

# 2nd International Conference on Obesity and Weight Loss

October 15-16, 2018 Amsterdam, Netherlands

## Obesity and the Susceptibility of the Occurrence of Lower Limbs Osteoarthritis in a Cohort of Women from El Jadidaprovince

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**Introduction:** obesity has aroused these last time a significant interest because of its strong association with osteoarthritis by the worsening of the mechanical constraints exerted on the articulation. Considered as degenerative disease and debilitating, the prevalence of osteoarthritis does not cease to increase due to the increase in both the life expectancy and the prevalence of obesity. The objective of this study is to assess the link between obesity and the susceptibility of the occurrence of the osteoarthritis of the lower limbs in a sample of women.

**Methodology:** The study was undertaken on 137 women from 11 urban and rural localities of an agricultural province of Morocco, El Jadida. The evaluation of symptomatic the susceptibility of the occurrence of osteoarthritis of the lower members among the participants was performed using the Moroccan version of the WOMAC index for the lower limbs. Another questionnaire has allowed collecting socio-demographic data and anthropometric measurements in the surveyed in order to establish the relationship between obesity and the occurrence of osteoarthritis risk.

**Results:** The study data show that the female population surveyed was  $45 \pm 13$  years old, mostly obese (77%) and that the median score of the WOMAC is 38. The perception of the WOMAC pain linked to the susceptibility of osteoarthritis is felt much more among women with morbid obesity with an average of 15.40. For the waist/hip (WHR), participants having gynoïde (WHR < 0.80) and Android (WHR > 0.85) have expressed more pain with the respective averages (6.14; 8.13) and functional discomfort (22.71; 27.97) of their lower limbs than those with mixed morphotypes. Conversely, for the three dimensions of the WOMAC, no significant difference was observed for the sum of the skinfolds. The susceptibility of occurrence of osteoarthritis in its two forms (knee and coxarthrose) is much more evident in the category of age > 50 years with a rate of 22%.

**Conclusion:** The study results report a link between obesity and the risk of occurrence of osteoarthritis, its prevention is important and its magnitude varies according to the age and to the osteoarthritis location.

### Biography:

Dr. Rekia Belahsen is Professor and Head of the Training and Research Unit on Nutrition and Food Sciences, Director of the Lab. of Biotechnology, Biochemistry and Nutrition at UCD in El Jadida (Morocco). Graduated in Nutrition & Alimentation (France); and PhD in Endocrinology & Nutrition at Laval University (Canada). Expert evaluator for many national and international organizations (European Commission, UNICEF, etc....). PI of many National & international funded projects. Several awards and numerous fellowships: the FAO Medal of Merit (Morocco) in 2007, a grant from Islamic Development Bank in 1998. Author of many publications and is involved as reviewer and editorial for several journals. Executive member of many national, regional and international organizations (SMN, FANUS, MENANA, Nutricion sins Fronteras, IUNS). She organized several meetings (1<sup>st</sup> FANUS meeting, Ouarzazate, Morocco in 2007; the International Workshop on Nutrition transition and Population health, El Jadida Morocco in 2011, 7<sup>th</sup> ANEC Conference, Marrakech, Morocco in 2016, IUNS, 2013 (Spain) & 2017 (Argentina)). The main current research topics: nutrition transition, obesity, community nutrition, Mediterranean diet, micronutrient deficiency and Food composition and valorization of traditional Mediterranean diet.