



# **Welkom bij Koninklijke Visio**

**Expertisecentrum voor slechtziende en  
blinde mensen**

**Jan Koopman – Klinisch fysicus**

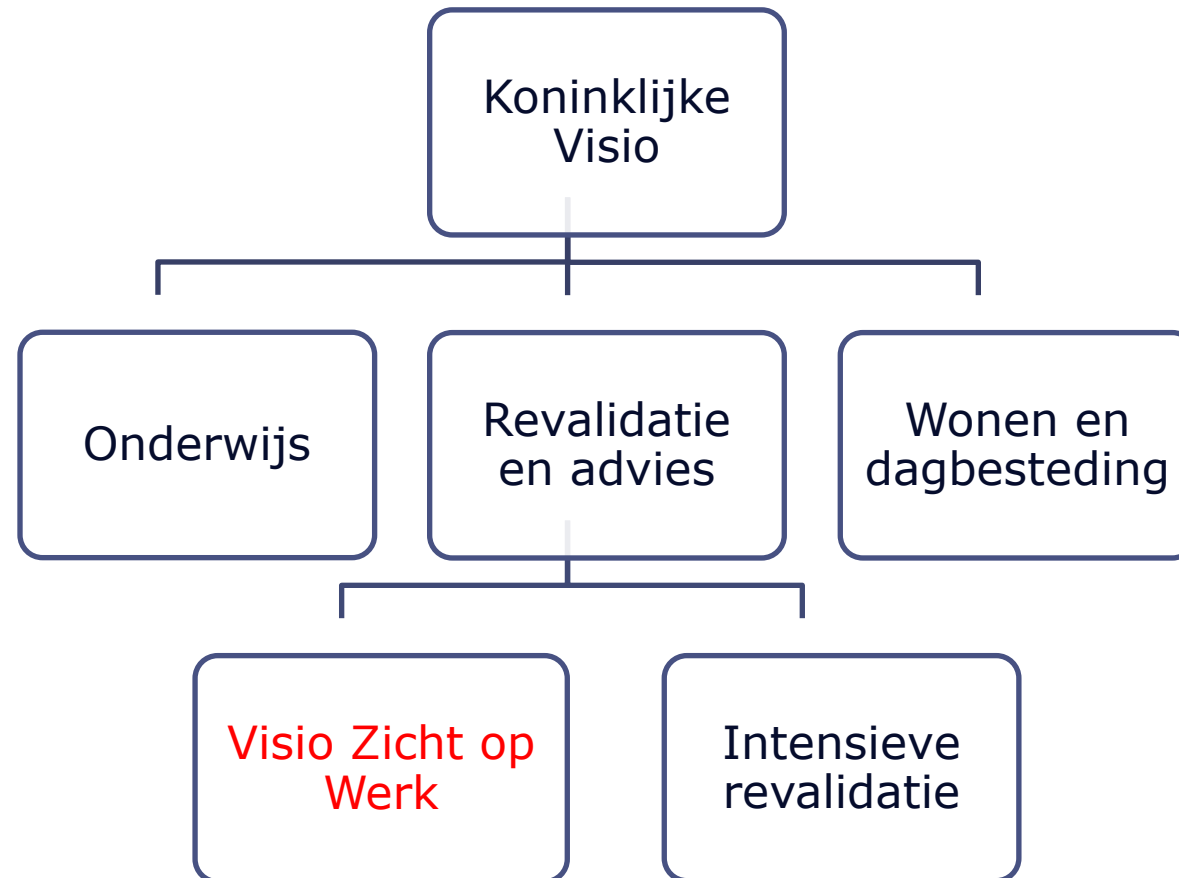
**Sandra Sneekes - Adviseur arbeid**

## BG-dag

### Disclosure belangen spreker

|   |                   |
|---|-------------------|
| (potentiële)<br>belangenverstremgeling  | Geen              |
| Voor bijeenkomst mogelijk<br>relevante relaties met bedrijven   | Geen              |
| <ul style="list-style-type: none"><li>• Sponsoring en onderzoeksgelden</li><li>• Adviseurschappen en honorarium incl. sprekersvergoedingen &gt; € 500</li></ul> | Koninklijke Visio |

Hoe kan Visio uw (uitgevallen) medewerker met visuele klachten helpen om weer duurzaam inzetbaar te worden?



# Neurovisuele Revalidatie

Jan Koopman, klinisch fysicus

Koninklijke Visio – Amsterdam



Dank aan prof. Joost Heutink,  
Koninklijke Visio – Team Onderzoek & Zorgverbetering  
Rijksuniversiteit Groningen – Klinische en Ontwikkelingsneuropsychologie

## Wat is visuele revalidatie?

Neurovisuele revalidatie richt zich op het verminderen van de impact van visusproblemen die het gevolg zijn van veranderingen in de hersenen, door verworven of traumatisch hersenletsel of door normale veroudering.

Multidisciplinair team: klinisch fysicus, oogarts, neuropsycholoog, ergotherapeut, optometrist, orthoptist, maatschappelijk werker, job-coach.

Interventies, trainingen en adviezen zijn een combinatie van cognitieve revalidatie en low vision revalidatie

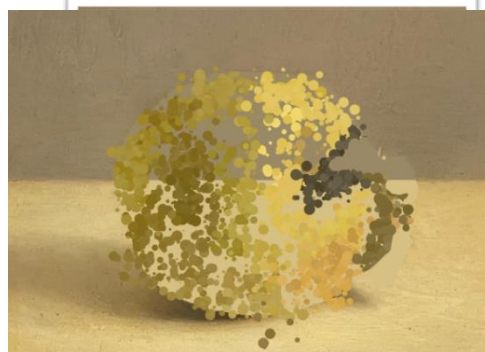
# Visusproblemen door verworven hersenschade



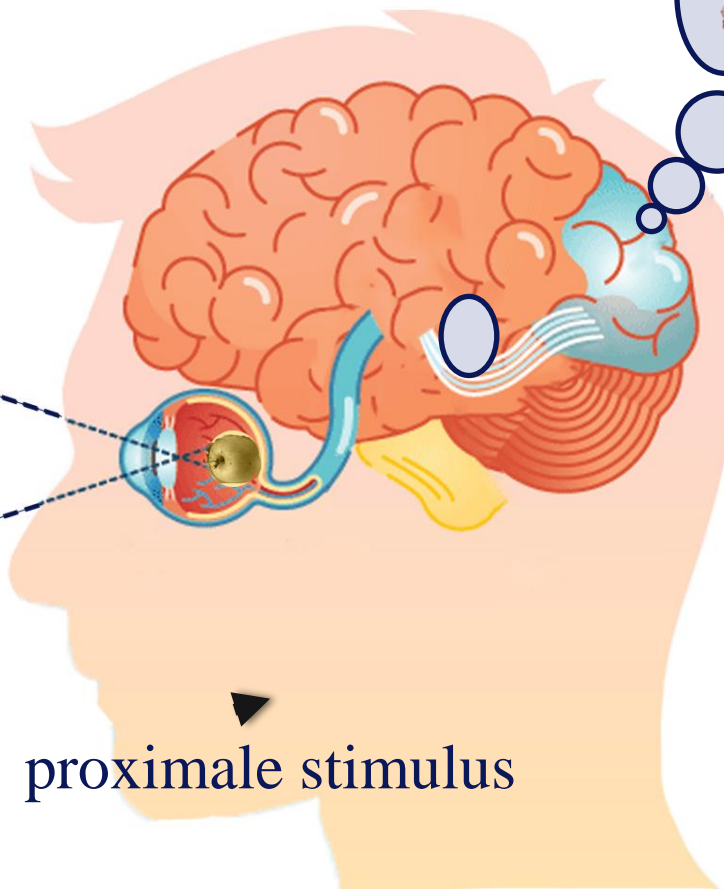




# Visuele perceptie is de reconstructie van de distale stimulus op basis van de proximale stimulus



distale stimulus



proximale stimulus



percept

13

12

13

14

A 13 C

D 12  
13 C  
14



Visuele perceptie is een **reconstructie** van onze omgeving ...

