

# Visuo-Vestibular Rehabilitation for Concussion/mTBI

## Part 5

Phoenix Concussion Recovery  
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1

Oculomotor  
control

- **Introduce in Module 3**

- Line reading – pages 1,4 for repeat assessments each visit
  - HEP: all 8 pages
  - Progress sitting → standing → marching in place
  - Goal <20sec per page
- Super saccades – both directions repeat assessment each visit
  - Goal <35sec marching in place
  - Sitting → standing → marching in place

- **Optional exercises**

- Pencil pursuits, saccades, push ups

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2

## Line Reading



3

## Super Saccades



4



Needed to organize and recognize what we see, integrate the information with our other senses and high-level cognitive functions, and create the appropriate motor response.



Visual Spatial Skills, Visual Analysis Skills,  
Visual Motor Skills

## Visual Information Processing (VIP)

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## Visual Information Processing

- **Introduce in Module 2**
  - Repeat on alternate visits
  - 1234
  - Periph + ball toss
  - Bpqd
  - Kershner arrows

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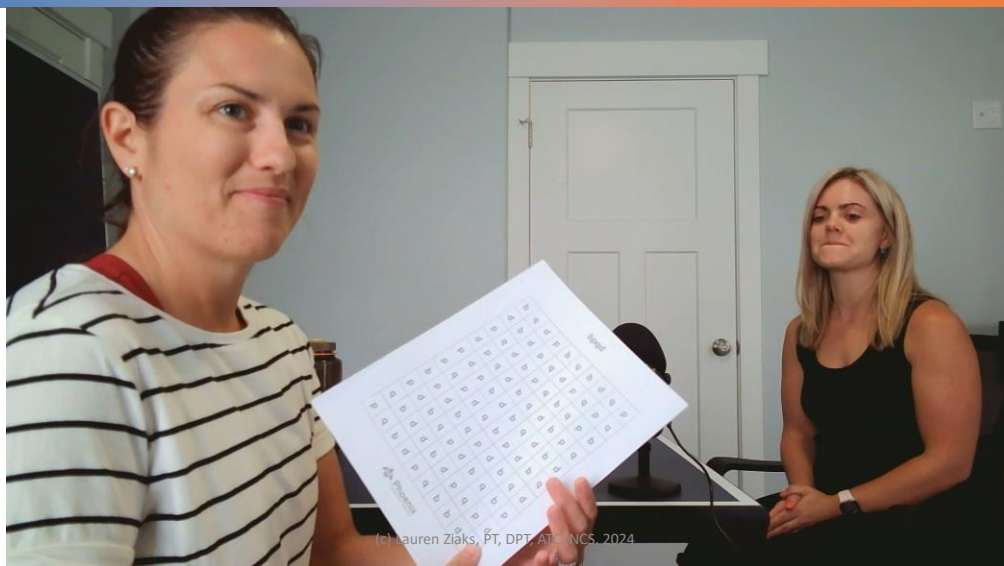
6

1234



7

bpqd



8

## Kershner Arrows



9

## Peripheral Awareness



10



## Visual Information Processing Part 2

### • Optional exercises:

- Visual discrimination – picture difference
- Alphabet saccades – goal 60seconds, 0 errors
- Tangrams
- Marsden ball – also for habituation / pursuits
  - 4 square
    - Has lot of flexibility

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## Tangrams & Visual Discrimination

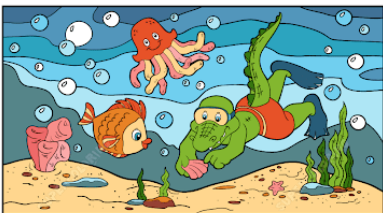
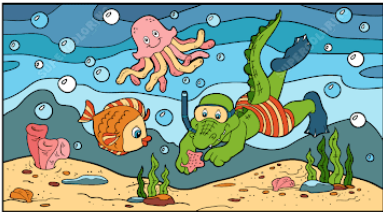


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# Alphabet Saccades & Marsden ball

## Alphabet Saccades



**Alligator begins with a.**  
Underline every a.

d g a w c y z s f l v a b k  
 a e h j m a n p r a s o t u  
 w d z a b e m p s u a c z  
 x a v q j a p g o a f k e j  
 a z m a j t a k u d i a e  
 m a f n a e o a f p z b l  
 a j i e a d a m a a f p a  
 n a g x l a v c u h o a w  
 y n a t x a o y z a s q u  
 a c e a b f i a m e c g a  
 p a h l a r d s a g i a m  
 o t a n d a u f k a w j a  
 x a l f p a g m a q d a z  
 a o e r a u x s a b v d a  
 j e a t a k h z a w g a f  
 s a n r k w a t a b q i a  
 a o c v a l x e h a z a j  
 n a k o a q w l a p m v a  
 c w s a e i p b u a h d q  
 j e i t a k h z a w g a f



