Supplementary Table S2. Full-Text Articles Excluded, with Study-Specific Reasons

Distribution of excluded full-text articles (n = 27): review articles (n = 12), study protocols (n = 6), and studies with no exercise-related outcomes (n = 9).

Full citation	Reason for exclusion	Study-specific explanation
Hanssen H, Streese L, Vilser W. Retinal vessel diameters and function in cardiovascular risk and disease. Prog Retin Eye Res. 2022;91:101095.	Review article	Review of retinal vessel diameter and functional measures; no original study population or original exercise-related retinal outcome data.
Li DL, Zhou M, Pan CW, Chen DD, Liu MJ. Unhealthy Lifestyles and Retinal Vessel Calibers among Children and Adolescents: A Systematic Review and Meta-Analysis. Nutrients. 2023;15(1):150.	Review article	Systematic review/meta-analysis rather than an original eligible human study.
Van Eijgen J, et al. Retinal vessel analysis to assess microvascular function in the healthy eye: A systematic review on the response to acute physiological and pathological stressors. Surv Ophthalmol. 2025;70(2):200–214.	Review article	Systematic review rather than an original observational or interventional study.
Wallraven T, et al. Retinal vessel imaging in inflammatory disease: From endothelial dysfunction to clinical evidence and translation. Prog Retin Eye Res. 2026;112:101472.	Review article	Review article without original exercise-related participant data.
Iorga RE, Costin D, Munteanu-Danulescu RS, Rezus E, Moraru AD. Non-Invasive Retinal Vessel Analysis as a Predictor for Cardiovascular Disease. J Pers Med. 2024;14(5):501.	Review article	Narrative review of retinal vessel analysis as a cardiovascular biomarker; no original eligible dataset.
Danielescu C, Dabija MG, Musat O. Automated Retinal Vessel Analysis Based on Fundus Photographs as a Predictor for Non-Ophthalmic Diseases—Evolution and Perspectives. J Pers Med. 2024;14(1).	Review article	Review/perspective article rather than an original eligible study.
Zou L, Herold F, Ludyga S, et al. Look into my eyes: What can eye-based measures tell us about the relationship between physical activity and cognitive performance? J Sport Health Sci. 2023;12(5).	Review article	Review article summarizing eye-based measures and physical activity/cognition; no original study sample.
Hanssen H. Vascular biomarkers in the prevention of childhood cardiovascular risk: From concept to clinical implementation. Front Cardiovasc Med. 2022;9:935810.	Review article	Conceptual/review publication rather than an original eligible human study.
Tan TE, Wong TY. Diabetic retinopathy: Looking forward to 2030. Front Endocrinol (Lausanne). 2023;13:1077669.	Review article	Review article focused on diabetic retinopathy and future diagnostic developments.
Wicklein R, et al. The OSCAR-MP Consensus Criteria for Quality Assessment of Retinal Optical Coherence Tomography Angiography. Neurol Neuroimmunol Neuroinflamm. 2023;10(6):e200169.	Review article	Consensus/methodological review; no original exercise- or fitness-related retinal outcome analysis.
Kashani AH, et al. Retinal optical coherence tomography angiography imaging in population studies for study of microvascular dysfunction in Alzheimer's disease and related dementias. Alzheimers Dement. 2025;21(6):e70252.	Review article	Methodological/consensus review of OCTA in dementia-related population studies rather than an eligible original exercise study.
Taha AA, Lazar D, Julin C, Sørensen TL. Use of optical coherence tomography angiography for the diagnosis of age-related macular degeneration. Dan Med J. 2023;70(10):A12220780.	Review article	Review of OCTA for age-related macular degeneration; no original exercise-related study data.
Carrard J, et al. Effect of an eight-week high-intensity interval training programme on circulating sphingolipid levels in middle-aged adults at elevated cardiometabolic risk (SphingoFIT)—Protocol for a randomised controlled exercise trial. PLoS One. 2024;19(5):e0302477.	Study protocol	Protocol publication; no completed retinal microvascular results were available.
Haregu T, et al. The long-term effects of Kerala Diabetes Prevention Program on diabetes incidence and cardiometabolic risk: a study protocol. BMC Public Health. 2023;23(1):539.	Study protocol	Protocol publication; retinal microvascular assessment was planned, but completed outcome data were not reported.
Van Eijgen J, et al. High-intensity interval training in patients with glaucoma (HIT-GLAUCOMA): protocol for a multicenter randomized controlled exercise trial. Front Physiol. 2024;15:1349313.	Study protocol	Protocol publication without completed trial results.
Königstein K, Meier J, et al. VascuFit: vascular effects of non-linear periodized exercise training in sedentary adults with elevated cardiovascular risk—protocol for a randomized controlled trial. BMC Cardiovasc Disord. 2022;22(1).	Study protocol	Protocol publication; no completed retinal microvascular outcome data.
Bitos K, et al. Effects of dapagliflozin on blood volume status and vascular outcomes in clinically stabilized heart failure patients after an acute decompensated heart failure event (DAPA-VOLVO study): Protocol of a double-blind randomized controlled clinical trial. PLoS One. 2025;20(7):e0325668.	Study protocol	Protocol publication and pharmacological intervention; no completed eligible exercise-related retinal results.
Streese L, Gander J, Carrard J, Hauser C, Hinrichs T, Schmidt-Trucksäss A, Gugleta K, Hanssen H. Hypertension and retinal microvascular dysfunction (HyperVasc): protocol of a randomised controlled exercise trial in patients with hypertension. BMJ Open. 2022;12:e058997.	Study protocol	Protocol publication; no completed study results available.
Abraham AG, et al. Cognitive decline in older adults: What can we learn from optical coherence tomography (OCT)-based retinal vascular imaging? J Am Geriatr Soc. 2021;69(9):2524–2535.	No exercise-related outcomes	The study evaluated retinal vascular imaging in relation to cognitive decline, without an eligible exercise, physical activity, or physical fitness exposure.
Kerr JA, et al. Diet quality trajectories and cardiovascular phenotypes/metabolic syndrome risk by 11–12 years. Int J Obes (Lond). 2021;45(7):1392–1403.	No exercise-related outcomes	The exposure of interest was diet quality rather than exercise, physical activity, exercise training, or physical fitness.
Streese L, et al. Metabolic profiling links cardiovascular risk and vascular end organ damage. Atherosclerosis. 2021;331:45–53.	No exercise-related outcomes	The primary exposure was metabolic and cardiovascular risk profiling rather than exercise or physical fitness.
Hsu CC, Lee LC, Chang HC, et al. Short-term structural and microvascular	No exercise-related	The exposure was hypergravity during centrifuge

