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Abstract

Salicylate Intake in Pregnant and Non-Pregnant Women †

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Abstract: Salicylates are naturally present in plants. In medicine, acetylsalicylic acid (aspirin) is widely used as an analgesic, antipyretic, and anti-inflammatory agent and also as a preventive medicine for preeclampsia in pregnancy. The main sources of salicylates are vegetables, herbs, and spices. It is observed that salicylates present in a diet rich in vegetables and herbs are largely responsible for the positive effects of these foods on human health. Therefore, the aim of this study was to determine the total salicylate intake in pregnant and non-pregnant women. This study was conducted on 105 non-pregnant women (NPW) and 98 pregnant women (PW) aged 19–42 years old. PW were at 11–12 weeks of gestation. We used a validated questionnaire and a 24 h recall nutrition interview. The results were analyzed using the original database on salicylate content in food and the computer software package Aliant. The BMI index was calculated. A statistical analysis of the results was performed using Statistica 13.3. It was found that in PW, the total intake of salicylates was significantly lower than in NPW as follows: 421.11 ± 51.19 µg/day and 539.32 ± 43.20 µg/day, respectively. PW did not use supplements with salicylates nor aspirin, while 4.4% of NPW used supplements with salicylates, and 15% occasionally used aspirin. The main food sources of salicylates in women were as follows: spices, vegetables and fruits, and cereal products. However, PW used a significantly lower number of spices (especially hot spices) than NPW. In the NPW group, a good source of salicylates was alcohol (beer and wine), while PW did not drink alcohol at all. The energy intake in both groups was not markedly different and was 1612.81 ± 314.07 kcal/day in PW and 1552.40 ± 321.18 kcal/day in NPW. The average BMI of 22.8 kg/m^2 was comparable between groups. In conclusion, the intake of natural salicylates decreased in pregnancy, which may be associated with the lower beneficial effect of these bioactive substances on health in pregnant women, e.g., increasing the risk of preeclampsia.

Keywords: salicylates; aspirin; pregnancy; preeclampsia

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