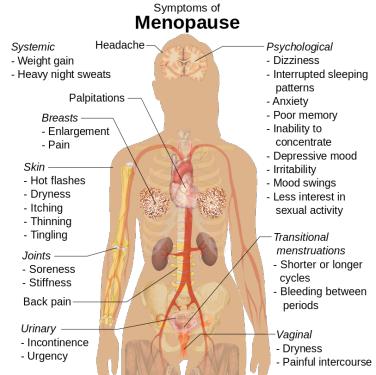


Menopausal Hormone Therapy and Women's Health: An Umbrella Review of Systematic Reviews and Meta-Analyses



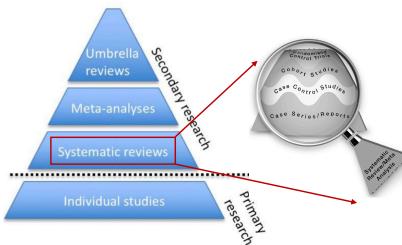
Background

- For several decades, the possible health effects of menopausal hormone therapy (MHT) have remained an ongoing debate
- Current clinical practice guidelines lacked consistency in some critical outcomes (e.g., coronary heart disease and all-cause mortality)
- Two Investigators independently extracted data and assessed study quality
- Random-effects robust variance estimation was used to combine effect estimates

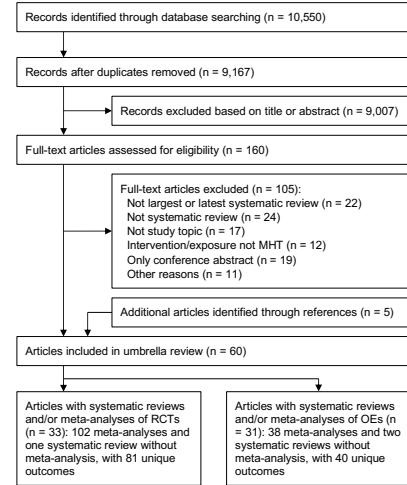
Methods

- MEDLINE, EMBASE and 10 other databases were searched on November 26, 2017, updated on December 17, 2020
- Systematic reviews or meta-analyses of randomized controlled trials (RCTs) and observational studies investigating effects of MHT, including estrogen-alone therapy (ET) and estrogen plus progestin therapy (EPT), on any health outcome in perimenopausal or postmenopausal women in all countries and settings
- Records identified through database searching (n = 10,550)
- Records after duplicates removed (n = 9,167)
- Records excluded based on title or abstract (n = 9,007)
- Full-text articles assessed for eligibility (n = 160)
- Full-text articles excluded (n = 105):
 - Not largest or latest systematic review (n = 22)
 - Not systematic review (n = 24)
 - Not study topic (n = 17)
 - Intervention/exposure not MHT (n = 12)
 - Only conference abstract (n = 19)
 - Other reasons (n = 11)
- Additional articles identified through references (n = 5)
- Articles included in umbrella review (n = 60)
- Articles with systematic reviews and/or meta-analysis of RCTs (n = 33); 102 meta-analyses and one systematic review without meta-analysis, with 81 unique outcomes
- Articles with systematic reviews and/or meta-analysis of OEs (n = 31); 38 meta-analyses and two systematic reviews without meta-analysis, with 40 unique outcomes

Evidence Synthesis Methods

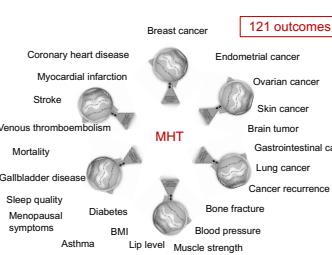


Study Selection Process

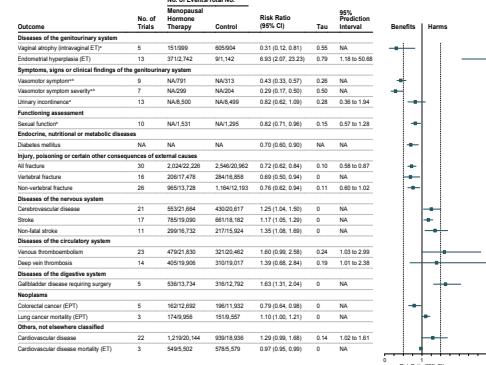


Results

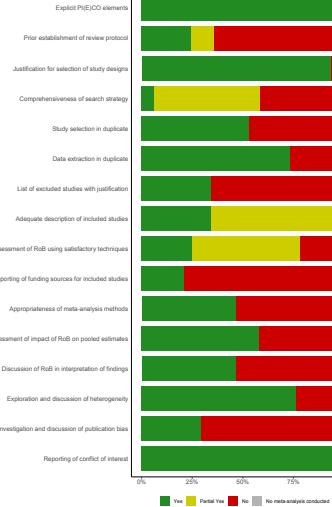
Outcomes Included



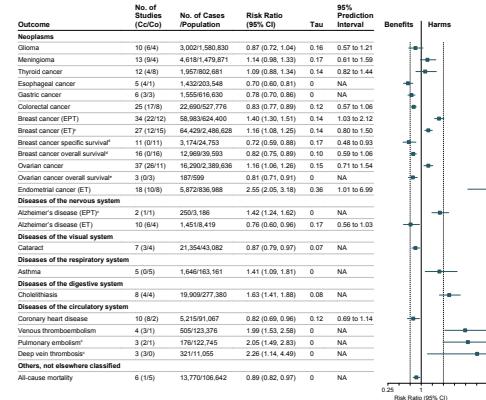
Meta-Analyses of RCTs



Quality Assessment



Meta-Analyses of Observational Studies



Conclusions

- MHT has a complex balance of benefits and harms on multiple health outcomes
- Some effects differ qualitatively between ET and EPT
- Clinicians should evaluate the credibility of the methods of systematic reviews before applying their results in clinical practice
- A re-examination of current practice guidelines may be needed

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