Exercise and physical activity

**Oral communications**

**CO25-001-e**  
Isokinetic adaptations of knee extensors and flexors after aerobic walk training in old sedentary women

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**Introduction**  
We examined the effects of active walk training 3 days per week, for 24 weeks on isokinetic peak torque (PT) and mean power (MP) of the knee extensors and flexors of osteopenic sedentary old women.

**Methods**  
The population was composed by 121 women (65.5 ± 4.2 years) with 5.3 (± 1.7) to the Physical Activity Scale for the Elderly (PASE) and 86% of the theoretical distance of the 6-minute walk test (6MWT). The women were eligible to participate if they had no medical contraindication and were not diagnosed with major motor and neurocognitive dysfunctions. The isokinetic performance of the knee extensors and flexors in both limbs was measured on Biodex System 3™ in concentric/concentric condition on 80° range of motion. The experimental protocol consisted in 5 maximal effort performed at 60°/sec, 60 second of rest interval and 5 maximal effort at 180°/sec. After 5 minutes of rest, identical paradigm was performed on contro-lateral side. Experimental group performed aerobic walk training: (1) between 60 and 80% of maximal heart rate; (2) with a distance between 1500 to 4500 meters at the end of the training; (3) with a total time effort between 25 to 45 minutes at the end of the training.

**Results**  
Our results showed significant increase of PT of hamstring in dominant side at 180°/sec (p < 0.01). We observed significant differences in the experimental group for the hamstring at 60°/sec for the dominant side (p < 0.02) and the no-dominant side (p < 0.01). For MP, no interaction was observed between groups and time. For the hamstring, we observed significant increase in the experimental group at 60°/sec on the no-dominant side (p < 0.05).

**Discussion**  
Our results indicate a moderate effects of the aerobic walk training performed during 6 months on the peak torque and the mean power of isokinetic knee extensors and flexors in old sedentary women.

**Disclosure of interest**  
The authors have not supplied their declaration of conflict of interest.

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**CO25-002-e**  
How physical activity level for patients with knee osteoarthritis.

**Epidemiological study on spa therapy**

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**Objective**  
To describe the level and perception of the physical activity for patients with knee osteoarthritis in 9 spa resorts

**Method**  
Five hundred and forty-eight patients (548) with knee osteoarthritis were interviewed by self-answered questionnaires. Physical activity level was evaluated by the International Physical Activity Questionnaire Short version (IPAQ) [1] and perception of physical activity by a new questionnaire (EPAP) based on a preliminary qualitative study.

**Results**  
The mean age of study population is 67.6 (± 7.9) years, whose 73.9% women and 30.9% are obese with a mean BMI of 28.2 (± 5.7). The subgroups analysis according to the 4 phenotypes described by the OARSI [2] shows that 92% patients are multi-joint osteoarthritis, 61% with comorbidities. Mean pain intensity on VAS is 4.5/10 and 67% of patients uses analgesics at least once a week. Only a third of patients receive a non-pharmacological treatment according to the latest guidelines [2]. According to the IPAQ, 42.6% of patients have a high level of activity, 38.6% moderate and 18.8% low. Obese patients have a significantly lower level of physical activity (p < 0.05). The facilitators are mainly biopsychosocial, cultural and environmental, while the barriers are mainly biomedical.

**Discussion**  
Osteoarthritis spa resort patients are more active than the general population, despite a high level of pain. The literature shows that patient multidisciplinary care for knee osteoarthritis including self-care and exercise improves pain, physical function and contributes to weight reduction. This study can help adaptation of osteoarthritis management, taking into account the patient’s history, his psychology and his phenotype. This strategy could permit to offer tailored educational strategies regarding physical activity.

**Keywords**  
Osteoarthritis; Knee; Physical Activity; Measurement; Epidemiology
CO25-003-e
Facilitators and Barriers in physical activity engagement for knee osteoarthritis patients

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Objective To identify facilitators and barriers of a regular physical activity practice for knee osteoarthritis patients.

Method Qualitative, prospective study, based on semi-structured interviews and focus groups; stopping interviews leans on the principle of data saturation.

Results Twenty individual interviews and two focus groups were conducted with knee osteoarthritis patients (27 patients). The study population consisted of 18 women and 8 men, mean age 67 years old and BMI 29.2. They were mostly retired and lived in urban areas. The main facilitators are physical (physical well-being, reduction of pain, glaze of other), personal (culture of physical activity, lifestyle, psychological well-being), societal (social link, lifestyle, glaze of society) and environmental (living environment). They differ by sex, performance concept for men and others eyes for women. The barriers are psychological (fear of pain), physical (knee pain, performance concept for men and others eyes for women). The society) and environmental (living environment). They differ by sex, psychological well-being), societal (social link, lifestyle, glance of other), personal (culture of physical activity, lifestyle, psychological well-being), societal (social link, lifestyle, glance of society) and environmental (living environment). They differ by sex, performance concept for men and others eyes for women.

Discussion The study population has a positive representation on the relationship between physical activity and knee osteoarthritis management. The patients’ beliefs and knowledge agree with the relationship between physical activity and knee osteoarthritis. The patients’ beliefs and knowledge agree with the relationship between physical activity and knee osteoarthritis.

Keywords Osteoarthritis; Knee; Physical Activity; Facilitators Barriers Qualitative study; Adherence

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

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