**Introduction**

Cardiovascular diseases (CVDs) are the leading cause of death worldwide, with low- and middle-income nations accounting for over three-quarters of CVD deaths.

Meanwhile, the use of oral contraceptive is associated with an increased risk of cardiovascular events in women of reproductive age.

**Aim**

To provide a comprehensive synthesis of the available evidence on the link between oral contraceptive use and CVD-risk in premenopausal women.

To assess the role of geographic disparities.

**Methodology**

This systematic review and meta-analysis was prepared according to the preferred reporting items for systematic reviews and meta-analysis (PRISMA) guidelines.

Participants: Healthy premenopausal women

Intervention: Oral contraceptive

Comparator: Premenopausal women not using oral contraceptives

Outcome: Endothelia activation and cardiovascular risk variables.

The potential risk of bias of all included studies were assessed using the modified Downs and Black checklist.

Data analysis were performed using the Review Manager (RevMan).

**Results**

Briefly, 179 studies were screened after searching from inception till date.

25 were included in the review, while 15 studies were included in the meta-analysis.

**Conclusion**

Evidence from this systematic review and meta-analysis showed little to no difference in the risk of endothelia dysfunction among oral contraceptive users when compared with non-users.

There was a significant increase in the prevalence of other traditional cardiovascular risk variables. Lastly, the magnitude of CVD-risks varies across different geographical region.

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