

# INPLASY PROTOCOL

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**Support:** There is no founding source.

**Review Stage at time of this submission:** Preliminary searches.

**Conflicts of interest:**  
None declared.

## Prevalence of myopic maculopathy in general and high myopic population worldwide: A systematic review and meta-analysis

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**Review question / Objective:** What is the prevalence of myopic maculopathy (MMD) in general and high myopic population worldwide? Does the prevalence of MMD have racial differences ?

**Eligibility criteria:** Our including criteria are as follows: (1) population-based study; (2) describe the definition and classification of the MMD in detail; (3) sample size >1000 for the total population, patients with high myopia should also come from a corresponding study with large sample size; (4) report the prevalence of MMD as result. Excluding criteria: (1) hospital-based study; (2) full-text unavailable. For several studies based on the same population database, we only included the studies reporting the latest relevant information.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 04 July 2022 and was last updated on 04 July 2022 (registration number INPLASY202270014).

**Condition being studied:** Myopic macular degeneration (MMD) is one of the leading causes of blindness worldwide. However, there is no meta-analysis investigating the prevalence of MMD in high myopic population. We performed preliminarily research.

### INTRODUCTION

**Review question / Objective:** What is the prevalence of myopic maculopathy (MMD) in general and high myopic population worldwide? Does the prevalence of MMD have racial differences ?

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## METHODS

**Participant or population:** Patients with myopic macular degeneration in the total and highly myopic population.

**Intervention:** Not applicable. Because all included studies will be Observational studies. We try to identify the prevalence of MMD in total and highly myopic population.

**Comparator:** Not applicable. Because all included studies will be observational studies.

**Study designs to be included:** Population-based observational study.

**Eligibility criteria:** Our including criteria are as follows: (1) population-based study; (2) describe the definition and classification of the MMD in detail; (3) sample size >1000 for the total population, patients with high myopia should also come from a corresponding study with large sample size; (4) report the prevalence of MMD as result. Excluding criteria: (1) hospital-based study; (2) full-text unavailable. For several studies based on the same population database, we only included the studies reporting the latest relevant information.

**Information sources:** We identified the following electronic databases for literature retrieval: MEDLINE, Cochrane Library, China National Knowledge Infrastructure (CNKI), and Embase from inception to May 5th, 2022, without any language restrictions. We also carefully read the reference list from included studies and previous meta-analyze to determine any other potential studies.

**Main outcome(s):** Prevalence of myopic maculopathy in the total and highly myopic population.

**Additional outcome(s):** Prevalence of sublesions of myopic maculopathy.

**Quality assessment / Risk of bias analysis:** Two investigators independently performed the quality assessment with the Risk Of

Bias In Non-randomized Studies of Interventions (ROBINS-I) tool.

**Strategy of data synthesis:** R (version 4.1.2, "meta" package) will be used to pool the overall incidence of MMD. Two trained investigators respectively extracted data from included studies, and any disparities between them will be solved in a discussion with the third one. Extracted information includes study name, examined time, sample size, the prevalence of MMD, basic demographic characteristics of participants, and methods of classification.

**Subgroup analysis:** We will use subgroup analysis to investigate the different incidence of MMD between countries (regions), rural/urban areas, and races.

**Sensitivity analysis:** We performed sensitivity analysis by removing a single study in sequence and pool the results of remaining results.

**Language:** Only studies written in English and Chinese will be included in this meta-analysis.

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

**Keywords:** myopic macular degeneration, prevalence, high myopia.

### Contributions of each author:

Author 1 - Hekai Shi - The first author proposed this idea, will draft the manuscript, and perform statistical analysis.

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