# INPLASY PROTOCOL

**Corresponding author:**
**Baojin Wang**

**307797362@qq.com**

**Author Affiliation:**
**The third affiliated hospital of zhengzhou univers**

**Review Stage at time of this submission:** Data extraction.

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

## Efficacy and safety of dienogest for the treatment of endometriosis and adenomyosis: a systematic review and meta-analysis

Lin, S[1]; Wang, X[2]; Fu, X[3]; Yang, W[4]; Bai, Y[5]; Shi, Z[6]; Du, J[7]; Wang, B[8].

**Review question / Objective:** The aim of the systematic review and meta-analysis is to evaluate the efficacy and safety of dienogest in the treatment of women with symptoms ascribed to endometriosis or adenomyosis.

**Condition being studied:** Endometriosis is a common gynecological disease, which is estimated to affect 10% to 15% of all women in reproductive age. It has a negative impact on quality of life, sexual function, work productivity and personal relationships of patients. Medical treatment should be the first-line therapeutic option for patients who do not wish to have babies immediately. Dienogest, a 19-nor testosterone and progesterone derivative, is a fourth-generation synthetic oral progestin. RCTs has proved the good efficacy and favorable safety of dienogest. The meta-analysis about dienogest is rare. So we will conduct the systematic review and meta-analysis was to evaluate the efficacy and safety of dienogest in the treatment of patients with endometriosis or adenomyosis.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 28 May 2020 and was last updated on 28 May 2020 (registration number INPLASY202050107).

## INTRODUCTION

**Review question / Objective:** The aim of the systematic review and meta-analysis is to evaluate the efficacy and safety of dienogest in the treatment of women with symptoms ascribed to endometriosis or adenomyosis.

**Condition being studied:** Endometriosis is a common gynecological disease, which is estimated to affect 10% to 15% of all

women in reproductive age. It has a negative impact on quality of life, sexual function, work productivity and personal relationships of patients. Medical treatment should be the first-line therapeutic option for patients who do not wish to have babies immediately. Dienogest, a 19-nor testosterone and progesterone derivative, is a fourth-generation synthetic oral progestin. RCTs has proved the good efficacy and favorable safety of dienogest. The meta-analysis about dienogest is rare. So we will conduct the systematic review and meta-analysis was to evaluate the efficacy and safety of dienogest in the treatment of patients with endometriosis or adenomyosis.

## METHODS

**Participant or population:** Patients with endometriosis or adenomyosis.

**Intervention:** Dienogest.

**Comparator:** Placebo, GnRH-a or other interventions.

**Study designs to be included:** Randomized controlled trials (RCTs).

**Eligibility criteria:** (1) prospective randomized controlled trials(RCTs); (2) English language studies; (3) Patients in the experimental group were treated with dienogest, while patients in the control group received other medications, such as GnRH analogue, placebo, Combination oral contraceptives or non-steroidal anti-inflammatory drugs. (4) The primary outcome is the improvement in pain associated with endometriosis, other outcomes include side effects and changes in the clinical laboratory parameters. Meta-analyses, reviews, case reports, conference abstracts, cohort studies, retrospective studies and trails without available data are excluded. Studies involving adolescent or menopausal women are excluded.

**Information sources:** A systematic search conducts in the Cochrane library, Embase, Pubmed and Web of Science.

**Main outcome(s):** The primary efficacy outcome is changes in VAS scores of endometriosis-related pain before and after the trial, changes in the amount of analgesics intake is the secondary outcome of efficacy. The outcomes that evaluated the safety included changes in bone mineral density, changes in estrogen concentration, the incidence of hot flushes, headaches and other adverse events.

**Quality assessment / Risk of bias analysis:** To assess study quality, the Cochrane risk of bias assessment tool will be used. Seven domains related to risk of bias are assessed in each study: (1) random sequence generation; (2) allocation concealment; (3) blinding of participants and personnel; (4) blinding of outcome assessment; (5) incomplete outcome data; (6) selective reporting; (7) other bias.

**Strategy of data synthesis:** The Review Manager 5.3 software are used to conduct the meta-analysis. Continuous data will be calculated by mean difference, dichotomous data will be calculated by relative risk. I2 statistics will be applied to evaluated the heterogeneity of results among studies. The fixed-effect model will be used to analyze results, when there is no heterogeneity or the value of I2 < 50%, otherwise, the random-effect will be performed.

**Subgroup analysis:** If a sufficient number of studies are identified for inclusion, we will conduct subgroup analysis of the included studies according to the types of drugs.

**Sensibility analysis:** If a sufficient number of studies are identified for inclusion, we will conduct sensibility analysis by eliminating studies one by one to find the source of heterogeneity.

**Language:** English.

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

**Keywords:** dienogest, meta-analysis, endometriosis-related pain, GnRH-a.

**Contributions of each author:**
Author 1 - Shaochong Lin.
Author 2 - Xinyue Wang.
Author 3 - Xiling Fu.
Author 4 - Wenhui Yang.
Author 5 - Yang Bai.
Author 6 - Zhongna Shi.
Author 7 - Junpeng Du.
Author 8 - Baojin Wang.