**Maddox Rod**

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  + Purpose: to measure the relative horizontal or vertical deviation of the eyes, one with respect to the other, when fusion is interrupted
    - Can also be used to evaluate cyclo deviations
  + The Maddox Rod is dissociative due to the cylinders within the MR
  + Does not differentiate between phorias and tropias
  + To determine vertical:
    - Use dim to moderate illumination
    - Have patient wear his/her habitual correction and hold the MR over the right eye with the streaks oriented vertically
      * Patient will see a horizontal line
    - Hold the transilluminator at 40cm for near or use the muscle light on the projector screen for distance
    - Confirm that the patient sees both a red line and a white light and ask the patient to note where the red line is in relation to the white light
      * Line directly through the light: no vertical phoria
      * If light is touching the line: 1Δ deviation
      * If light is overlapping but not centered: 0.5 Δ deviation
      * Line above the light: OD hypo (recorded as hyper OS)
        + Red line is projected from inferior retina of OD
        + Use BU prism OD (or BD prism OS) to neutralize
      * Line below the light: OD hyper
        + Red line is projected form superior retina of OD
        + Use BD prism OD to neutralize
    - Repeat in down gaze (advantage of out of phoropter)
    - Record phoria based on prism required to neutralize (using the hyper eye) in both primary and down gaze
    - If using for lateral, have patient hold the MR over the right eye with the streaks oriented horizontally
      * Patient will see a vertical line
  + If testing in the phoropter
    - For near lateral: use 12 Δ BI OD (either Risley or prism bar) and decrease (or increase?) the prism until they are superimposed
    - For near vertical: use 6 BD OD (either Risley or prism bar) and decrease the prism until they are superimposed
  + Note: using the transilluminator is not an accommodative target
    - Should affect lateral phoria measurements because you are not bringing in convergence but should not affect vertical