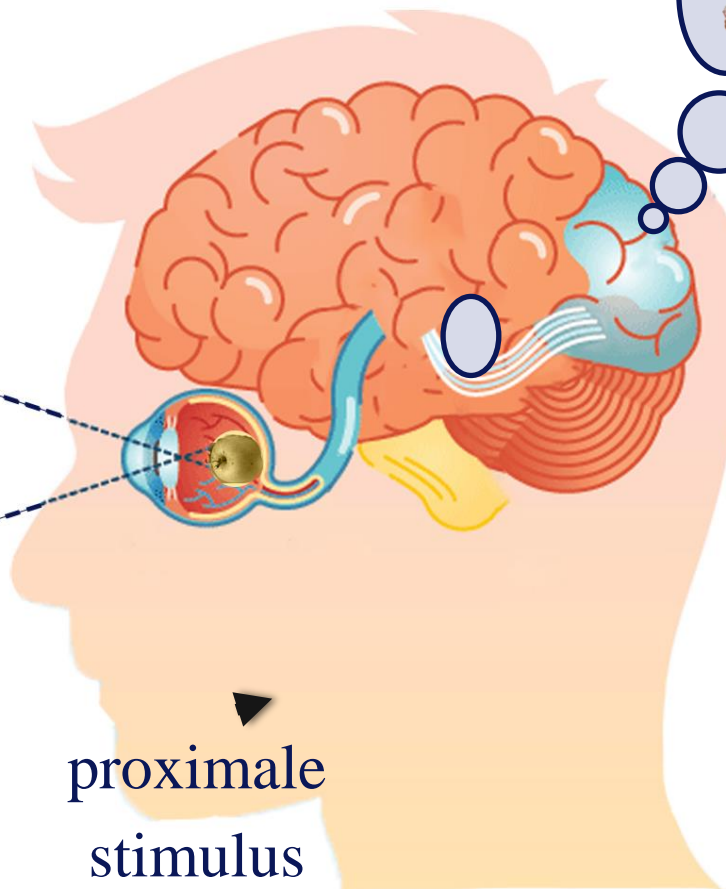
... die onze hersenen in staat stelt om om de buitenwereld te **interpreteren** en te **duiden**, zodat we met die wereld kunnen **interacteren** ...

... en die het mogelijk maakt onze omgeving te **voorspellen** zodat we erop kunnen **anticiperen**.





Distale stimulus



proximale stimulus



percept

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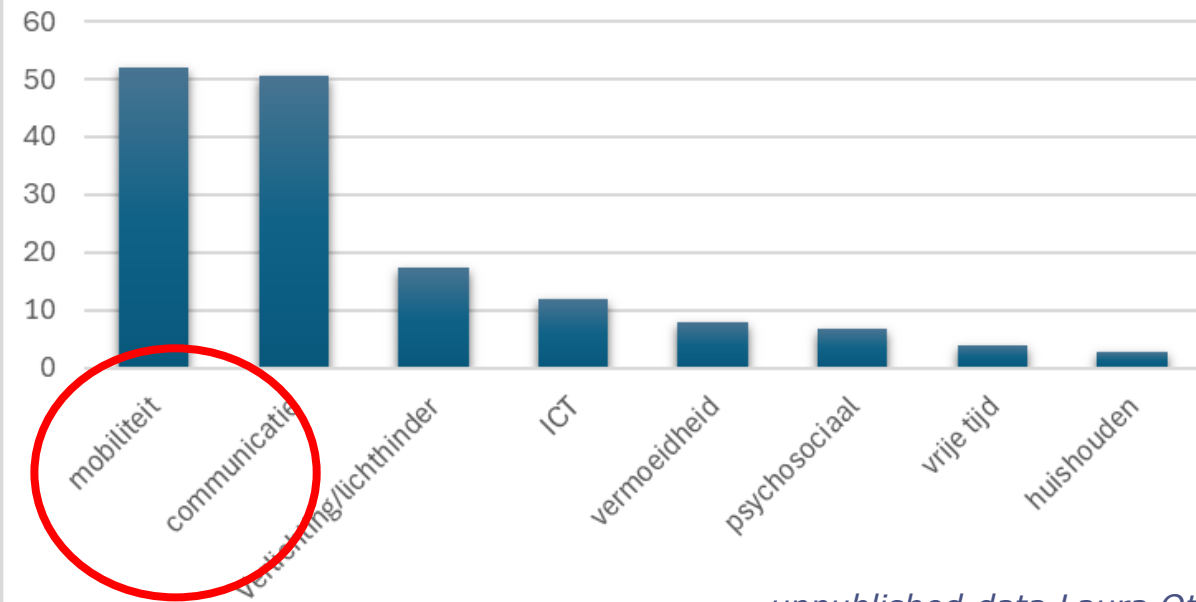
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Revalidatie gericht op

- activiteiten
- klachten

### Vragen op het gebied van ...



unpublished data Laura Otting



## Cohort:

(n=54) mensen met hemianopsie verwezen voor revalidatie bij Visio  
37 linkszijdig HVFD; 17 rechtszijdig HVFD; 5-20 maand sinds laesie (gem. 20)  
Allen: visus > 0.5 ; geen perceptiestoornissen, geen neglect; geen  
oogbewegings-stoornissen

## Spontante klachten:

Dingen niet op tijd zien

- Geen overzicht hebben
- Gedesoriënteerd zijn
- Moeite met lezen
- Vermoeidheid

Journal of  
Neuro-Ophthalmology

The Official Journal of the North American Neuro-Ophthalmology Society

[Articles & Issues](#) [Collections](#) [COVID-19](#) [Tele-Neuro-Ophthalmology](#) [Trainees' Corner](#) [Surgeons' Corner](#) [For Authors](#)

ORIGINAL CONTRIBUTION

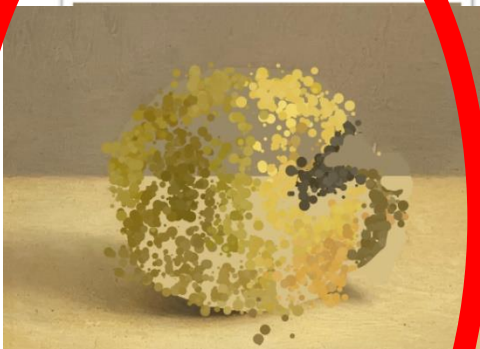
### Difficulties in Daily Life Reported by Patients With Homonymous Visual Field Defects

de Haan, Gera A. MSc; Heutink, Joost PhD; Melis-Dankers, Bart J. M. PhD; Brouwer, Wiebo H. PhD; Tucha, Oliver PhD

