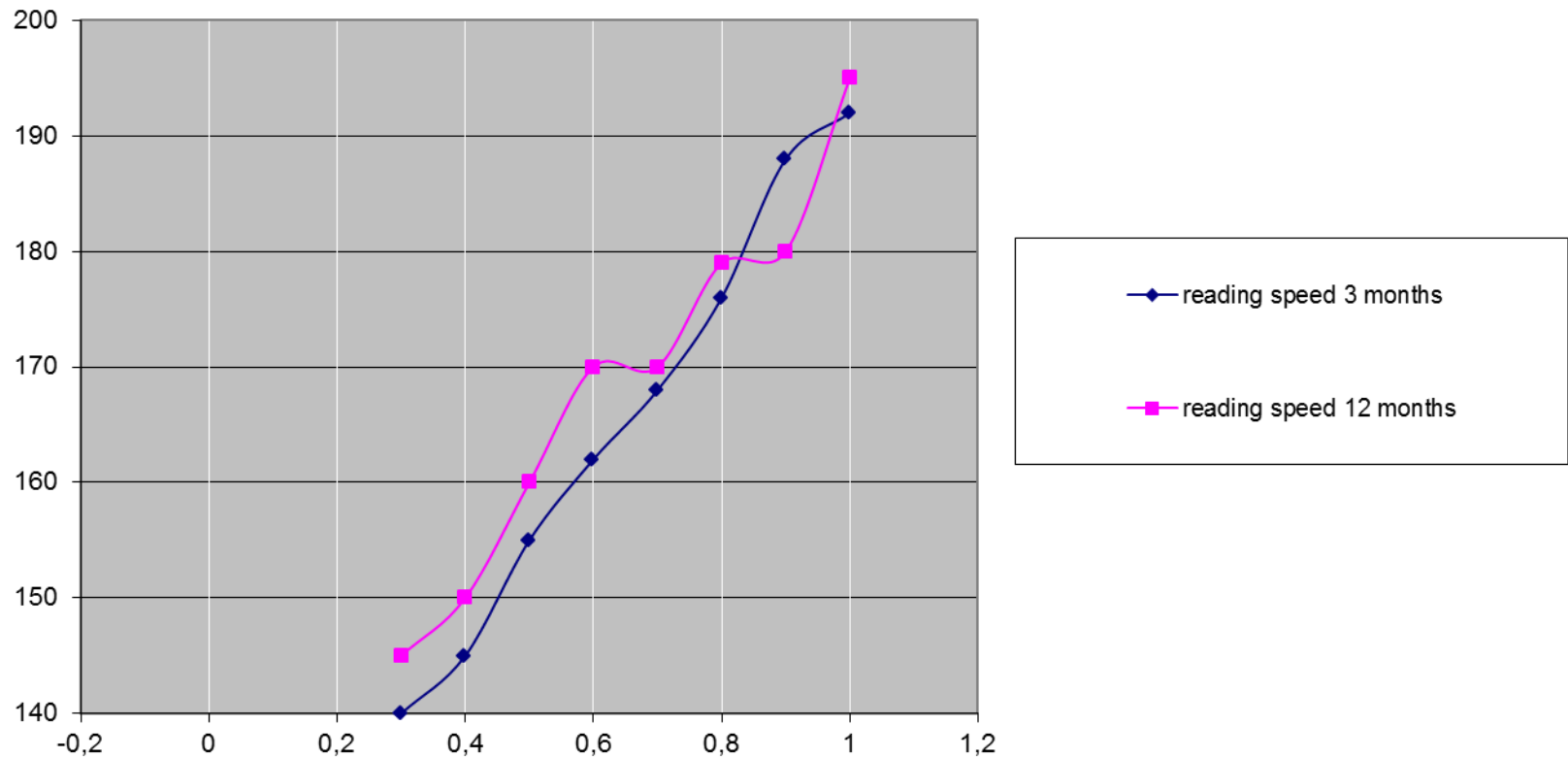
mesopic

photopic

test with functional acuity contrast method – developed by B.P. Ginsburg

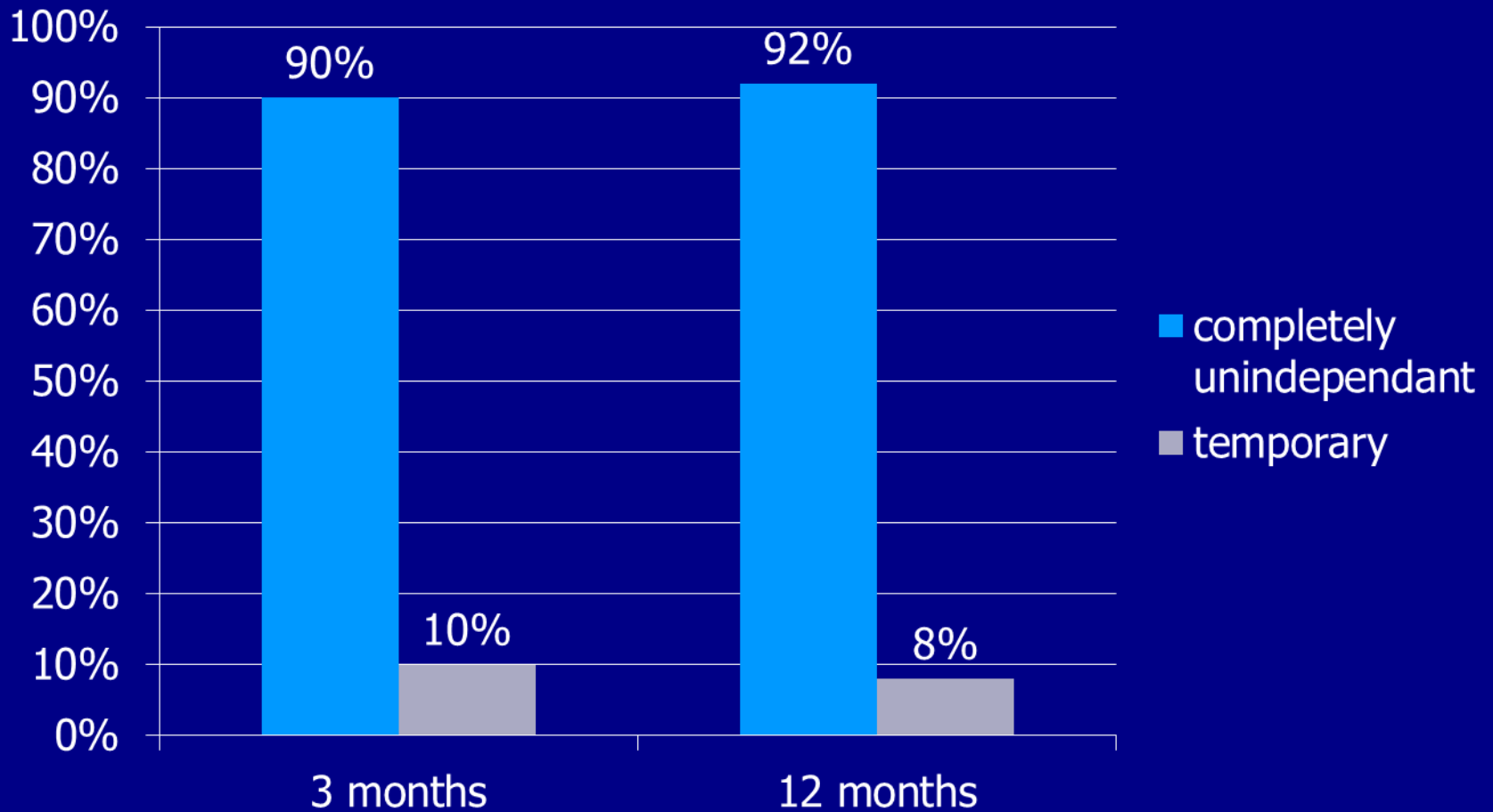


Reading Speed

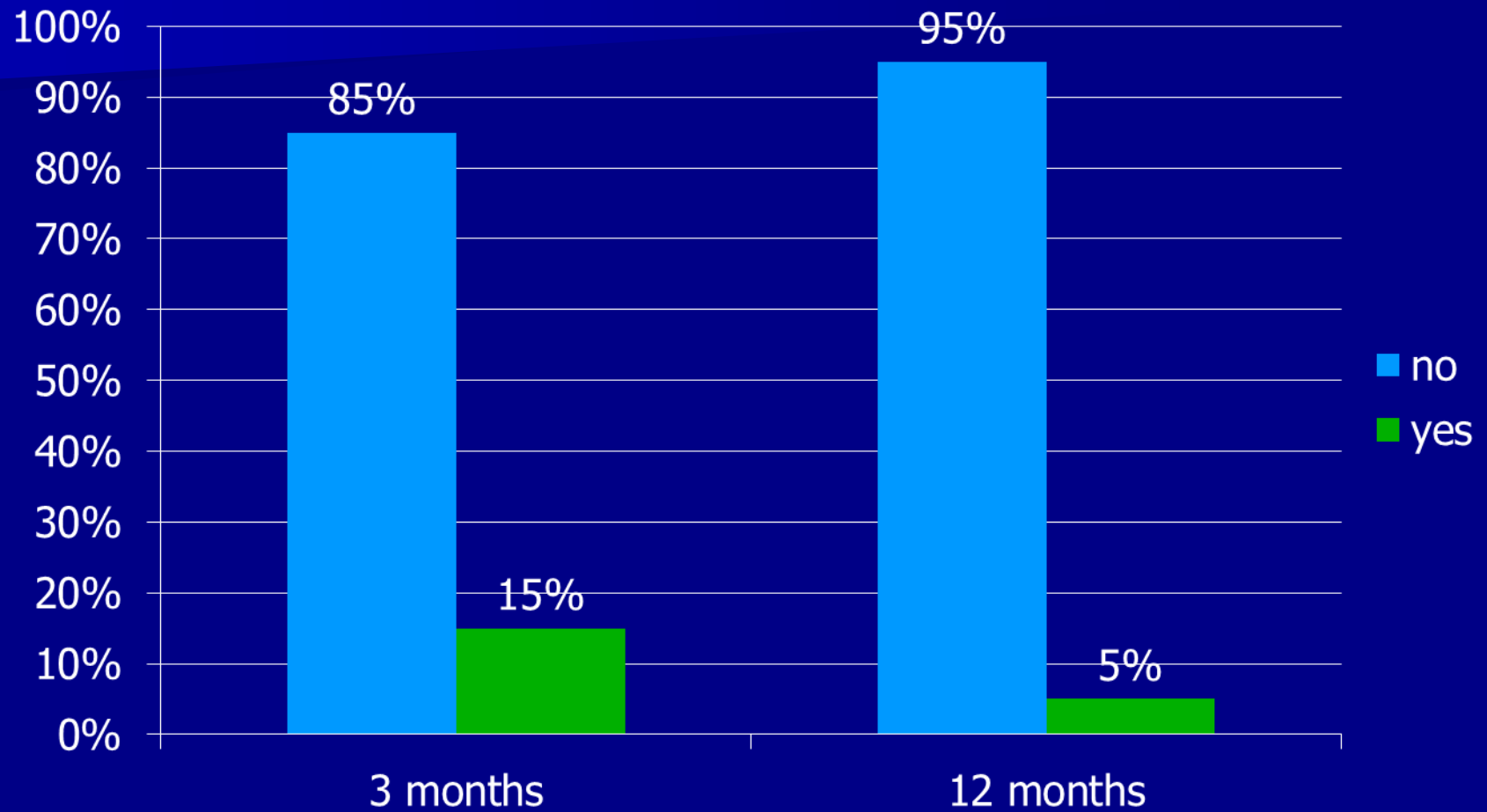


Results achieved with Radner Charts under photopic (100 cd/m^2) conditions at 40cm distance

