

## Effect of a dietary supplement containing kurozu (a Japanese traditional health drink) concentrate on several obesity-related parameters in obese Japanese adults: a randomized, double-blind, placebo-controlled trial

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### **ABSTRACT:**

**Objective:** This study was undertaken to examine the Kurozu concentrate (KC) based dietary supplement on several obesity-related parameters in obese Japanese male and female adults.

**Background:** Kurozu, which is a specific type of rice vinegar produced by fermentation of unpolished brown rice, has long been used as a traditional health food and folk medicine in Japan. A recent animal study and our preliminary human study suggest that the KC supplement has potential for use in the management of obesity.

**Materials and Methods:** A 12-week, randomized, double-blind, placebo-controlled trial was conducted involving 48 Japanese adult subjects (28 males and 20 females) with obesity. Subjects were either assigned to the group consuming the KC supplement for 12 weeks (870mg/day; 480 mg/day as KC) (n=24; 14 males and 10 females) or the placebo group (n=24; 14 males and 10 females). All test participants were assessed using several obesity-related parameters, including body weight, BMI, waist circumference, and abdominal fat computed tomography (CT) sections. These measurements took place at baseline and at week 12.

**Results:** At week 12, a significant decrease in body weight ( $P < 0.043$ ) and nearly significant

decreased values of BMI ( $P=0.052$ ) were observed in the KC group compared to the placebo group. The reduction in waist circumference at week 12 within the KC group was not significantly greater than the placebo group. Examination of abdominal CT sections around the navel indicated that, although most of the values of the total fat area, subcutaneous fat area, and visceral fat area for both of the placebo and KC groups significantly increased during the 12-week intervention, the magnitude of increase in the total fat area for all subjects and that of the total fat area, subcutaneous fat area, and visceral fat area for females on one or more of three CT sections were significantly lower in the KC group than the placebo group ( $P<0.05$ ).

**Conclusion:** Although the results are not definitive, KC supplementation may have potential for improving some obesity-related parameters in obese subjects, particularly females.

**Key words:** Kurozu concentrate (KC), KC-based dietary supplement (KC supplement), abdominal obesity-related parameters, body mass index (BMI), computed tomography (CT), abdominal fat