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**File: ■ German Chamomile (*Matricaria recutita* syn. *M. chamomilla*, Asteraceae)
Tea
■ Sleep Quality
■ Postpartum Women**

HC 121534-545

Date: May 31, 2016

RE: Chamomile Tea Consumption Improves Sleep Quality and Depression in Postpartum Women

Chang SM, Chen CH. Effects of an intervention with drinking chamomile tea on sleep quality and depression in sleep disturbed postnatal women: a randomized controlled trial. *J Adv Nurs*. February 2016;72(2):306-315.

Adequate rest and sleep are critical for a woman's physical and psychological health after giving birth. Most women in Taiwan, home to these authors, follow traditional postpartum confinement practices; however, several do not experience quality nighttime sleep. Because Taiwanese mothers are the primary caregivers, improving sleep quality is a key health concern. German chamomile (*Matricaria recutita* syn. *M. chamomilla*, Asteraceae) is one of the most commonly used herbal teas as a sleep aid. Chamomile flowers contain a large number of therapeutically active compounds, including the flavonoid apigenin, which is known to have sedative effects. These authors conducted a randomized, single-blinded, controlled trial to evaluate the effects of German chamomile tea on sleep quality, fatigue, and depression in women at 8 and 10 weeks postpartum.

Between November 2012 and August 2013, the authors recruited 80 women who had given birth in a teaching hospital in southern Taiwan. The women had experienced normal childbirth with no postnatal complications.

At 6 weeks after childbirth, 40 subjects assigned to the chamomile tea group were instructed to drink 1 cup of chamomile tea daily for 2 weeks. Each cup of German chamomile tea was prepared by steeping 1 teabag containing 2 g of dried flowers in 300 mL of hot water for 10 to 15 minutes. While the authors note that the source of the chamomile tea was from Germany, they provide no information about the composition, purity, quality, or strength of the investigational product, nor do they give the brand or manufacturer or provide an analysis of the tea constituents. In Germany, both food-grade chamomile tea and pharmaceutical-grade chamomile tea are commercially available. The quality grade would have an impact on the results. Forty subjects in the control group did not receive any intervention.

A 14-item Postpartum Sleep Quality Scale (PSQS) measured subjective sleep quality. Its 2 domains measured daytime dysfunction related to infant care during the night (7 items) and sleep inefficiency related to physical symptoms (7 items). The subjects were also asked to score the incidence of sleep problems during the previous 2-week period on a 5-point Likert scale, from 0 (never) to 4 (almost always). The 20-item Edinburgh Postnatal Depression Scale (EPDS) measured postpartum depression symptoms during the preceding 7 days, from 0 (not at all) to 3 (yes, most of the time). The 12-item Postpartum Fatigue Scale (PFS) measured subjective fatigue for the subjects during the preceding week, from 0 (none) to 3 (severe).

All subjects in both groups completed a demographic data form, the PSQS, EPDS, and PFS at baseline and at 2 and 4 weeks post-intervention (or 8 and 10 weeks postpartum). Of all subjects, 35 in the chamomile group and 38 in the control group completed the 2-week post-test questionnaires (immediate effect), and 35 in the chamomile group and 37 in the control group completed the 4-week post-test questionnaires (long-term effect). Five subjects in the chamomile tea group were lost to follow-up due to "mailing loss," and 3 in the control group were lost to follow-up due to "incorrect contact details" (1) and "mailing loss" (2).

At baseline, PSQS, EPDS, and PFS scores were similar among all subjects. After 2 weeks of intervention, significant differences were observed in scores on the PSQS subscale "physical-symptoms-related sleep inefficiency" ($P=0.015$) and on the EPDS ($P=0.020$), with significant improvements in sleep efficiency and depression symptoms in the chamomile tea drinkers compared with the control group. No significant between-group differences were observed after 4 weeks of intervention. No significant effects were seen in daytime dysfunctions related to nighttime care of the infant; however, the mean post-test scores of the chamomile tea group were lower than those of the control group, especially after 2 weeks.

The subjects reported that drinking German chamomile tea effectively promoted sleep quality (40%), emotional stability and relaxation (37.1%), and had no adverse effects. "For postpartum women, drinking German chamomile tea before bedtime may help calm restlessness, facilitate the post-natal paternity relationship, and alleviate postpartum fatigue," write the authors.

The authors note, "The mechanism behind these effects of chamomile tea on postpartum depression remains unclear and merits the further analysis of the biological profile of chamomile. A possible interpretation may be related to chamomile's reportedly having a mechanism of action similar to that of non-steroidal, anti-inflammatory drugs."¹ Furthermore, since the study included only Taiwanese subjects, future studies should include subjects in other countries to enhance the generalization of chamomile tea therapy.

As demonstrated by these findings, the consumption of single-ingredient chamomile tea once daily for 2 weeks produced positive and significant effects on the sleep quality and mental health of postpartum women. "We hope that healthcare professionals will reference these findings to increase their awareness of the correct and positive use of herbal therapy in postpartum health care," the authors state. Due to the insufficient information provided about the investigational product, this study is not reproducible.

—*Shari Henson*

Reference

¹Srivastava JK, Pandey M, Gupta S. Chamomile, a novel and selective COX-2 inhibitor with anti-inflammatory activity. *Life Sci.* 2009;85(19-20):663-669.

Editor's Note:

The chamomile amount seems significantly underpowered since a typical single and daily dosage regimen would be 2 to 4 g of dried chamomile flower heads in 150 ml of boiling water 3 to 4 times daily. It appears that the effects of about $\frac{1}{3}$ to $\frac{1}{4}$ the normal daily dose were investigated. Also, the composition, purity, quality, and strength of the investigated product were not analyzed.

In a response from the corresponding author, Dr. Chen, she stated that single-ingredient, dried chamomile flowers (origin, Germany) were purchased from Shuan Young Enterprise Co., LTD. (Taipei, Taiwan; <http://www.magnet.com.tw/en/>). The authors "did not analyze the tea constituents since the chamomile flowers used were original (imported from Germany) and single-ingredient. In Taiwan, the postnatal women traditionally drank Chinese medicine herbs. So, we decided this dose to test the effects of chamomile tea which is not a traditional drink for postnatal women in Taiwan" (personal communication to L. Glenn, March 22, 2016).

According to the website provided, the company does not offer pharmaceutical quality chamomile. Also, all of the chamomile-containing products on their website are combination products, rather than single-ingredient teas, and all appear to be food-grade teas (website accessed May 19, 2016).

The authors should have analyzed the product to ensure that it was single-ingredient and did actually contain German chamomile. The fact that a low dose was decided upon because German chamomile tea is not a familiar or traditional remedy for Taiwanese women is a major limitation of the study as the authors should have discussed in the text the normal therapeutic single and daily dose and why they chose a subtherapeutic dosage schedule.

The American Botanical Council has chosen not to include the original article.

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