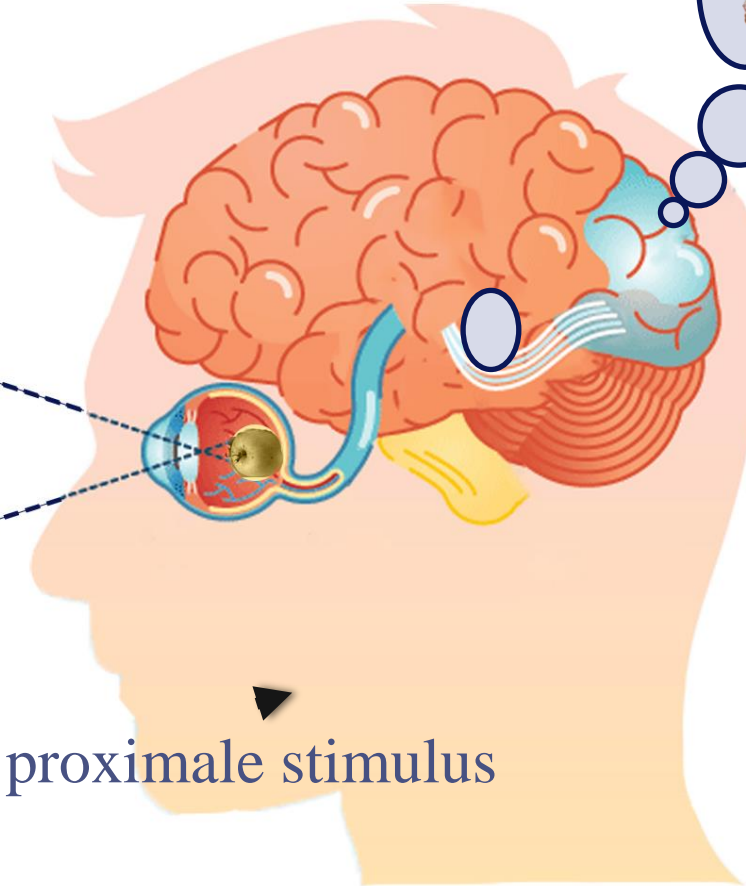
Author Information

Journal of Neuro-Ophthalmology 35(3):p 259-264, September 2015. | DOI: 10.1097/WNO.0000000000000244

# Distale stimulus optimaliseren



Distale stimulus



proximale stimulus

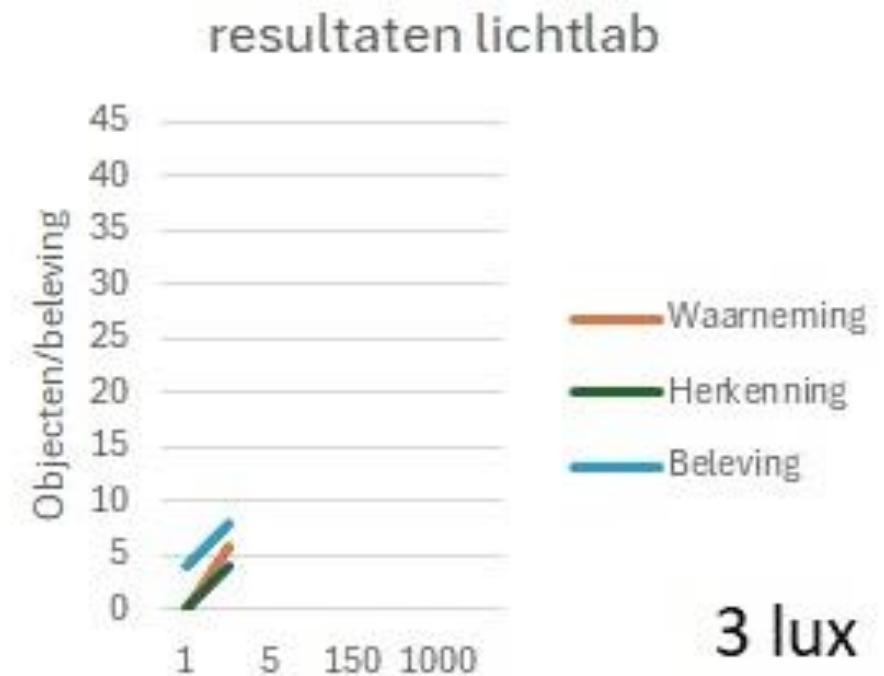


percept

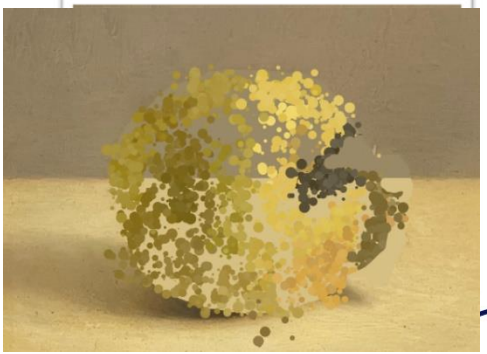
# Verlichting/Lichthinder



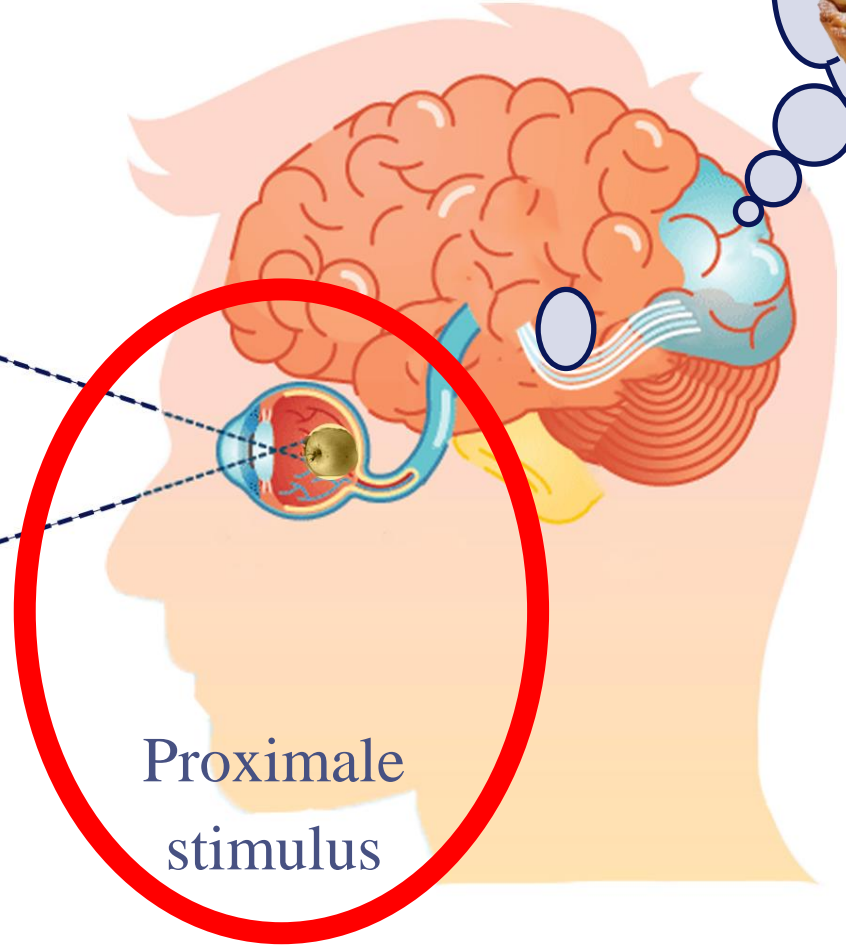
- Onderzoek: Lichtlab
- Resultaat: Lichtbehoefte en mate van lichthinder  
t.o.v. mensen zonder visuele beperking
- Aanpassing: Verlichtingsplan indien van toepassing



