

# Multidisciplinary approach during menopausal transition and postmenopause in Brazilian women

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## Summary

**Objective:** To identify clinical, physical, life quality and nutritional aspects of Brazilian women during menopausal transition and postmenopausal periods. **Methods:** 115 women agreed to participate in the study. They were divided into two groups: GI – menopausal transition (n = 48) and GII – postmenopause (n = 67). The Kupperman-Blatt Menopausal Index (IMK) and Women's Health Questionnaire (WHQ), Food Frequency Questionnaire and functional capacity were used. All patients were examined and underwent clinical and gynecological examination. **Results:** There was no significant difference in IMK, WHQ and functional capacity in either group. There was a higher caloric intake, especially in sugars, in postmenopause women than in menopausal transition women. Both groups presented reduced parameters in life quality and functional capacity. **Conclusion:** Our data suggests that there is no significant difference between women in menopausal transition and postmenopause, except in relation to the nutritional parameter. In both groups, the women presented low quality of life and reduced functional capacity.

**Key words:** Premenopause; Postmenopause; Diet; Comprehensive healthcare.

## Introduction

Population ageing occurs in many developed and developing countries. Life expectancy for Brazilian women is 75.6 years [1]. More and more women experience hormonal alterations related to menopausal transition and post-menopause. Not only in developed countries but also in developing ones there is an increasing tendency in life expectancy for women who live with diseases during the ageing years [2]. Health care and adequate treatment are essential to maintain life quality.

Women's menopausal transition and postmenopausal period is the passage from the reproductive phase (menarche) to senescence that generally occurs between 40 and 65 years [3]. In Brazilian women, natural menopause occurs between 48 and 50 years. It is considered premature menopause when it occurs before 40 years and late menopause after 52 years [4, 5].

Menopausal transition begins with the variation of menstrual cycle duration with high follicle stimulating hormone (FSH) and ends with the last menstruation (menopause). After this phase, postmenopause takes place [3]. Generally, in the first phase, women may present menstrual dysfunction and vasomotor symptoms, while in the second phase the effects of low levels of estrogens may be stronger, resulting in hot flashes, urogenital symptoms and cognitive alterations that may affect a woman's life [4, 6].

The view of multiprofessional health care teams focused on menopause involves clinical and educational aspects. Activities should be established and integrated, aiming at the success of methodology and development of each project. The knowledge about specific characteristics of each group to be studied is fundamental [7-9].

This study aims at identifying the clinical characteristics, the nutritional habits, the functional capacity and the quality of life of women during transitional menopause and postmenopause.

## Materials and Methods

This study is part of the Integral Program of Women Health Care during Climaterium (PIAC). It is a comprehensive health care program and multidisciplinary project that gives orientation to women in the transition to menopause and postmenopause. This project has been approved by the Ethics Committee of the Federal University of São Paulo, São Paulo Medical School (UNIFESP – EPM). Clinical, physical, nutritional and quality of life aspects that may interfere in women's health during menopause were analyzed. Voluntary patients were examined at the Ambulatory Medical Center for menopausal transition and postmenopause, Discipline of Gynecological Endocrinology, Department of Gynecology, UNIFESP – EPM. The participants' age varied between 40 and 70 years and they were nominally invited between June and August 2006. After they were informed about the project, 115 women signed a consent form to participate in the study. Exclusion criteria were: the use of any specific hormonal drugs to minimize menopausal symptoms in the previous 12 months to the interview; ingestion of soy and its derivatives or herbal substances; acknowledged or suspicious neoplasia; kidney, thyroid or liver chronic diseases; cerebral vascular disease and myocardial infarction; tobacco use (> 10 cigarettes a day), hyperprolactinemia; thromboembolic disturbances; diabetes mellitus; systemic arterial hypertension uncontrolled and age below 40. The voluntary patients were divided into two groups: GI – transition to menopause (n = 48); GII – postmenopause (n = 67) with no menstruation for more than a year. The Kupperman-Blatt Menopausal Index (IMK), Women's Health Questionnaire (WHQ), the Modified Stanford Health Assessment Questionnaire – simplified, modified and validated version in Brazil (MHAQ-Brazil) and food frequency questionnaire were applied

