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Editorial
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Nutritional Treatment of Obesity and Related Diseases

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Editorial

Now in many developed countries, obesity is the one of most important health problems because of prolonged sitting in daily life. World health Organization (WHO) reported in 2015 that obesity has more than doubled since 1980. The WHO definition is that a BMI greater than or equal to 25 is overweight and a BMI greater than or equal to 30 is obesity. They reported that 39% of adults aged 18 years and over were overweight in 2014, and 13% were obese [1]. In USA, more than one-third (34.9%) is obese [2,3]. In Japan the % of male aged 20 years and over, which exceeded 25 of BMI, was 28.4% in 2004 and 28.7% in 2014. The percentage of overweight of female was lower than male [4]. The Obesity causes type 2 diabetes, metabolic syndrome, cardiovascular diseases and others. These diseases induce other diseases, which are sometimes fatal [5] (Figure 1). Two types of nutritional interventions are now considered. One is to overcome obesity by nutrition; another is to prevent disease progression caused by obesity.

In order to overcome obesity, risk factors from the points of nutrition and dietetics have to be elucidated. A high intake of energy rich food, sugar containing drinks have been considered to be main risk factors in developed countries [6]. Recently it has been elucidated that the food preferences are formed in early life [7]. Most important risk factor of obesity is of course high-energy intake. Traditional dietary recommendations have not changed much and the most commonly recommended macronutrient distribution is 50–60% for carbohydrates, 30% for fat and 10–20% for proteins. It has been widely recognized that energy restriction is more important than the macronutrient distribution of such a diet in causing weight loss [8]. It has been shown that food restriction does produce weight loss but it also decreases in energy expenditure and body energy store. Wight loss maintenance was failed [9], because it is opposed by biology [10]. Long term weight loss maintenance is succeeded in high amount of physical activity [11]. Satiety is an important factor for weight control. High-fat diets have low satiety [12], whereas high-protein diet has high satiety [13]. The type of carbohydrates affects differently to obesity. Sugar and fructose are harmful, whereas those containing slowly digestible and resistant starches have beneficial effects on obesity [14].

Low carbohydrate diets become popular for weight control recently. Low carbohydrate diet versus total reduction of energy intake arouses controversy. Recent systemic review found that these two diets had the same effect on weight loss, especially when looking at long-term effects on weight loss [15].

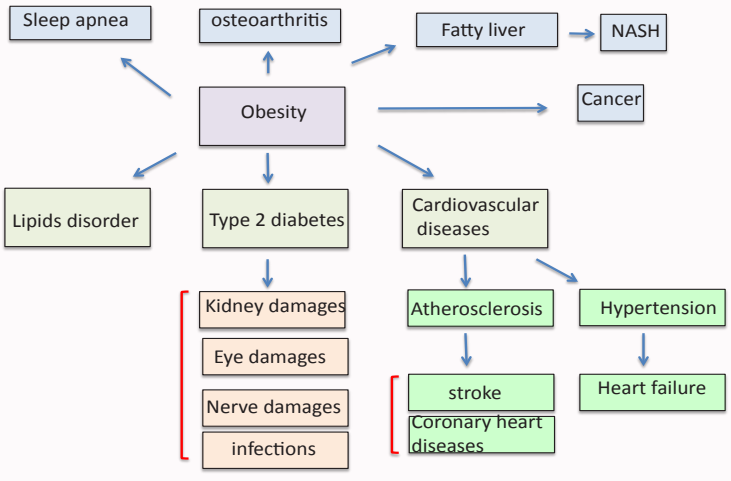

Figure 1: Diseases caused due to obesity.

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Nutrition therapy of diabetes

At 2013, American Diabetes Association (ADA) replaced the previous position (2008) of nutrition treatment diabetes. Especially they suggested that although for overweight or obese adults with type 2 diabetes, reducing energy intake while maintaining a healthful eating pattern is recommended to promote weight loss, there is no ideal mix that applies broadly and that macronutrient proportions should be individualized [16].

Other nutrition therapy for obesity-induced metabolic diseases

There are many nutrition therapies applied to metabolic diseases including atherosclerosis, hypertension, heart failure and renal failure. These nutritional therapies are changing every time by new finding from basic researches and clinical researches. Thus for ideal nutrition therapy in future, clinical reports related to nutrition therapy are important. Many things are learned by case reports, which are related to nutrition. Recent advance of life science enable our daily eating to think scientifically. Foods will cause health hazards by the contamination of infectious agents and toxins. Mycotoxins, phycotoxins, bacterial toxins induce varieties of diseases. These cases are different in living conditions. We can learn much from each case and apply to new patients.

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