# Proximale stimulus optimaliseren



distale stimulus



Proximale stimulus



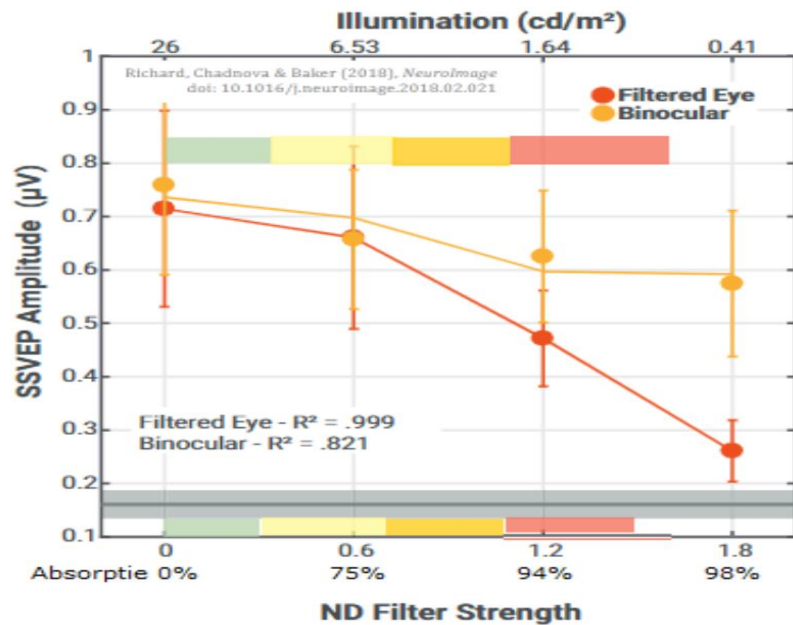
percept

# Monoculair filteren

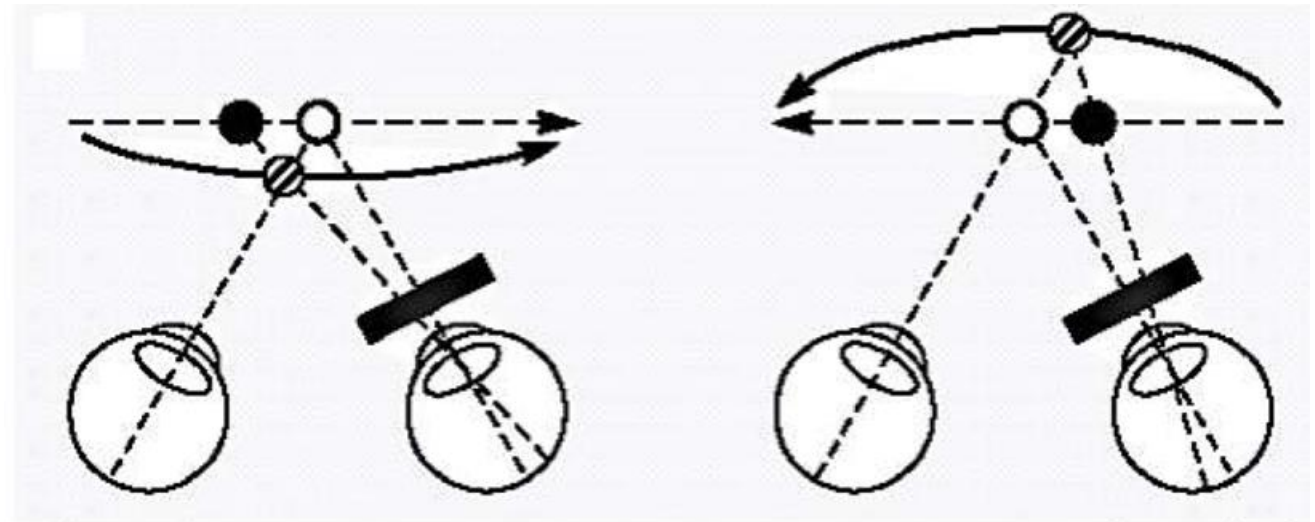


- Licht gaat trager door een donker glas dan ene licht glas.
- Beeld van 2 ogen wordt gefuseerd in de hersenen

## Suppressie



## Spontaan Pullfrich effect

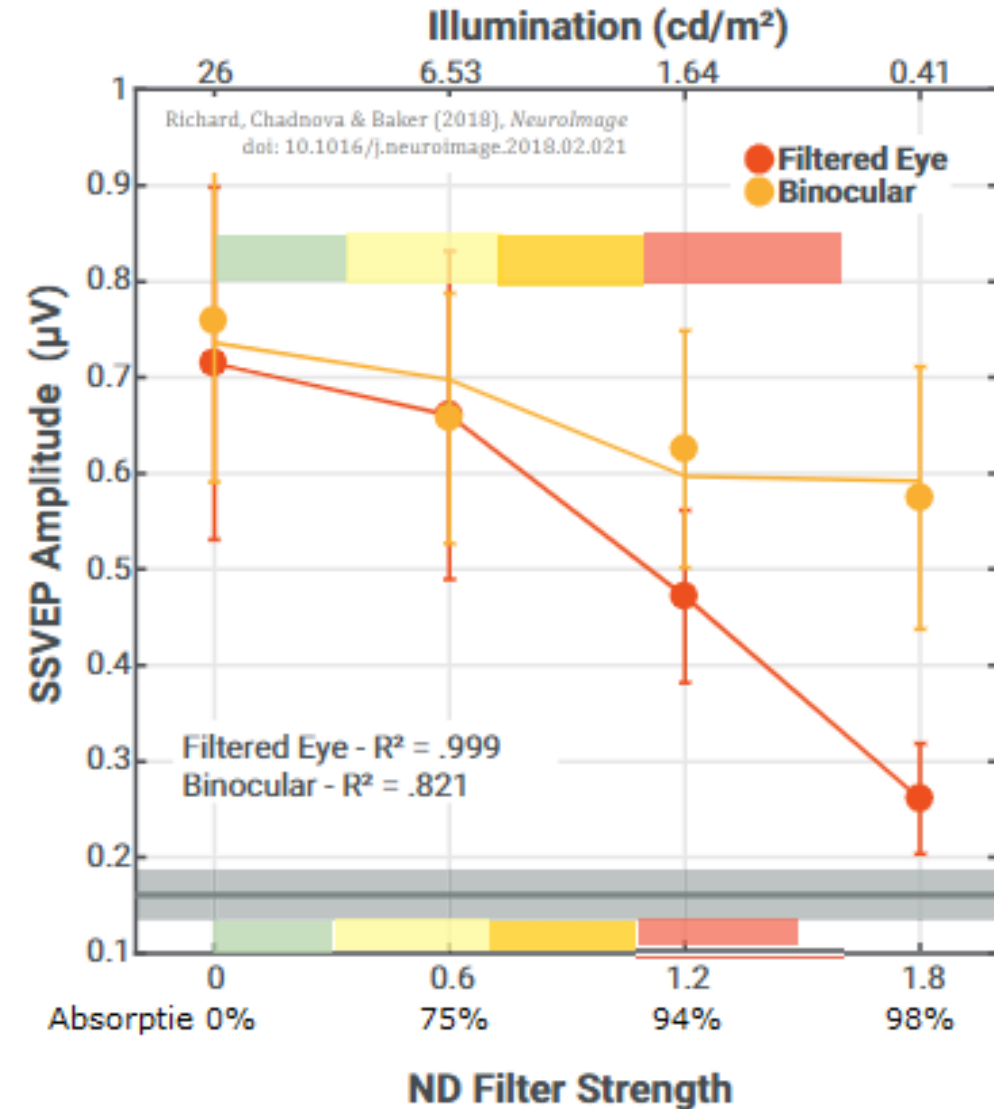




- Spontaan gemelde klachten
  - Dubbelbeelden
  - lichthinder
  - Verstoorde adaptatie
  - Afstanden inschatten (voelen van dieptes)
- Problemen ervaren in:
  - Mobiliteit binnen en buitenshuis