ocular changes induced by hypergravity exposure during human centrifuge training. Invest Ophthalmol Vis Sci. 2025.	outcomes	training, not physical exercise or habitual physical activity as defined by the review.
Wefelnberg MM, Baumann FT, et al. Interocular symmetry in dynamic retinal vessel analysis among healthy adults. Biomol Biomed. 2026.	No exercise-related outcomes	Methodological study of interocular symmetry without an eligible exercise, physical activity, or physical fitness exposure.
Baker J, Safarzadeh MA, Incognito AV, et al. Functional optical coherence tomography at altitude: retinal microvascular perfusion and retinal thickness at 3,800 meters. J Appl Physiol. 2022;133(3):534–545.	No exercise-related outcomes	The study investigated retinal responses to high-altitude hypobaric hypoxia rather than exercise, habitual physical activity, exercise training, or physical fitness.
Repo O, Juonala M, Niinikoski H, et al. Randomized 20-year infancy-onset dietary intervention, life-long cardiovascular risk factors and retinal microvasculature. Eur Heart J. 2024;45(33):3072–3085.	No exercise-related outcomes	The exposure was a long-term dietary intervention; exercise, physical activity, and physical fitness were not the exposure or intervention of interest.
Nelis P, Nieweler A, Brücher V, Eter N, Ten Tusscher M, Alnawaiseh M. Light conditions influence optic nerve OCT angiography parameters in healthy subjects with neutral pupils. Sci Rep. 2023;13(1):9154.	No exercise-related outcomes	The study assessed the effects of light and dark exposure on OCTA parameters rather than an exercise- or fitness-related exposure.
Kutz DF, Obergassel J, Mack M, Stojan R, Schmitz B, Alten F, Voelcker-Rehage C. Retinal vessel density and cognitive function in healthy older adults. Exp Brain Res. 2025;243(5):114.	No exercise-related outcomes	The primary association examined was between retinal vessel density and cognitive function, without an eligible exercise, physical activity, exercise-training, or physical-fitness outcome.