EyeDetect Research Summary

The Converus Science Team, led by Dr. John Kircher, has published articles or reports about the technology underlying EyeDetect®. In the research, EyeDetect is referred to as an ocular-motor deception test (ODT).

In the 2016 article from the European Polygraph Journal, the published mean decision accuracy of EyeDetect is 86%. That is comprised of .89 for True Negatives (TN) and .83 for True Positives (TP) and no Inconclusive (INC) results. These data resulted from a compilation of all studies, including the latest, which was a field study.

The "Meta-Analytic Survey of Criterion Accuracy of Validated Polygraph Techniques" (2011) from the American Polygraph Association highlighted data from all validated polygraph techniques. At this time, there is as much peer-reviewed research on EyeDetect as on any individual polygraph technique.

Note: Sources 1-9 are peer-reviewed.

1. Kircher, J. C., and Raskin, D. (2016) Laboratory and Field Research on the Ocular-motor Deception Test. European Polygraph Journal, Volume 10, Number 4 (38). LINK

2. Cook, A. E., Hacker, D. J., Webb, A. K., Osher, D., Kristjansson, S., Woltz, D. J., & Kircher, J. C. (2012). Lyin' Eyes: Ocular-motor Measures of Reading Reveal Deception. Journal of Experimental Psychology: Applied, 18(3), 301-313. LINK

3. Patnaik, P., Woltz, D., Hacker, D., Cooke, A., Francke-Ramm, M., Webb, A., and Kircher, J. (2016) Generalizability of an Ocular-Motor Test for Deception to a Mexican Population. International Journal of Applied Psychology, 6(1): 1-9. LINK

4. Hacker, D. J., Kuhlman, B., & Kircher, J. C., Cook, A.E., and Woltz, D.J. (2014). Detecting Deception Using Ocular Metrics During Reading. In D. C. Raskin, C. R. Honts, & J. C. Kircher (Eds.), Credibility Assessment: Scientific Research and Applications. Elsevier, pp 159-216. (AUTHOR/PUBLICATION REQUIRE PURCHASE) LINK

5. Kuhlman, B. B., Webb, A. K., Patnaik, P., Cook, A. E., Woltz, D. J., Hacker, D. J., & Kircher, J. C. (2011, September). Evoked Pupil Responses Habituate During an Oculomotor Test for Deception. Poster presented at the Society for Psychophysiological Research convention, Boston, MA. (abstract) LINK

6. Patnaik, P., Woltz, D.J., Cook, A.E., Webb, A.K., Raskin, D.C., and Kircher, J.C. (2015, March). Ocular-motor Detection of Deception in Laboratory Settings. Meeting of the American Psychology and Law Society, San Diego, CA. LINK

EyeDetect Research Summary (cont.)

7. Webb, A. K., Hacker, D.J., Osher, D., Cook, A.E., Woltz, D. J., Kristjansson, S. K., and Kircher, J. C., (2009). Eye Movements and Pupil Size Reveal Deception in Computer Administered Questionnaires. In D. D. Schmorrow, I. V. Estabrooke, & M. Grootjen (Eds.), Foundations of Augmented Cognition. Neuroergonomics and Operational Neuroscience (553-562). Berlin/Heidelberg: Springer-Verlag. LINK

8. Webb, A. K, Honts, C. R., Kircher, J. C., Bernhardt, P.C., and Cook, A. E. (2009). Effectiveness of Pupil Diameter in a Probable-Lie Comparison Question Test for Deception. Legal and Criminal Psychology, 14(2), 279-292. (AUTHOR/PUBLICATION REQUIRE PURCHASE) LINK

9. Kircher, J. C. (2018). Ocular-Motor Deception Test. In J. Peter Rosenfeld, Detecting Concealed Information and Deception (pp. 187-212). Cambridge, MA: Academic Press. doi:10.1016/B978-0-12-812729-2.01001-6. (AUTHOR/PUBLICATION REQUIRE PURCHASE) LINK

10. Osher, D. (2006). Multimethod Assessment of Deception: Oculomotor Movement, Pupil Size, and Response Time Measures. (Doctoral dissertation), University of Utah, Department of Educational Psychology. LINK

11. Webb, A.K. (2008). Effects of Motivation, and Item Difficulty on Oculomotor and Behavioral Measures of Deception. (Doctoral dissertation), University of Utah, Department of Educational Psychology. (ISBN: 9780549980032) LINK

12. Patnaik, P. (2013). Ocular-motor Methods for Detecting Deception: Direct Versus Indirect Interrogation. (Master's Thesis), University of Utah, Department of Educational Psychology. LINK

13. Patnaik, P. (2015). Oculomotor Methods for Detecting Deception: Effects of Practice Feedback and Blocking. Doctoral dissertation, University of Utah, Department of Educational Psychology. LINK