

# INPLASY PROTOCOL

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None declared.

## Wilson's disease and copper deficiency phenomenon – the systematic review

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**Review question / Objective:** The frequency, clinical course and predictors of copper deficiency in Wilson's disease.

**Condition being studied:** copper deficiency in WD.

**Eligibility criteria:** All studies published until 22 December 2022 for original studies (prospective and retrospective), and case series or case reports analyzing copper deficiency in WD patients. Included will be studies published in English.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 03 April 2023 and was last updated on 03 April 2023 (registration number INPLASY202340004).

### INTRODUCTION

**Review question / Objective:** The frequency, clinical course and predictors of copper deficiency in Wilson's disease.

**Rationale:** Only few case series and case reports analyzed the problem of copper deficiency in WD. This systematic review will summarize the available evidence on copper deficiency in treated WD. We will investigate the frequency, course and

predictors of copper deficiency phenomenon in treated WD.

**Condition being studied:** Copper deficiency in WD.

### METHODS

**Search strategy:** We will search the PUBMED database. Search terms will include: "copper deficiency and Wilson's disease/Wilson disease" and copper

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depletion and Wilson's disease/Wilson disease". The reference lists of extracted publications will be also searched for relevant articles.

**Participant or population:** WD patients including those with copper deficiency syndrome.

**Intervention:** N/A.

**Comparator:** N/A.

**Study designs to be included:** Prospective and retrospective studies, case series and case reports documenting copper deficiency in treated WD patients.

**Eligibility criteria:** All studies published until 22 December 2022 for original studies (prospective and retrospective), and case series or case reports analyzing copper deficiency in WD patients. Included will be studies published in English.

**Information sources:** Electronic databases.

**Main outcome(s):** Frequency, the clinical course and predictors of copper deficiency in WD patients

**Additional outcome(s):** N/A.

**Quality assessment / Risk of bias analysis:** To prevent the risk of bias in this systematic review, a quality assessment tool will be used to assess the quality of all studies included in our analysis.

**Strategy of data synthesis:** The results will be summarized descriptive.

**Subgroup analysis:** Patients with different anti-copper treatment in the course of WD.

**Sensitivity analysis:** Patients receiving different anti-copper treatments.

**Language restriction:** English only.

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

**Keywords:** Wilson's disease, anti-copper treatment, chelators, zinc salts, copper deficiency.

**Contributions of each author:**

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