

# Control Obesity to Prevent Metabolic Syndrome and Related Diseases

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**Keywords:** Overweight, obesity, metabolic syndrome, prevention, diet, activity, environment

## Abstract

In Asia Pacific region, increasing obesity and diabetes become serious problem in addition to the aging society. Number of diabetes is over 100 mil in China, 60 mil in India, 10 mil in Japan, etc. It is difficult to keep HbA1c below 6.0% in aged people, because many of them have several diseases simultaneously. In addition to diabetes, hypertension, hyperlipidemia, hyperuric acid, and renal insufficiency are all related to obesity in metabolic syndrome. So, if we succeed to control obesity, we can decrease the incidence of all above diseases. The author would like to introduce our successful intervention study (SCOP) by integrated approach including psychological intervention. More than half decreased 10% body weight after one year. We started to find more simple intervention method, based upon 6000 participants in Genki study. Among the participants, obese people showed higher OR to have diabetes, hypertension, hyperlipidemia and other diseases. On the contrary, brown rice eaters showed low or and they felt healthy and vivid. It has been clarified in recent studies, that brown rice contains substances that have various effects on physiological functions in addition to the function as ordinary nutrients. Functional components like  $\gamma$ -oryzanol of brown rice could control diabetes, and GABA may keep mental health. The rice bran contains rich vitamins, minerals, long-chain fatty acids, ferulic acid and inositol, etc. In that sense, the influence of brown rice on health is extremely large and could be called medical rice. Rice is the staple food of 70% of the world's people. The annual production is about 600 million tons. More than 90% of rice is now made in Asian countries. There are a lot of developing countries which are the sources of protein and fat. In response to the enormous increase of medical costs in many countries, encouragement of healthy longevity by changing dietary habits is mandatory.

## Introduction

Overweight and obesity are significant risk factors for developing the metabolic syndrome and have in recent years, become the major world-wide nutritional challenge

affecting both children, and adults in countries with both high and low incomes. Obesity arises primarily from the need for energy storage when dietary energy intake exceeds energy expenditure. The latter largely consists of basal metabolic rate which forms ~60–75% of total energy expenditure. The energy expended through physical activity which in children is usually a larger proportion (20–30%) of total daily energy expenditure than in adults, is the next largest component with energy expended in thermogenesis accounting for only about 10%. The rapid increase in obesity rates worldwide has been caused by the combination of less active lifestyles and a failure to reduce energy intake in line with reduced total energy expenditure arising from reduced physical activity. Since 1980, the prevalence of obesity has more than doubled in over 70 countries with the recent rate of increase seemingly more rapid in children. The prevalence of childhood obesity has increased 8-fold since 1975 and the combined prevalence of overweight and obesity may be as high as 23% worldwide. The prevalence of obesity increases significantly after adolescence. Furthermore, most obese children remain obese as adults and have a 5-fold increased risk of obesity in adult life than that seen in normal weight children

## Method

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## Conclusion

The annual production is about 600 million tons. More than 90% of rice is now made in Asian countries. There are a lot of developing countries which are the sources of

protein and fat. In response to the enormous increase of medical costs in many countries, encouragement of healthy longevity by changing dietary habits is mandatory.

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