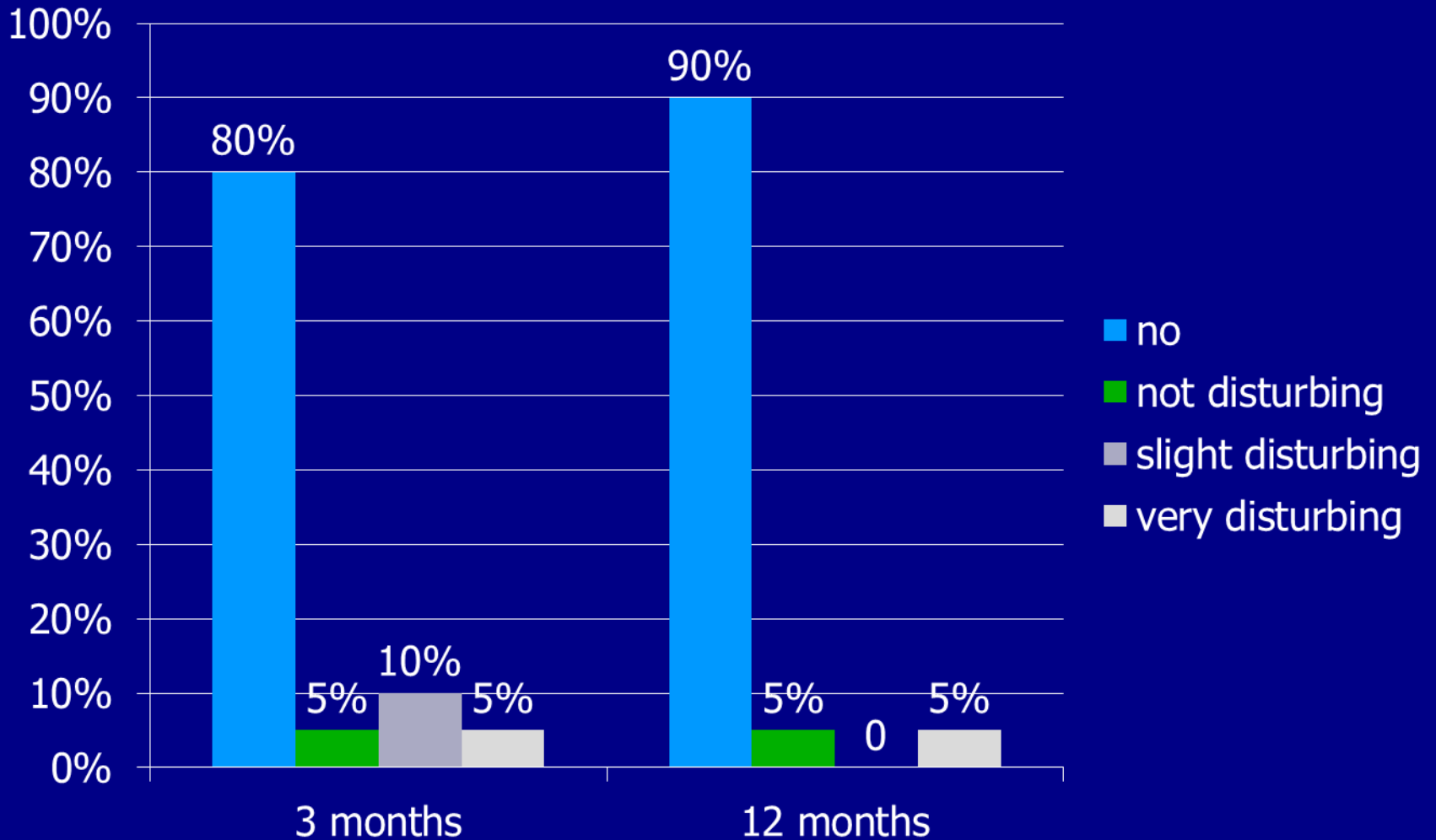
Do you need glasses??