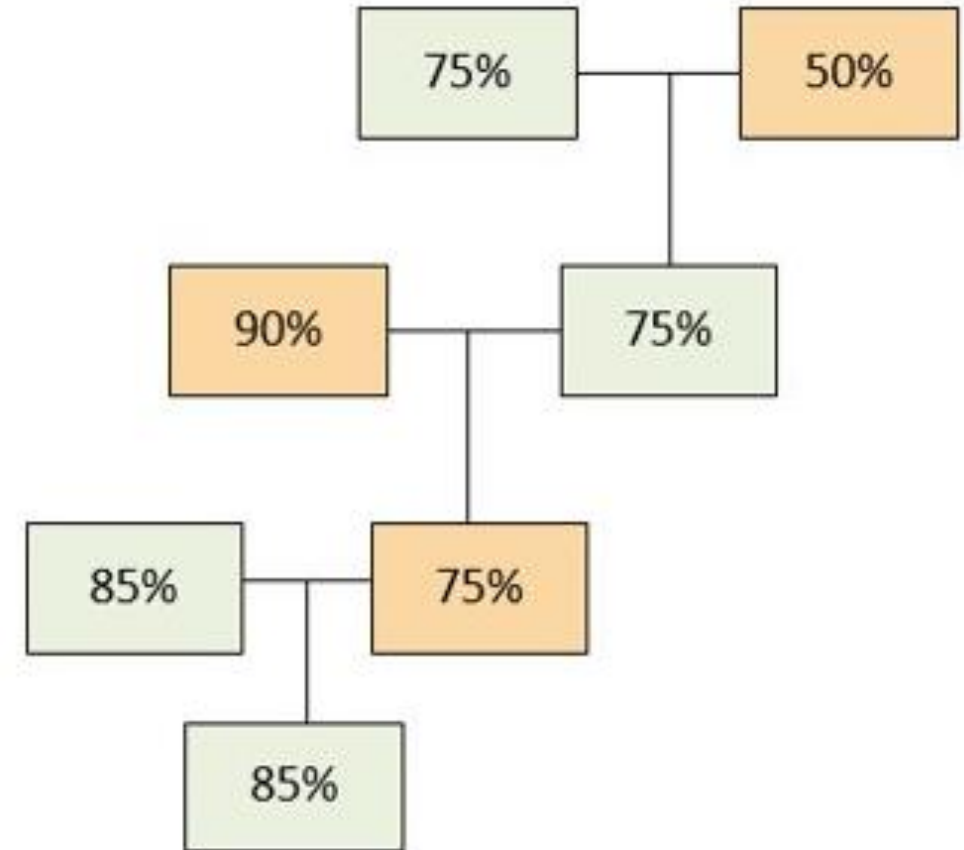
Onderdrukken van storend beeld:  
- vertraging onderdrukt beeld in  
centrale GV



## Visuele functies:

- gezichtscherpte; lichte verbetering bij meer licht
- lichthinder bij 1000 lux
- VOD > VOS (0.2 logMAR)
  
- Oogstand: recht tot divergent OD
- Contrastgevoeligheid: normaal

Filter OD 85% kijkt rustiger



Visio 



# Multiple sclerosis



## Non-specifieke klachten:

- wazig zien
- donkere waas
- verstoorde lichtadaptatie
- veranderd kleur percept
- Wennen bij het opstaan
- Mijnheer draagt een ooglapje tegen dubbelbeelden



Neuro-visu...

eskundige dage

... because of Pope John Paul II's threat to intervene personally in any Soviet invasion of his homeland, the Kremlin, perhaps even Premier Leonid Brezhnev himself, put out a \$1.5 million contract on the pontiff last year. 9A.

**DEATHS:** Princess Grace got the headlines, but death also has come to two writers. Leicester Hemingway, Ernest's brother and a Florida author of six books, like his sibling shot himself at home. Innovative contemporary novelist John Gardner, 49, dies in motorcycle crash. 2A.

**MERGER:** The Bendix-Martin Marietta-United Technologies merger dogfight has Wall Street in a tizzy. No matter how the dust settles, big money's at stake. 1B.

**NATION:** Law officers from 17 Sun Belt states meet in Tennessee to discuss Southern underground economy and its profit switch from moonshine to marijuana. 3A.  
■ IBM charges 3 ex-employees with theft of trade secrets.

**WASHINGTON:** Philippine President Ferdinand Marcos, ruthless dictator in some eyes and benevolent savior in others, leaves turmoil at home to meet with Reagan Thursday in the White House. The session could affect American military presence in the Far East for years. 2A. (Details on state dinner, 8A.)

■ If immigration reform bill survives House review, thousands of foreign students will have to go home for two years after college graduation before they can work here. American firms are angry. 8A.

**ABROAD:** For first time since WW II, war prisoners — five Soviets captured by Afghan resistance fighters — are interned in Switzerland. 9A.

**OPINIONS:** Americans must get serious about setting a national agenda — USA TODAY editorial. 10A.  
Guest commentaries: Detroit Mayor Coleman Young says American cities are crumbling while Washington yawns; California Gov. Jerry Brown says we must live by our wits and work harder. 10A.

■ Inquiry: House Majority Leader Jim Wright says Ronald Reagan is leading us back to Depression. Senate Majority Leader Howard Baker says not so. 11A.

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## Miracle: 327 survive, 55



## Minnesota passenger's crash photos

The lucky American who es...

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## Minnesota passenger's crash photos

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OS

OD

## Beperkingen

- bij het lezen; invullen scotoom
- gebruik ICT; lezen scherm
- Mobiliteit
  - moeite met afstapjes
  - lastig ontwijken van mensen in drukke omgeving
  - buiten angstig, alles komt op de heer af.
  - lastig inschatten verkeerssituatie.



