SUPPLEMENTAL METHODS

Clinical and laboratory measurements

Height and weight were measured in light clothing and without shoes. Body mass index was calculated by dividing the weight in kilograms by the square of the height in meters. Waist circumference was measured midway between the costal margin and the iliac crest, at the end of expiration. Blood pressure was measured with an automatic manometer of an appropriate cuff size, on the right arm after more than 5-minute rest. Blood samples were obtained after overnight fasting and were analyzed by the central, certified laboratory at Asan Medical Center.

Levels of total cholesterol, high-density lipoprotein cholesterol, low density lipoprotein cholesterol, triglyceride, uric acid, creatinine, aspartate aminotransferase, and alanine aminotransferase were measured using the enzymatic calorimetric method with a Toshiba 200 FR Neo autoanalyzer (Toshiba Medical System Co. Ltd., Tokyo, Japan). Gamma-glutamyl transferase level was measured using the L-γglutamyl-p-nitroanilide method (Toshiba). The immunoturbidimetric method (Toshiba) was used for high-sensitivity C-reactive protein, and the enzymatic calorimetric method by the Toshiba 200 FR autoanalyzer (Toshiba) was used for fasting plasma glucose. Glycated hemoglobin levels were measured by ion-exchange high-performance liquid chromatography (Bio-Rad Laboratories Inc., Hercules, CA, USA). Serum insulin level was measured by an immunoradiometric assay (TFB Co. Ltd., Tokyo, Japan).