

### **3.24 Traps and tips to perform the multifocal electroretinogram (mfERG)**

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**Purpose:** To report common traps in carrying out the mfERG and to propose some keys to avoid them.

**Methods:** Based on clinical cases, we have collected various situations producing difficulties in performing the mfERG that can lead to errors in the interpretation of its results. We report how we have proceeded to resolve them.

**Results:** The choice of the active electrode, a bubble under the corneal electrode, and difficulty in positioning glasses properly represent the main technical problems. Refractive error, especially including astigmatism and high refractive error, constitute the optical problem. Ptosis, corneal pathology, lens opacities, history of refractive surgery, and eccentric fixation

reflect anatomical causes. We have regularly noticed the instability of fixation and patient contortion. In very severe impairment, we observed some false responses due to the recording of noise. At each stage of the exam, we propose how to identify the different traps that can lead to misinterpretation and how to manage them.

**Conclusions:** The mfERG is a fundamental procedure of visual electrophysiologic testing. It is essential to perform it rigorously: the quality of the results is decisive for their validity and is critical for accurate medical diagnosis. Knowing the tips to avoid the most common traps is particularly useful.