

## 1. Obesity in Europe

In Europe, overweight and obesity are increasing rapidly in most countries, and health economic consequences are now appearing. An increase focus on this problem has led to important studies<sup>8</sup> and creation of *Task Forces*<sup>9</sup> that create an important contribution to the topic. Obesity levels are increasing at an alarming rate, with up to 27% of men and 38% of women now considered to be obese in some parts of the EU. The number of overweight children is also growing rapidly, currently rising by 400 000 a year and obesity related illnesses are estimated to account for as much as 7% of total healthcare costs in the EU<sup>10</sup>.

This is particularly important in countries in Europe, which have State based social systems. With increases both on healthcare costs, absenteeism and decreased production in the work setting, the maintenance of social care systems, like healthcare, social security and others, may be in serious threat, with an extraordinary burden for future European generations.

There is extensive scientific literature and position stands addressing the need to develop effective programs and strategies to fight the pandemic of obesity and obesity-related health problems<sup>11-15</sup>. Some strategies can be summarized in several important interventions and research areas:

a) Search for a better understanding of the mechanisms associated with the project at the scientific, medical, economical and social level for an accurate analysis of the strengths, weaknesses, opportunities and threats of the project and to evaluate the extension of the benefits;

b) The development of projects for the overall population and for sub-groups in the population: children and adolescents, minorities, disadvantaged groups, and in the organizational setting: educational environment, governmental services and “decision making” levels. Those projects should be applied in a multiple joint effort with interested partners, and with a very stringent *quality control* and evaluation mechanisms to control the progress of the project, to correct insufficiencies and reinforce the project for the future;

c) Emphasis on strategies for lifestyle modification through behavioral changes already with small children and families.

## **2. Characteristics of obesity and consequences**

Adults who are overweight or obese have an increased risk for mortality and morbidity consequence of an array of diseases, including cardiovascular disease (CVD), hypertension, dyslipidemia, diabetes mellitus, gallbladder disease, and some types of cancer<sup>1</sup>. Body Mass Index (BMI) is a frequently used clinical tool to assess body composition. However, it is accepted that BMI is a poor indicator of risk, as variations in BMI may reflect variation in lean body mass and fat mass but not the distribution of the fat mass. The localization of the fat deposits is of extraordinary importance, especially when it is accumulated in the abdominal region. This “visceral fat” is characterized by high lipolytic activity and it’s a stronger contributor to the Metabolic Syndrome (MetS) which represents a constellation of markers that indicates a predisposition to diabetes, CVD and other pathologic states<sup>3</sup>. Adipose tissue is also now recognized as an endocrine organ secreting many substances that have been linked to MetS and

inflammatory processes that lead to the initiation of atherosclerotic mechanisms leading to DCV<sup>4</sup>.

For a subject to be classified as having MetS three or more of the following criteria need to be present:

1. Abdominal obesity: waist circumference >102 cm in men and >88 cm in women
2. Hypertriglyceridemia:  $\geq 1.69$  mmol/L
3. Low high-density lipoprotein cholesterol: <1.04 mmol/L in men and <1.29 mmol/L in women
4. High blood pressure:  $\geq 130/85$  mm Hg
5. High fasting glucose:  $\geq 6.1$  mmol/L

Behavioral factors such as sedentary lifestyle and dietary habits are related to the increased accumulation of abdominal fat as well as other components of the MetS. Recommendations for a long-term treatment and prevention of obesity include interventions combining healthy diet, exercise habits and behavior modifications designed to facilitate maintenance of these lifestyle changes<sup>5</sup>. Healthy dietary behaviors and physical activity include a balanced, healthy choice, low caloric diet and an accumulation of at least 30 minutes of moderate physical activity most days of the week. This last recommendation suggests a participation in vigorous physical activity that promotes the development of cardio respiratory fitness and regular performance of physical activities that enhance and maintain muscular strength, muscular endurance, and flexibility<sup>6</sup>. The recommendation to increase physical activity is

a key element of health-promotion strategies in many countries, and of international initiatives targeted at developed and developing countries such as the WHO Mega Country Health Promotion Network<sup>7</sup>.

### **3. The role of Academic Sports Services in the fight against obesity**

The University setting is a potentially important environment for reducing the prevalence of overweight of adult population through the promotion of healthy weight management practices<sup>16</sup>. While overweight and obesity appear to track from childhood into adulthood, overweight during late adolescence is most strongly associated with increased risk of overweight in adulthood<sup>17</sup>. Therefore this sub-group of the population assumes special importance to monitor, and to measure the success of applying obesity prevention programs. Universities provide numerous opportunities to positively influence physical activity, exercise, sports, nutrition, and body composition management of older adolescents and young adults in an educational setting. It is also been shown that University educated men and women engage in more leisure-time physical activity than less well educated individuals in many countries<sup>17</sup>.

Universities can and should approach the student, graduate and staff community to assess the needs of those groups and to offer programs that would increase awareness of the benefits of healthy life habits, mainly through combining physical activity, exercise with correct food choices and behavioral programs to reflect the psychic dimension of obesity. Strategies to increase adherence and compliance with those programs should consider the nature of an academic setting: in a study performed in the United States with 4609 University students, the authors reported that nearly half of all students were

trying to lose weight, yet only about 1 of 3 students who were trying to lose weight reported ever receiving any information from their university on the topics of physical activity and fitness or dietary behaviors and nutrition<sup>15</sup>. In another extremely important sub-group, 15% of female students who were trying to lose weight used potentially harmful and unhealthy weight control methods (i.e., diet pills, vomiting, or laxatives)<sup>15</sup>. These examples illustrate the importance of the correct intervention at this level, and the importance that a well constructed, far-reaching and appealing University health promoting program should have.

The Universities are preparing adults for active life, being at the social or professional level. The acquisition of habits that promote health and healthy life styles could then be passed on to other groups, and even to the following generations.

What are the areas of intervention to help accomplish that goal:

I) Sport activity in recreational and leisure activities. The practice of sport is well related with health and well being. Universities have special interest developing that kind of activities and increase the research in this area. The last research of Cetelem bank regarding consumers shows the emergence of new needs among population in general. In Portugal, as an example, the health and well-being are the most growing market.

II) Adherence and regularity to the practice. A lot of students have had negative experiences about sport during their school period. It might be that the decided to do never sports again in their life! During their university career they get the chance to experience sport in a different way and learn that body movement can be a joy in life.

III) Sport facilities and sport activities are planned in the campus and/or in the campus community. Therefore students, professors and staff can easily be involved in programs against obesity.

IV) Higher Education Institutions have among their staff, experts in health care that can give some extra support developing healthy life styles. This can be accomplished by the implementation of scientific research studies, academic community programs on sport, exercise and physical activity prescription, nutrition intervention, psychological and social counselling. This *know-how* can also be directed to the creation of support mechanisms for the academic community, like: publications, educational sessions, posters, etc.

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ENAS Secretary General

A handwritten signature in black ink, appearing to read 'J. Roquette', with a stylized flourish at the end.

João Roquette

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