**Balloon begins with b.**  
Underline every b.

b s f b j m h d b p n b a  
 o b t c a u b f x r b g y  
 c w s b e i p b u z b d q  
 d b x w b y z s f b v a b k  
 q e h b m i n p b g s o t b  
 x b l f p b g m y q d b z  
 c o e b c u x b h b v d y  
 j b i t a b h z a w g i b  
 s j n r k b a t a b b i u  
 b o c v b l x e b m z d j  
 n f b o t q b l y p b v r  
 w d b l b e m p s b g c z  
 b f v q b n p b o u f b e j  
 a b m b j t b k u d l v b  
 m w f n x b o y b p z g l  
 y b v t x a o b z w b q u  
 b c e p b f i v b e c b a  
 p b h l a b d s b g l r b  
 q b n p b o u d b x w b y  
 b d z l b e b p s u g c b



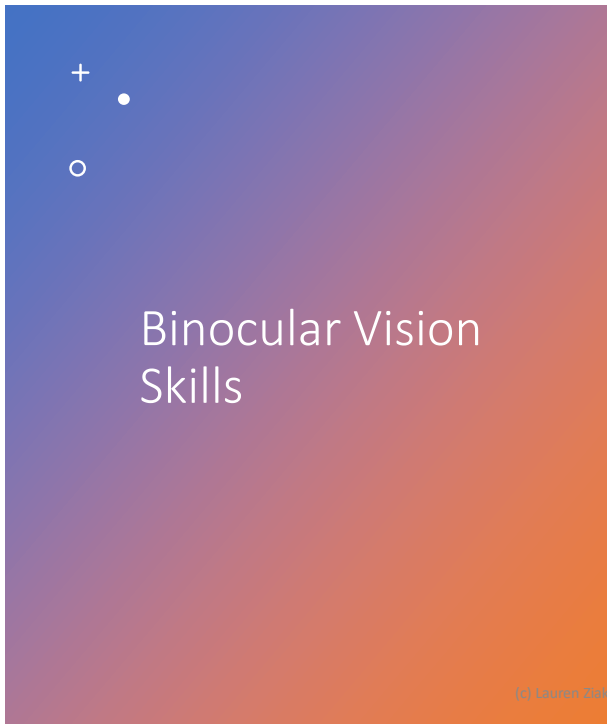
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# 4 Square



14



+

•

○

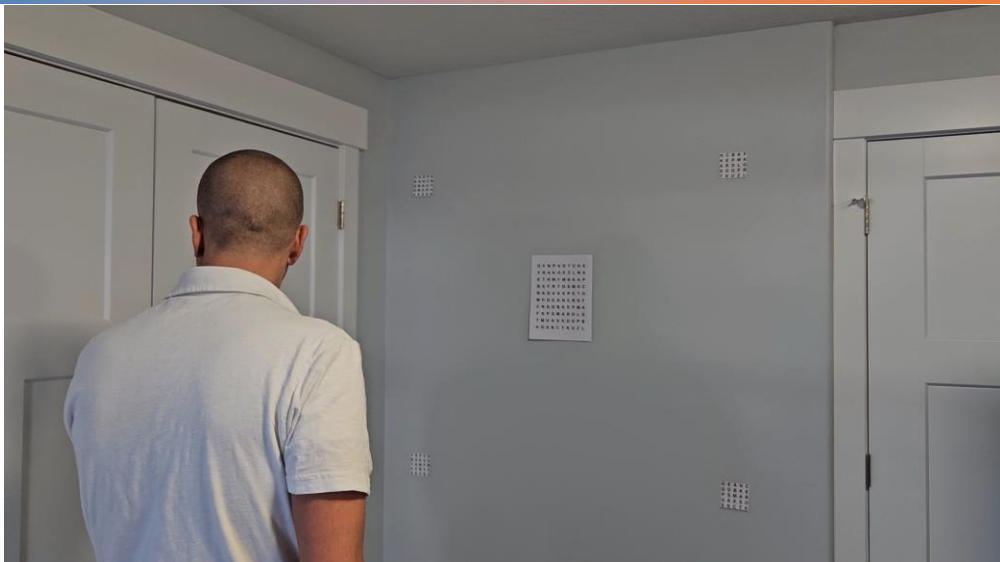
## Binocular Vision Skills

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- **Module 4**
  - Hart chart – accommodation rock
  - Initiate R/G tranaglyphs if time
- **Module 5**
  - Sticker sheet
  - R/G tranaglyphs – each visit from here forward
- **Module 6**
  - Brock string

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## Hart Chart – Near/Far/Near



16



## Tranaglyphs



17

## Sticker Sheet



18

## Brock String



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## Vestibular Therapy Substitution

