WHO recommendation against salt restriction for the prevention of pre-eclampsia

30 October 2011

Recommendation

Restriction in dietary salt intake during pregnancy with the aim of preventing the development of pre-eclampsia and its complications is not recommended.

(Moderate-quality evidence, weak recommendation)

Publication history

First published: October 2011
Updated: no update planned
Assessed as up-to-date: October 2011

Remarks

- The guideline development group agreed that healthy dietary practices should be promoted in the general population, including among pregnant women.
- The group considered the avoidance of excessive dietary salt intake as a healthy dietary practice.

Background

Hypertensive disorders of pregnancy are an important cause of severe morbidity, long-term disability and death among both mothers and their babies. Worldwide, they account for approximately 14% of all maternal deaths, whereas in Latin America and the Caribbean, they contribute to approximately 22% of all maternal deaths.(1)

Among the hypertensive disorders that complicate pregnancy, pre-eclampsia and eclampsia stand out as major causes of maternal and perinatal mortality and morbidity. The majority of deaths due to pre-eclampsia and eclampsia are avoidable through the provision of timely and effective care to the women presenting with these complications.
Methods

The recommendation was developed using standardized operating procedures in accordance with the process described in the “WHO handbook for guideline development”, guided by the GRADE approach.\(^{(2, 3)}\) Outcomes used for this recommendation were aligned with the prioritized outcomes from the WHO recommendations on prevention and treatment of pre-eclampsia eclampsia (2011).\(^{(4)}\)

A Cochrane systematic review was conducted, on the effect of changes to dietary salt intake to risk of developing pre-eclampsia.\(^{(5)}\) In the review, randomized controlled trials relevant to the key question were screened by review authors, and data on relevant outcomes and comparisons were extracted. Evidence profiles (in the form of GRADE tables) were prepared for comparisons of interest, including the assessment and judgments for each outcome, and the estimated risks.

WHO convened a Guideline Development Group (GDG) meeting on recommendations for prevention and treatment of pre-eclampsia or eclampsia in April 2011, where this recommendation was developed. The GDG comprised of a group of independent experts, who used the evidence profiles to assess evidence on effects on the pre-specified outcomes. GDG members discussed the balance between desirable and undesirable effects, overall quality of supporting evidence, values and preferences of stakeholders, resource requirements, cost-effectiveness, acceptability, feasibility and equity, to formulate the recommendation. Remarks were added to clarify the recommendation, and aid implementation.

Recommendation question

For this recommendation, we aimed to answer the following question/s:

- in normotensive pregnant women (P), does a change in dietary salt intake (I) compared to standard dietary salt intake (C), affect the risk of developing pre-eclampsia (O)?
- If so, what is the recommended level of dietary salt intake?

Evidence Summary

Evidence on the differential effects of altered dietary salt intake on the development of preeclampsia and its complications came from a Cochrane systematic review of two RCTs involving 603 women in the Netherlands.\(^{(5)}\) Participants in both trials were nulliparous women with normal blood pressure at trial entry. The two trials compared restricted dietary salt intake (20 mmol/day or 50 mmol/day) with advice to continue with normal diet. There were no statistically significant differences for the critical (and proxy) outcomes addressed in the trials: preeclampsia (two trials, 603 women; RR 1.11 95% CI 0.49–1.94), perinatal death (two trials, 409 women; RR 1.92, 95% CI 0.18–21.03), admission to intensive care unit (one trial, 361 women; RR 0.98, 95% CI 0.69–1.40) and Apgar score less than seven at 5 minutes (one trial, 361 women; RR 1.37, 95% CI 0.53–3.53) (EB Table 5). Although there were no serious limitations in the quality of the studies included in the review, the relatively small number of participants and few events yielded generally imprecise estimates.

Implementation considerations

- The successful introduction of this recommendation into national programmes and health-care services depends on well-planned and participatory consensus-driven processes of adaptation and implementation. The adaptation and implementation processes may include the development or
revision of existing national guidelines or protocols based on this recommendation.

- The recommendation should be adapted into a locally appropriate document that can meet the specific needs of each country and health service. Any changes should be made in an explicit and transparent manner.
- A set of interventions should be established to ensure that an enabling environment is created for the use of the recommendations (including, for example, the ability to regularly monitor women with pre-eclampsia), and that the behaviour of the healthcare practitioner changes towards the use of this evidence-based practice.
- In this process, the role of local professional societies is important and an all-inclusive and participatory process should be encouraged.

Research implications

The 2011 GDG did not identify any high-priority research questions on this intervention.

Related Links

- **WHO recommendations on prevention and treatment of pre-eclampsia and eclampsia** (2011) - [full document](#) and [evidence tables](#) (EB Table 51)

- [Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential practice](#)

- [Managing Complications in Pregnancy and Childbirth: A guide for midwives and doctors](#)

Supporting systematic review:


References
