

# Experts publish guidelines for psychophysiological research involving measurements of the eye's pupil

March 23 2022

---



Credit: Pixabay/CC0 Public Domain

A variety of psychological and physical conditions can cause variations in the diameter of the pupil—the black center of the eye that changes in

size to regulate the amount of light reaching the retina and to sharpen images. In an article published in *Psychophysiology*, experts offer a set of guidelines to inform and guide research involving pupil measurements during psychological research.

Pupil diameter is changed as muscles of the iris expand or contract in response to the activity of neurons and hormones. The guidelines summarize important aspects concerning the physiology of the pupil, provide recommendations on how to examine data related to measurements of the pupil, and discuss psychological phenomena that modulate the reactivity of the pupil to increase or decrease its diameter.

"The pupil and iris are unique in offering direct observation of involuntary muscles reflecting central nervous system activity," said corresponding author Stuart R. Steinhauer, Ph.D., of the Veterans Affairs Pittsburgh Healthcare System and the University of Pittsburgh School of Medicine. "Enlargement of the pupil to psychological and sensory stimulation has been noted over thousands of years. Over the past six decades, [technological advances](#) for recording and analyzing images have documented the amazing sensitivity of the pupil to even slight changes of emotional and cognitive operations."

**More information:** Stuart R. Steinhauer et al, Publication guidelines and recommendations for pupillary measurement in psychophysiological studies, *Psychophysiology* (2022). [DOI: 10.1111/psyp.14035](https://doi.org/10.1111/psyp.14035)

Provided by Wiley

Citation: Experts publish guidelines for psychophysiological research involving measurements of the eye's pupil (2022, March 23) retrieved 19 April 2024 from <https://medicalxpress.com/news/2022-03-experts-publish-guidelines-psychophysiological->

[involving.html](#)

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.