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in all volunteers in this study. Participants underwent clinical and gynecologic examination. Epidemiologic data was collected such as age, marital status, and economic status (employed or not employed). The IMK was developed in 1953 and it has been used in many studies to evaluate the gravity of menopausal symptoms [10]. The index includes 11 symptoms. Each category is calculated in a four point scale in which zero equals asymptomatic and four, severely symptomatic. Total points for each item evaluates the gravity of menopausal symptoms that may vary from 0 to 51 points, the higher the punctuation the more severe the complaint. The WHQ was the first questionnaire to be included in the International Health Related Quality of Life Outcomes Database [11]. It was validated in Brazil [12] to evaluate health status, because it is easy to understand and to apply. It has 36 items, divided into nine dimensions: depressive mood (six items); somatic symptoms (seven items); anxiety/fears (4 items); vasomotor symptoms (two items); sleep problems (three items); sexual functioning (three items); menstrual problems (four items); cognitive difficulties (three items) and attraction (three items). The scale varies from zero to four points, the higher the score the more pronounced the suffering and dysfunctions. The MHAQ – Brazil [13, 14] allows for the evaluation of measured parameters in therapeutic assay and was used to check functional capacity. It has eight sub-scales which evaluate different aspects of the patient's daily life. Each one of these sub-scales presents two or three questions related to physical activities. The patient was asked the degree of difficulty he found in realizing a determined activity one week previous to the interview and assign a grade from zero (no difficulty) to three (impossibility to realize the activity). The sub-scale grade is equivalent to the higher grade attributed in one of the two or three questions. The instrument's final score is obtained by the arithmetical average of the grades of the eight sub-scales and it varied from zero to three. The questionnaire related to food frequency [15] is based on the individual. It registers or describes the patient's usual food ingestion based on a list of different foods. The quantity and kind of food on the list varied according to the aim of the evaluation. The food frequency questionnaire offers qualitative information on food ingestion. This study established the number of women who ingested specific food during the week previous to the interview. In the statistical analysis data was processed, and estimates were made about the distribution center and of the variability of the results for numerical variables: average, standard deviation and standard error for the average. The unpaired Student's t-test or chi-square test were used to compare data obtained from the studied groups. The significance level was fixed at 0.05 for both tests; 90% confidence limit was calculated with 40 patients per group.

## Results

Clinical characteristics included age, body mass index (BMI), marital status, and economic status (Table 1). The average age of women on transition menopause ( $48.22 \pm 2.30$ ) was lower than that of postmenopause women ( $55.10 \pm 3.4$ ,  $p < 0.05$ ). There was no statistical difference between the groups as to BMI and marital status. In both groups BMI was above 26. Unemployment rate was significantly higher among postmenopause women. Table 2 indicates IMK, WHQ and MHAQ - Brazil. There was no significant statistical difference between either group. Nutritional characteristics indicated that postmenopause

Table 1. — *Clinical characteristics of the participants of the study (average  $\pm$  standard deviation).*

Characteristics	Menopausal transition (n = 48)	Postmenopause (n = 67)	p
Age*	$48.22 \pm 2.30$	$55.10 \pm 3.4$	< 0.01
BMI*	$26.66 \pm 5.29$	$28.2 \pm 6.02$	0.15
Marital Status**			0.63
Single-Widow	18	28	
Married-Stable Union	20	30	
Divorced-Separated	10	9	
Economic Status**			0.02
Unemployed	10	53	
Employed	38	44	

\*Unpaired Student's t-test was used. \*\*  $\chi^2$  test was used to compare marital status and economic status.

