# INPLASY PROTOCOL

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**Conflicts of interest:**
**None declared.**

# A meta-analysis of cholesteryl ester transfer protein(CETP) gene rs708272(G>A) polymorphism in association with cornoary heart disease risk

Zhang, RZ[1]; Xie, QY[2].

**Review question / Objective:** **To seek the association of the CETP rs708272 polymorphism with CHD.To figure out if the carriers of allele rs708272-A reduce or increase the risk of CHD in comparison with carriers of allele rs708272-G under allele model, dominant model and recessive model.**
**Condition being studied:** **The inclusion criteria of CHD:(1)the presence of stenosis≥50% in a minimum of one main segment of coronary arteries (the right coronary artery, left circumfex, or left anterior descending arteries) by coronary angiography. (2) symptoms representing angina pectoris, electrocardiographic changes, and elevations of cardiac enzymes based on the criteria of the World Health Organization.**
**(3) a certifed record of coronary artery bypass graft or percutaneous coronary intervention were included in the study.The exclusion criteria of CHD :patients with congenital heart disease, cardiomyopathy, and valvular disease.Controls:the same populations as the cases and specifed to be without CAD, cardiovascular and cerebrovascular diseases, and peripheral atherosclerotic arterial disease.**

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 06 June 2023 and was last updated on 06 June 2023 (registration number INPLASY202360021).

## INTRODUCTION

**Review question / Objective:** **To seek the association of the CETP rs708272 polymorphism with CHD.To figure out if the carriers of allele rs708272-A reduce or increase the risk of CHD in comparison with carriers of allele rs708272-G under allele model, dominant model and recessive model.**

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## METHODS

**Participant or population:** Inclusion criteria: (1)the presence of stenosis≥50% in a minimum of one main segment of coronary arteries (the right coronary artery, left circumfex, or left anterior descending arteries) by coronary angiography.(2) symptoms representing angina pectoris, electrocardiographic changes, and elevations of cardiac enzymes based on the criteria of the World Health Organization.(3) a certifed record of coronary artery bypass graft or percutaneous coronary intervention were included in the study.exclusion criteria:patients with congenital heart disease, cardiomyopathy, and valvular disease.

**Intervention:** Cholesteryl ester transfer protein(CETP) gene rs708272(G>A) polymorphism.

**Comparator:** The same populations as the cases and specifed to be without CAD, cardiovascular and cerebrovascular diseases, and peripheral atherosclerotic arterial disease.

**Study designs to be included:** inclusion criteria:(1) only English-language publications were considered; (2) the association of CETP gene rs708272(G>A) polymorphism with CHD risk was evaluated; (3) the absolute counts of rs708272 genotype between CHD patients and controls;exclusion criteria:(1) duplicate publications; (2) incomplete information;(3) insufficient or insignificant statistical data; (4) review articles.

**Eligibility criteria:** inclusion criteria:(1) only English-language publications were considered; (2) the association of CETP gene rs708272(G>A) polymorphism with CHD risk was evaluated; (3) the absolute counts of rs708272 genotype between CHD patients and controls;exclusion criteria:(1) duplicate publications; (2) incomplete information;(3) insufficient or insignificant statistical data; (4) review articles.

**Information sources:** PubMed, Embase, Scopus, Cochren, Web of Science.

**Main outcome(s):** Counts of rs708272 genotype between CHD patients and controls,odds ratios under three genetic models.

**Quality assessment / Risk of bias analysis:** The assessment of publication bias was made by the Begg's funnel plots and Egger's asymmetry tests.
The Egger's test can inspect funnel plot asymmetry by determining whether the intercept deviates significantly from zero when regressing the standardized effect estimates against their precision.

**Strategy of data synthesis:** Unadjusted odds ratio (OR) and 95% confidence interval (95% CI) were calculated by using a random-effects model with the DerSimonian & Laird method to pool individual effect-size estimates under all circumstances. The magnitude of statistical heterogeneity across studies was represented by the inconsistency index statistic.Data were statistically analyzed by the STATA software version 17.0 for Mac.

**Subgroup analysis:** Subgroup analysis based on ethnity, divided into Asians and Caucasian.Subgroup analysis based on CHD subtypes, divided into myocardial infarction group and coronary stenosis

group.Subgroup analysis based on source of controls, divided into hospital-based group and population-based group.

**Sensitivity analysis:** Sensitivity analyses were performed to assess the contribution of individual studies to pooled effect estimates by sequentially omitting each study one at a time and computing differential estimates for remaining studies.

**Country(ies) involved:** China.

**Keywords:** CHD; CETP; rs708272.

**Contributions of each author:**
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Author 2 - Qingya Xie.