

Beurteilung des Computer-Programms „Blink Blink“

Verbesserung der Symptome des Trockenens Auges während Computerarbeit

Literatur

- [1] Freudenthaler N, Neuf H, Kadner G, Schlote T. Characteristics of spontaneous eyeblink activity during video display terminal use in healthy volunteers. *Graefes Arch Clin Exp Ophthalmol* 2003;241:914–20. <https://doi.org/10.1007/s00417-003-0786-6>.
- [2] Tsubota K, Nakamori K. Dry Eyes and Video Display Terminals. *N Engl J Med* 1993;328:584–584. <https://doi.org/10.1056/NEJM199302253280817>.
- [3] Tsubota K. Tear dynamics and dry eye. *Prog Retin Eye Res* 1998;17:565–96. [https://doi.org/10.1016/S1350-9462\(98\)00004-4](https://doi.org/10.1016/S1350-9462(98)00004-4).
- [4] Schlote T, Kadner G, Freudenthaler N. Marked reduction and distinct patterns of eye blinking in patients with moderately dry eyes during video display terminal use. *Graefes Arch Clin Exp Ophthalmol* 2004;242:306–12. <https://doi.org/10.1007/s00417-003-0845-z>.
- [5] Doughty MJ. Consideration of Three Types of Spontaneous Eyeblink Activity in Normal Humans: during Reading and Video Display Terminal Use, in Primary Gaze, and while in Conversation: *Optom Vis Sci* 2001;78:712–25. <https://doi.org/10.1097/00006324-200110000-00011>.
- [6] Acosta MC, Gallar J, Belmonte C. The influence of eye solutions on blinking and ocular comfort at rest and during work at video display terminals. *Exp Eye Res* 1999;68:663–9. <https://doi.org/10.1006/exer.1998.0656>.
- [7] Patel S, Henderson R, Bradley L, Galloway B, Hunter L. Effect of visual display unit use on blink rate and tear stability. *Optom Vis Sci* 1991;68:888–92.
- [8] Himebaugh NL, Begley CG, Bradley A, Wilkinson JA. Blinking and tear break-up during four visual tasks: *Optom Vis Sci* 2009; 86:E106–14. <https://doi.org/10.1097/OPX.0b013e318194e962>.
- [9] Hikichi T, Yoshida A, Fukui Y, Hamano T, Ri M, Araki K, et al. Prevalence of dry eye in Japanese eye centers. *Graefes Arch Clin Exp Ophthalmol* 1995;233:555–8. <https://doi.org/10.1007/BF00404705>.
- [10] Thomson WD. Eye problems and visual display terminal: the facts and the fallacies. *Ophthalmic Physiol Opt* 1998;18:111–9.
- [11] Cole BL, Maddocks JD, Sharpe K. Effect of VDUs on the eyes: report of a 6-year epidemiological study: *Optom Vis Sci* 1996; 73:512–28. <https://doi.org/10.1097/00006324-199608000-00001>.
- [12] Lie I, Watten RG. VDT work, oculomotor strain, and subjective complaints: an experimental and clinical study. *Ergonomics* 1994;37:1419–33. <https://doi.org/10.1080/00140139408964919>.
- [13] Blehm C, Vishnu S, Khattak A, Mitra S, Yee RW. Computer Vision Syndrome: A Review. *Surv Ophthalmol* 2005;50:253–62. <https://doi.org/10.1016/j.survophthal.2005.02.008>.
- [14] McMonnies CW. Diagnosis and remediation of blink inefficiency. *Contact Lens Anterior Eye* 2020;S1367048420300989. <https://doi.org/10.1016/j.clae.2020.04.015>.
- [15] Fogelton A. Eyeblink, <https://www.blinkingmatters.com/>. 2020.
- [16] Eyeleo, <http://eyeleo.com/>. 2020.
- [17] Eye Pro v3 (ergo), <https://classlessoft.in/index.php/eye-pro>. 2020.
- [18] Dementyev A, Holz C. DualBlink: A wearable device to continuously detect, track, and actuate blinking for alleviating dry eyes and Computer Vision Syndrome. *Proc ACM Interact Mob Wearable Ubiquitous Technol* 2017;1:1–19. <https://doi.org/10.1145/3053330>.
- [19] Miura DL, Hazarbassanov RM, Yamasato CKN, Silva FB e, Godinho CJ, Gomes JÁP. Effect of a light-emitting timer device on the blink rate of non-dry eye individuals and dry eye patients. *Br J Ophthalmol* 2013;97:965–7. <https://doi.org/10.1136/bjophthalmol-2012-302695>.
- [20] Ang CK, Mohidin N, Chung KM. Effects of wint glass on blink rate, NIBUT and ocular surface symptoms during Visual Display unit use. *Curr Eye Res* 2014;39:879–84. <https://doi.org/10.3109/02713683.2013.859273>.
- [21] Cardona G, Gómez M, Quevedo L, Gispets J. Effects of transient blur and VDT screen luminance changes on eyeblink rate. *Contact Lens Anterior Eye* 2014;37:363–7. <https://doi.org/10.1016/j.clae.2014.05.005>.
- [22] Nosch DS, Foppa C, Tóth M, Joos RE. Blink animation software to improve blinking and dry eye symptoms. *Optom Vis Sci* 2015;92:e310–5. <https://doi.org/10.1097/OPX.0000000000000654>.
- [23] Korb DR, Baron DF, Herman JP, Finnemore VM, Exford JM, Hermosa JL, et al. Tear film lipid layer thickness as a function of blinking: *Cornea* 1994;13:354–9. <https://doi.org/10.1097/00003226-199407000-00012>.
- [24] Michel M, Sickenerger W, Pult H. The effectiveness of questionnaires in the determination of Contact Lens Induced Dry Eye. *Ophthalmic Physiol Opt* 2009;29:479–86. <https://doi.org/10.1111/j.1475-1313.2009.00658.x>.
- [25] Schiffman RM. Reliability and validity of the Ocular Surface Disease Index. *Arch Ophthalmol* 2000;118:615. <https://doi.org/10.1001/archophth.118.5.615>.