This study examined whether a single treatment of grapefruit aroma can attenuate heart rates and subjective exercise intensity of obese subjects during cycle exercise. Twelve Japanese women (55 ± 5.9 years old, 62.0 ± 10 kg, BMI 25.4 ± 3.6) divided into 2 groups: the aroma and control groups with and without aroma treatment of grapefruit essential oil (Citrus paradisi) during 20 min of cycle exercise, respectively. Heart rates and subjective exercise intensity, which was estimated by the Borg scale (rate of perceived exertion), were examined before and at 5, 10, 5, and 20 min during exercise. The results showed that both heart rates and the subjective exercise intensity in the control group significantly increased during exercise. In contrast, heart rates and the subjective exercise intensity in the aroma group did not change during exercise. This study suggests that the treatment of grapefruit aroma is effective for preventing obesity and metabolic syndrome because there is a possibility to continue exercise for a longer time with aroma treatment.