Jan Koopman

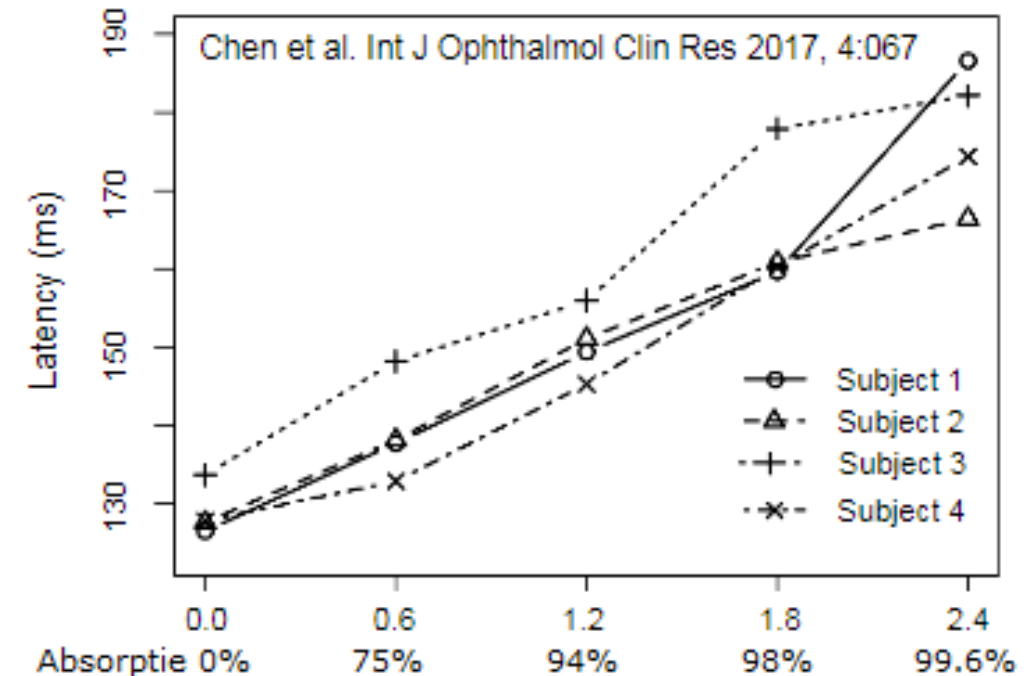
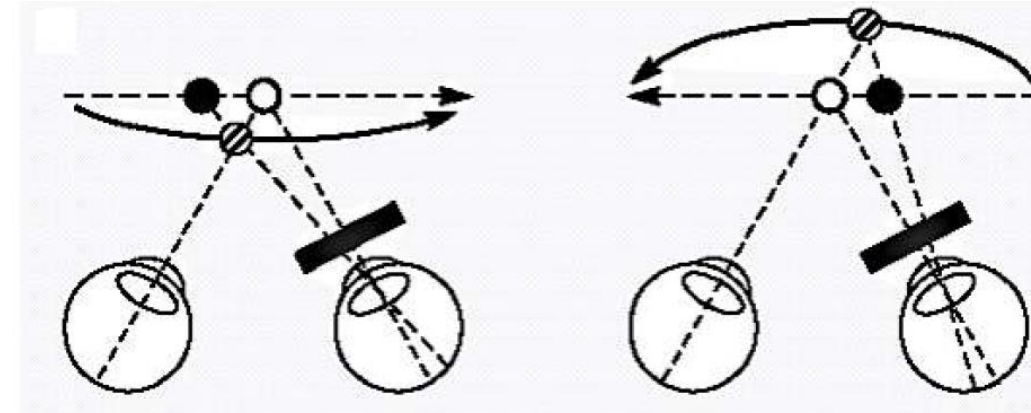


Rob (Guest)

- Ervaring dat een object dat in een rechte lijn beweegt in een cirkel beweegt.
- Ontstaat door vertraging in visuele verwerking.

Denk aan:

- Maculaire aandoening
- Licht dat de retina bereikt (bv. Unilat. cataract)
- Optische zenuw (bv. M.S.)



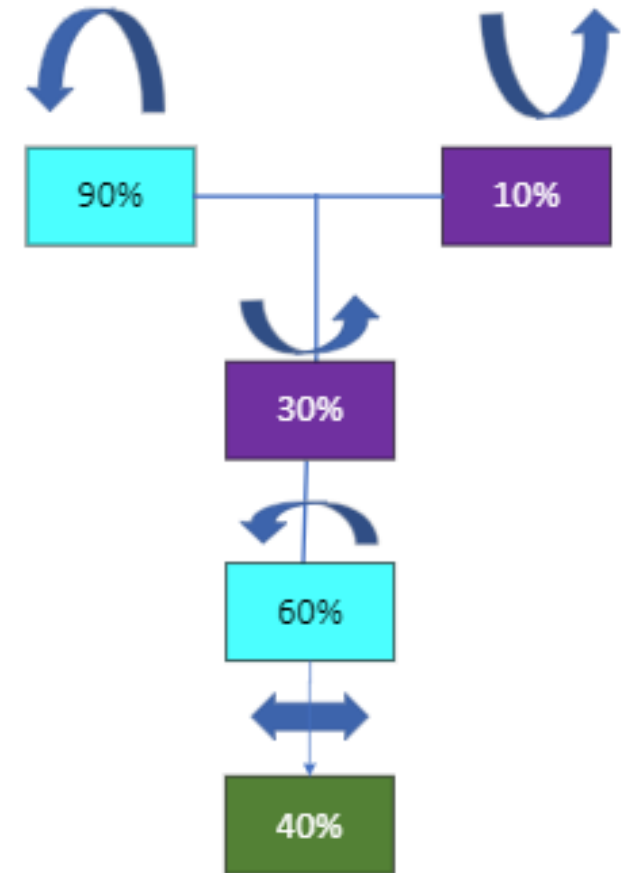


## Visuele klachten:

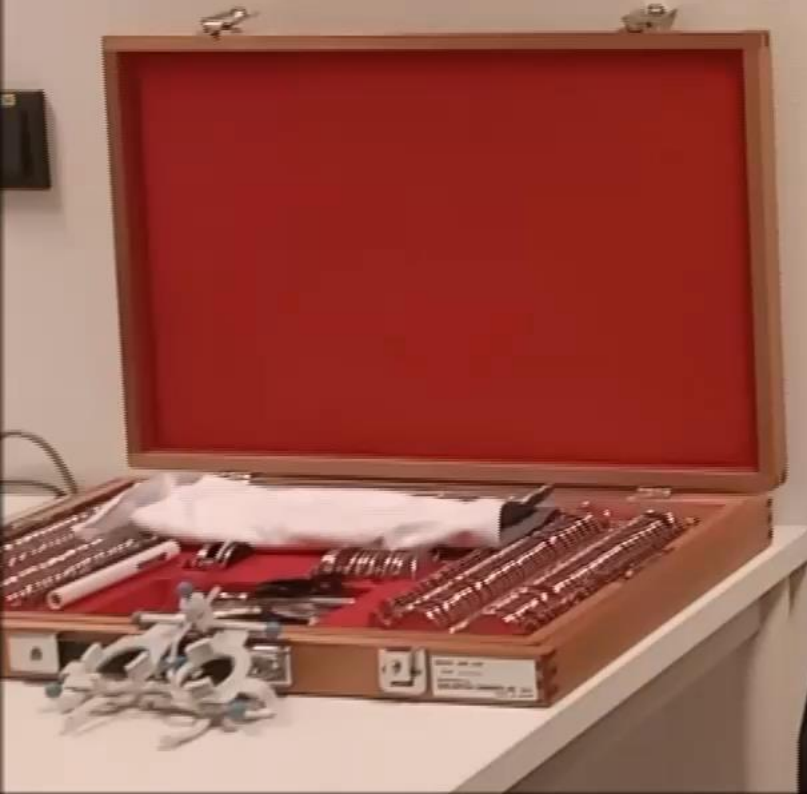
- |                      |                 |
|----------------------|-----------------|
| Contrast waarnemen   | - veel beter    |
| Lichthinder          | - veel minder   |
| Kleur percept        | - geen verschil |
| Afstanden inschatten | - veel beter    |
| Snelheid inschatten  | - veel beter    |

## Activiteiten:

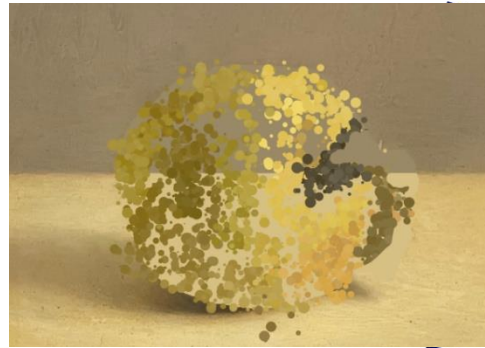
- |            |                            |
|------------|----------------------------|
| Lezen      | - minder vermoeiend, lange |
| PC-gebruik | - minder vermoeiend, lange |