Table 2. — *Characteristics of the participants of the study (average  $\pm$  standard deviation) in relation to IMK, functional capacity and WHQ.*

	Menopausal transition (n = 48)	Postmenopause (n = 67)	p
IMK*	$20.83 \pm 24.89$	$21.32 \pm 21.96$	0.86
MHAQ-BR*	$2.88 \pm 1.45$	$2.8 \pm 1.98$	0.87
WHQ*			
Depressive Mood	$17.51 \pm 8.45$	$17.92 \pm 7.99$	0.92
Somatic Symptoms	$17.55 \pm 4.43$	$16.63 \pm 5.12$	0.78
Cognitive difficulties	$7.03 \pm 2.33$	$6.88 \pm 3.21$	0.83
Vasomotor Symptoms	$4.71 \pm 1.95$	$4.91 \pm 2.06$	0.86
Anxiety/Fears	$8.41 \pm 2.45$	$8.15 \pm 2.07$	0.79
Sexual Functioning	$5.51 \pm 3.45$	$5.18 \pm 3.99$	0.98
Sleep Problems	$8.03 \pm 2.77$	$7.98 \pm 2.65$	0.94
Menstrual Symptoms	$8.44 \pm 1.45$	—	—
Attraction	$7.50 \pm 4.45$	$7.42 \pm 2.67$	0.77

\*Student's t-test was used for data analysis.

Table 3. — *Characteristics of the participants of the study concerning nutrition.*

Weekly food ingestion	Menopausal transition (n = 48)	Postmenopause (n = 67)	p
Milk and Derivatives	40	61	0.71
Vegetables/Fruit/Juice	32	39	0.13
Sugars	24	66	0.002
Rice, Pasta, Bread	44	63	0.67
Eggs	18	25	0.88
Canned Food/ Fried Food/Salted Food	11	21	0.28
Coffee	35	57	0.70
Red Meat	23	31	0.11

$\chi^2$  test was used for data analysis.

women presented higher daily consumption of carbohydrates, especially of sugars ( $p < 0.05$ ). The other items considered showed no significant difference (Table 3).

## Discussion

This study aimed at identifying clinical, nutritional habits, functional capacity and life quality of women during the menopausal transition and postmenopause. These are important aspects to be considered when planning multiprofessional care for the prevention of diseases and quality of life of women. Our studies suggest that, in

spite of age and hormonal differences in the menopausal transition and postmenopausal women, additional factors were not identified in relation to IMK, functional capacity and WHQ. IMK is an instrument used to evaluate climacteric symptoms that may influence life quality [16, 17].

The most important symptom is vasomotor-related and it might appear in transition menopause and in the first years of postmenopause [18]. It must be emphasized that during menopausal transition hot flashes appear when there is a decrease in estrogen concentration. It is known that during this period estrogen fluctuation occurs and the symptoms may appear or disappear spontaneously [19]. It should be expected that menopausal transition women presented a lower IMK than that of postmenopausal women [16, 20]. Our work did not detect any significant difference between either study group. However, climacteric symptoms have a great impact on women's quality of life [21] and both groups presented moderate climacteric symptoms. The WHQ evaluation for both groups was not significant. However, depressive mood and somatic symptoms were those mostly mentioned.

Functional capacity evaluated in this study did not present any statistical difference in either group. However, it was noted that the functional capacity of women in both groups was reduced. The studied women are predisposed to limitations in their daily activities which may favor diseases that worsen their life quality during the ageing process [16]. The decrease in life quality may be shown in the WHQ and it is in accordance with this study.

Associations between weight gain in relation to age point to postmenopause as a cause [22]. Some other authors consider weight gain similar in postmenopause compared to transition menopause [23]. We observed no significant differences in relation to BMI in either group. Some studies also did not find any correlation between BMI and climacteric symptoms [24].

An increase was noted in carbohydrate ingestion, especially sugars in postmenopause women which may predispose them to obesity, insulin resistance and diabetes mellitus [25]. The BMI in our study presented overweight that may impair life quality and favor cardiovascular diseases [26, 27] as well as limit functional capacity [28]. The highest sugar ingestion was observed in women in the postmenopause study group which had a great number of unemployed women. The decrease in income may contribute not only to lower protein and vegetable ingestion but also to the increase in daily consumption of carbohydrates.

## Conclusion

Both groups presented health conditions, life quality, functional capacity and nutritional habits inadequate for the ageing process. A multidisciplinary approach should alert physicians about patients' profiles and the focus should be on the prevention of diseases and improvement in healthcare.

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