Comparison of weight changes following unilateral and staged bilateral STN DBS for advanced PD.

Unilateral and bilateral subthalamic nucleus deep brain stimulation (STN DBS) in Parkinson's disease (PD) result in weight gain in the initial postoperative months, but little is known about the changes in weight following unilateral and staged bilateral STN DBS over longer time intervals. A case-control comparison evaluated weight changes over 2 years in 43 consecutive unilateral STN DBS patients, among whom 25 elected to undergo staged bilateral STN DBS, and 21 age-matched and disease severity matched PD controls without DBS. Regression analyses incorporating age, gender, and baseline weight in case or control were conducted to assess weight changes 2 years after the initial unilateral surgery. Unilateral STN DBS and staged bilateral STN DBS patients gained 3.9 ± 2.0 kg and 5.6 ± 2.1 kg versus their preoperative baseline weight (P < 0.001, respectively) while PD controls lost 0.8 ± 1.1 kg. Although bilateral STN DBS patients gained 1.7 kg more than unilateral STN DBS patients at 2 years, this difference was not statistically significant (P = 0.885). Although there was a trend toward greater weight gain in staged bilateral STN DBS patients versus unilateral patients, we found no evidence for an equivalent or synergistic increase in body weight following placement of the second DBS electrode.