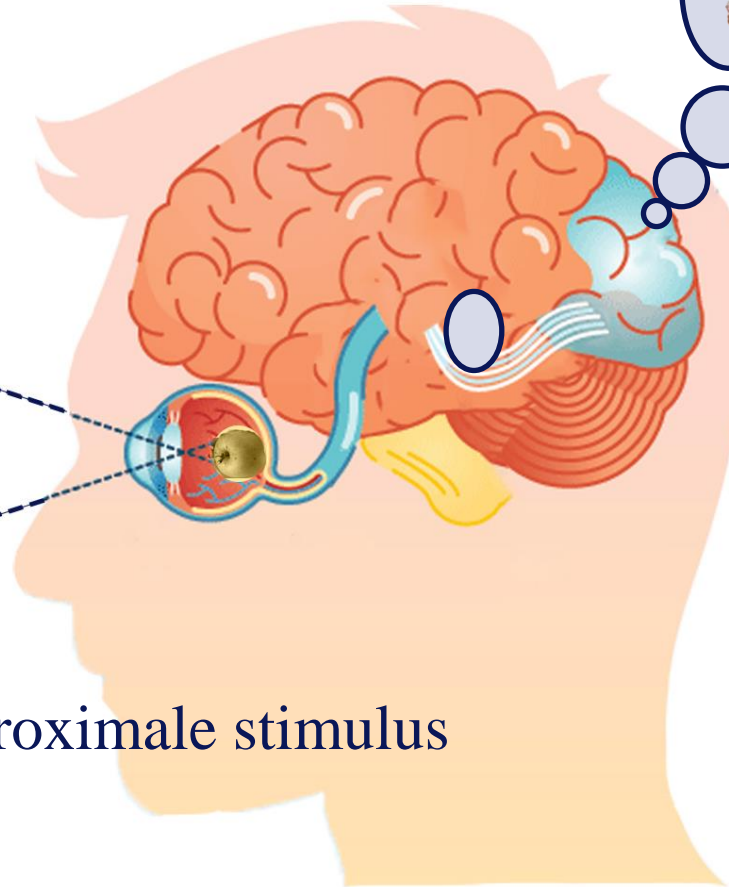
Visio 



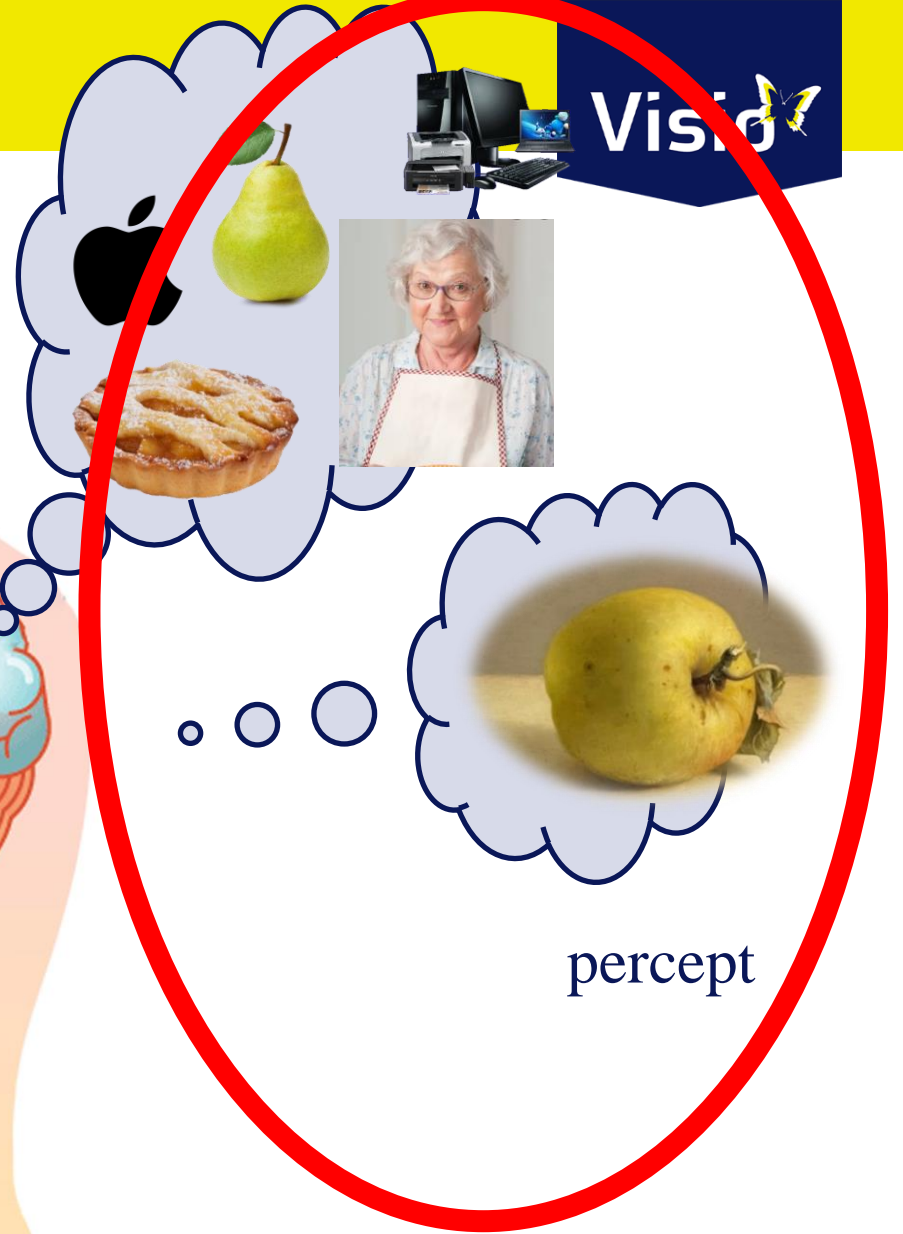
# Percept optimaliseren



distale stimulus



proximale stimulus



percept

- Moeilijkheden in mobiliteit
- overzicht optimaliseren
  - saccadische compensatie



