Resource Summary Report

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Hardy-Weinberg Equilibrium Calculator

RRID:SCR_008371
Type: Tool

Proper Citation

Hardy-Weinberg Equilibrium Calculator (RRID:SCR_008371)

Resource Information

URL: http://www.oege.org/software/hwe-mr-calc.shtml

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Description: This portal leads to the Chi-sq Hardy-Weinberg equilibrium test calculator for biallelic markers (SNPs, indels etc), including analysis for ascertainment bias for dominant/recessive models (due to biological or technical causes.) The purpose of this web program is for estimating possible missingness and an approach to evaluating missingness under different genetic models. Mendelian randomization (MR) permits causal inference between exposures and a disease. It can be compared with randomized controlled trials. Whereas in a randomized controlled trial the randomization occurs at entry into the trial, in MR the randomization occurs during gamete formation and conception. Several factors, including time since conception and sampling variation, are relevant to the interpretation of an MR test. Particularly important is consideration of the missingness of genotypes that can be originated by chance, genotyping errors, or clinical ascertainment. Testing for Hardy-Weinberg equilibrium (HWE) is a genetic approach that permits evaluation of missingness. Through this tool, the authors demonstrate evidence of nonconformity with HWE in real data. They also perform simulations to characterize the sensitivity of HWE tests to missingness. Unresolved missingness could lead to a false rejection of causality in an MR investigation of trait-disease association. These results indicate that large-scale studies, very high quality genotyping data, and detailed knowledge of the life-course genetics of the alleles/genotypes studied will largely mitigate this risk. Sponsors: This resource is supported by an Intermediate Fellowship (grant FS/05/065/19497) from the British Heart Foundation.

Synonyms: HWE Calculator

Resource Type: software application, simulation software, software resource

Keywords: gamete, genetic, allele, analysis, biallelic, biological, caluclator, conception, disease, dominant, genotype, hardy-weinberg equilibrium, marker, mendelian, model, randomization, recessive, snp, test, trait

Resource Name: Hardy-Weinberg Equilibrium Calculator

Resource ID: SCR_008371

Alternate IDs: nif-0000-25608

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Ratings and Alerts

No rating or validation information has been found for Hardy-Weinberg Equilibrium Calculator.

No alerts have been found for Hardy-Weinberg Equilibrium Calculator.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 103 mentions in open access literature.

Listed below are recent publications. The full list is available at T1D .

Saba N, et al. (2025) Association of angiotensin I converting enzyme gene I/D polymorphism and coronary artery disease in the Pakistani population. Science progress, 108(2), 368504251338935.

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Elngar EF, et al. (2022) Component 1 Inhibitor Missense (Val480Met) Variant Is Associated With Gene Expression and Sepsis Development in Neonatal Lung Disease. Frontiers in pediatrics, 10, 779511.

Faisal S, et al. (2022) Diagnostic and Prognostic Risk Assessment of Heat Shock Protein HSPA1B rs2763979 Gene Variant in Asthma. Genes, 13(12).

Al Ageeli E, et al. (2022) Migration/Differentiation-Associated LncRNA SENCR rs12420823*C/T: A Novel Gene Variant Can Predict Survival and Recurrence in Patients with Breast Cancer. Genes, 13(11).

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Zazeckyte G, et al. (2022) Associations of Tumor Necrosis Factor-Alpha Gene Polymorphisms (TNF)-? TNF-863A/C (rs1800630), TNF-308A/G (rs1800629), TNF-238A/G (rs361525), and TNF-Alpha Serum Concentration with Age-Related Macular Degeneration. Life (Basel, Switzerland), 12(7).

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Ben Salah H, et al. (2021) Rapid high-resolution melting method to identify human leukocyte antigen-G (HLA-G) 3' untranslated region polymorphism +3142C/G (rs1063320). Molecular genetics & genomic medicine, 9(11), e1817.

Ignaszak-Kaus N, et al. (2021) Relationship of Postoperative Pain and PONV after Minimally Invasive Surgery with the Serotonin Concentrations and Receptors' Gene Polymorphisms. Journal of personalized medicine, 11(9).

Motawi TMK, et al. (2021) rs62139665 Polymorphism in the Promoter Region of EpCAM Is Associated With Hepatitis C Virus-Related Hepatocellular Carcinoma Risk in Egyptians. Frontiers in oncology, 11, 754104.

Martins JSC, et al. (2020) Investigation of Human IFITM3 Polymorphisms rs34481144A and rs12252C and Risk for Influenza A(H1N1)pdm09 Severity in a Brazilian Cohort. Frontiers in cellular and infection microbiology, 10, 352.

Sahmoud S, et al. (2020) Association of VDBP rs4701 Variant, but not VDR/RXR-? Over-Expression with Bone Mineral Density in Pediatric Well-Chelated ?-Thalassemia Patients. Mediterranean journal of hematology and infectious diseases, 12(1), e2020037.

Fawzy MS, et al. (2020) Analysis of microRNA-34a expression profile and rs2666433 variant in colorectal cancer: a pilot study. Scientific reports, 10(1), 16940.

Mehrzad J, et al. (2020) The independent and combined effects of selected risk factors and Arg399Gln XRCC1 polymorphism in the risk of colorectal cancer among an Iranian population. Medical journal of the Islamic Republic of Iran, 34, 75.

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