- **Introduce in Module 2**

- Balance: primarily in vestibular condition
- Rocker boards
- Static balance
- Foam marching series

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## Vestibular Therapy Habituation

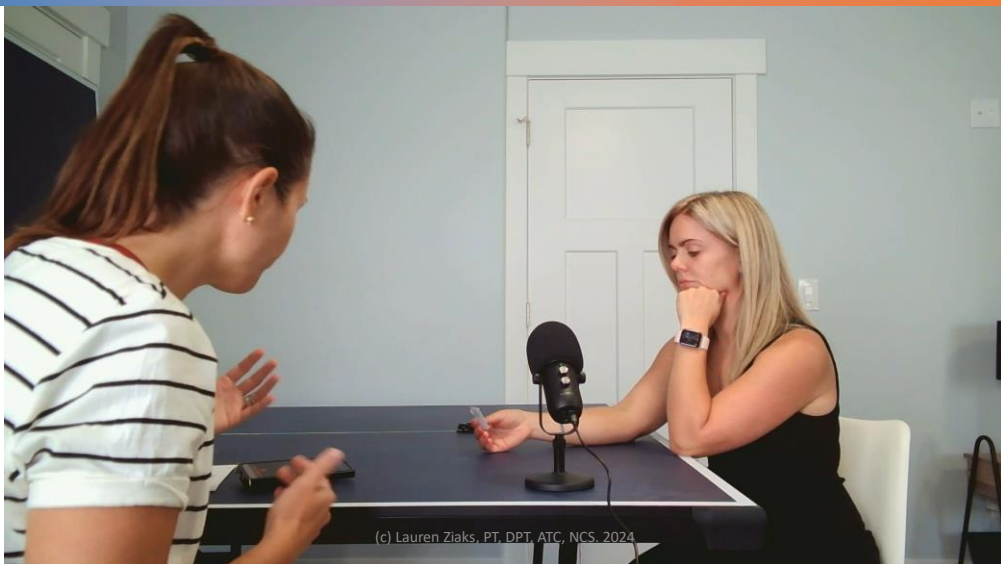
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- **Introduce in Module 4**

- VORx1: Goal 180bpm (1.5cps) x 60sec, standing
- VOR CXL: Goal 150bpm x 60sec, standing
- VORx2: Goal 150bpm x 60sec, standing

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## VORx1



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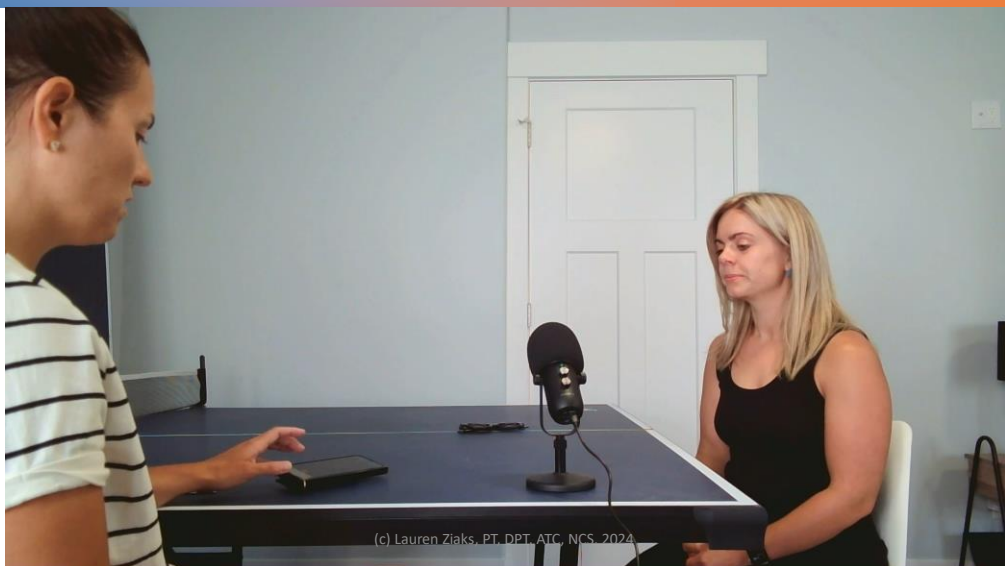
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## VOR CXL



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## VORx2



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## Vestibular Habituation Therapy 3PD strategies

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- **Use as necessary for FND trends**
  - Downregulating the nervous system
    - Teaching safety
    - Building attunement – rapport
  - Reducing aberrant movement patterns / high risk strategies
  - Teach the patient about their brain / body
- **Visual motion sensitivity**
  - Hallmark of 3PD
    - Optokinetic reflex
    - Habituation videos
    - Use of complex environments
      - Use function to build function

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Thank you  
See you for Part 6

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