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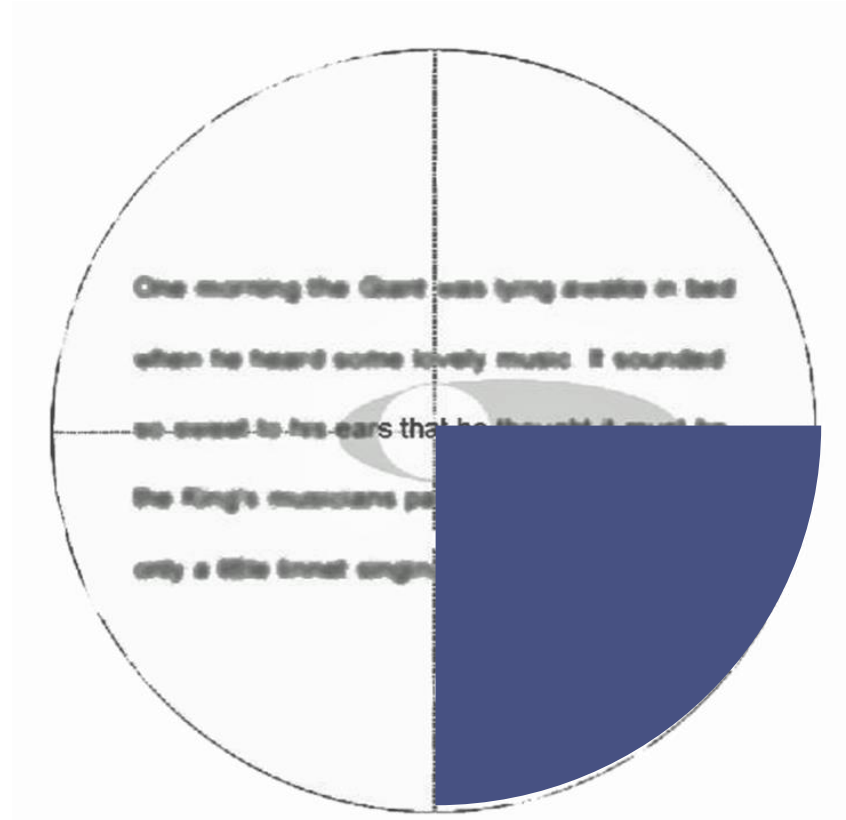
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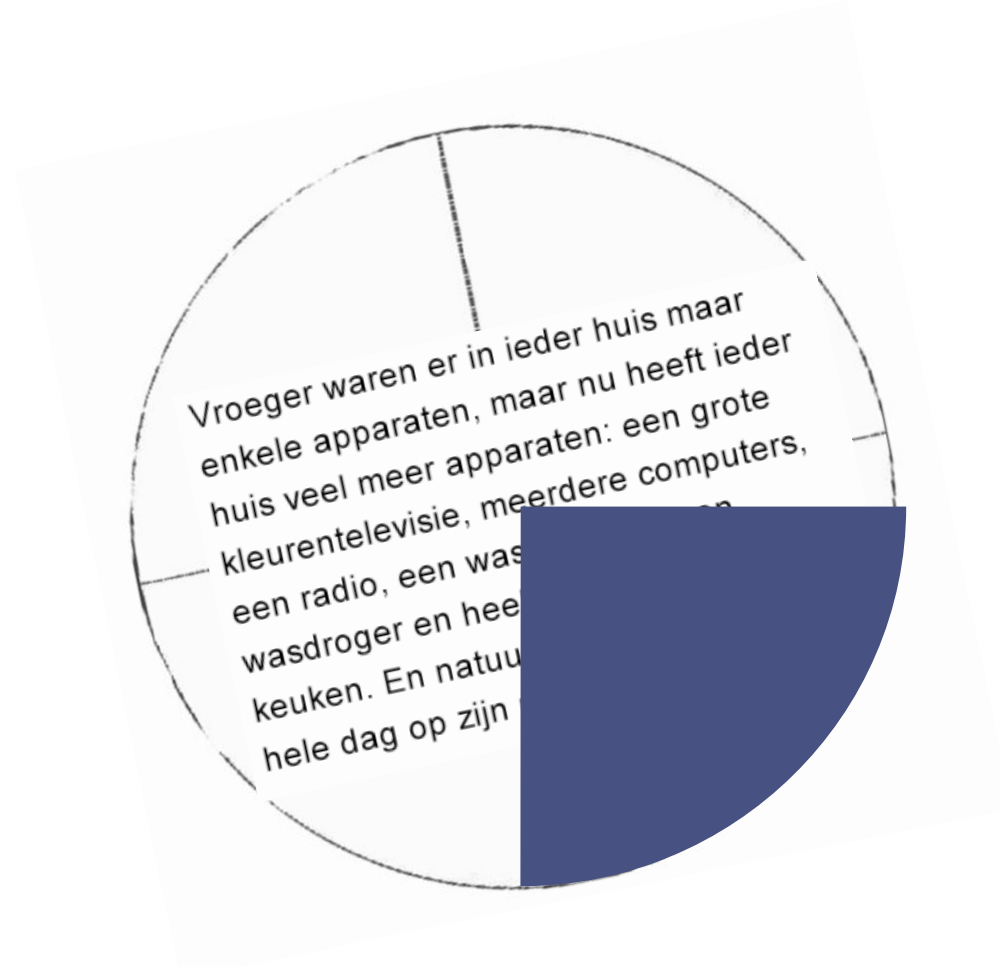


▪ hemianopsie links, blikrichting ver links



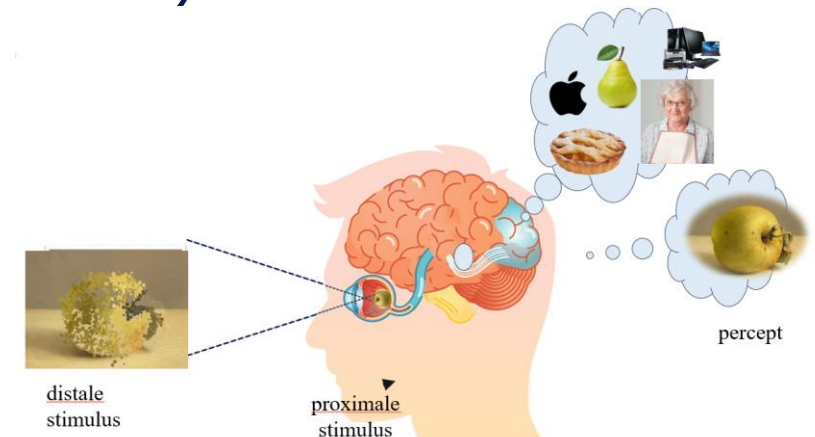
▪ *Eli Peli*







- Neurovisuele revalidatie is een relatief nieuwe tak
- Problemen lijken in veel gevallen op de problemen die mensen met een visuele beperking ervaren.
- Revalidatie kan plaatsvinden op:
  - Zichtbaarheid verbeteren (distale stimulus)
  - Overdracht te optimaliseren (proximale stimulus)
  - Te compenseren (percept)



6 juni 2024



Doel: afstand tot arbeidsmarkt zoveel mogelijk verkleinen

Aandacht voor:

- Fysieke toegankelijkheid werkplek
- Belastbaarheid
- Communicatie over visuele beperking
- Sociale vaardigheden
- Arbeidsvaardigheden (o.a. ict)
- (Auto-)Mobiliteit

- Vanuit Regionale Centra
- Multidisciplinair
- Contracten met UWV
- Reintegratie 1<sup>e</sup> spoor
- Specialistisch Arbeidsdeskundig onderzoek
- Specialistisch haalbaarheidsonderzoek
- Activiteitenweger (onderzoeken belastbaarheid)
- Reintegratie 2<sup>e</sup> en 3<sup>e</sup> spoor
- Jobcoaching
- WIA begeleiding

Veel voorkomende onderzoeken:

- Visueel basisonderzoek
- Verlichtingsonderzoek
- Computerhulpmiddelenonderzoek
- Werkplekonderzoek (div. vormen)
- Specialistisch Arbeidsdeskundig onderzoek
- Neuropsychologisch onderzoek

## Arbeidsbemiddeling 2<sup>e</sup> spoor / Haalbaarheidsonderzoek

- (Online) Beroepskeuze testen (LDC)
- Sollicitatie & netwerk training
- Opstellen CV, motivatiebrief en LinkedInprofiel
- Activiteitenweger
- Zoeken naar duurzame passende functie

Daarna eventueel WIA begeleiding

Aanmelden via Cliënt Service Bureau

- 088 585 8585 (Cliënt Service Bureau)

Meldt nadrukkelijk dat het om arbeid gaat!

- [visiozichtopwerk@visio.org](mailto:visiozichtopwerk@visio.org)

Meer informatie:

- [www.visiozichtopwerk.org](http://www.visiozichtopwerk.org) (en .nl)
- [www.visio.org/werken](http://www.visio.org/werken) (incl. verwijzersknop)

LinkedIn groep: Visio Zicht op Werk

Twitter: @VZoW

# Vragen ?

