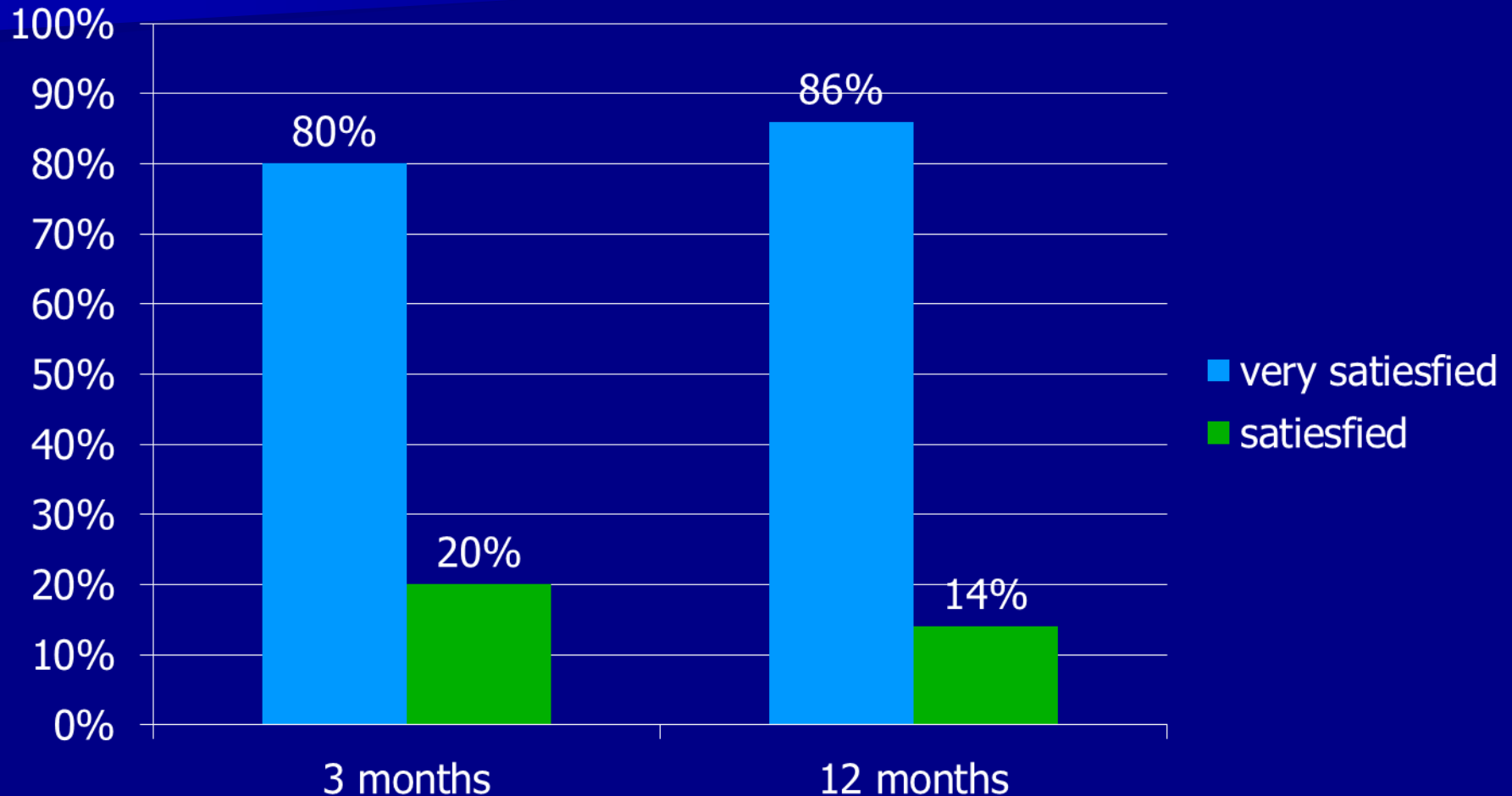
Do you experience Glare?



Do you notice halos?



Are you satisfied with the optical results after implantation of Fine Vision®?



Conclusion

- The results of implantations of Fine Vision®trifocal IOL at 12 months ,when compared with those after 3 months show improvement in both corrected and not corrected distance visual acuity,steady intermediate vision and slight improvement in near vision with increase of reading speed.
- Although still present at 12 months ,the perception of halos and glare decreased.
- Only one patients (2,5%) of our studie needed a Yag-laser treatment because of PCO.
- This study confirms that the optical rehabilitation after implantation of multifocal IOL Fine Vision is not completed after 3 months and continues up to 12 months.
- It may be that trifocality in IOLs means a longer period of neuroadaptation.

Thank you for your kind attention!

