ABSTRACT
Objective: Sodium levels are typically high in Chinese dishes due to use of ingredients such as soy sauce and monosodium glutamate. Chinese food is popular among many Americans, with the number of Chinese restaurants exceeding the total number of top three major fast food establishments. Since 2008, the Nutrient Data Lab has increased the number of Chinese foods analyzed through its National Food and Nutrient Analysis Program (NFNAP) to expand their inclusion in the USDA National Nutrient Database for Standard Reference. Variability of sodium in Chinese foods was examined. Materials and Methods: Twelve popular dishes were selected based on What We Eat in America, NHANES consumption data. Each dish was sampled from independently-owned restaurants in up to 12 nationwide locations using NFNAP's multi-stage, probability-proportional-to-size sampling plan. Sample units were homogenized by menu item and sent with quality control materials to pre-prepared laboratories where sodium was determined using the Inductively Coupled Plasma (ICP) method. Frequency of means, coefficients of variation (CV), and analysis of variance (ANOVA) tests were conducted. Results: Mean sodium levels ranged from 252 to 533 mg/100 g among the 12 dishes, and differences in variability were indicated by CV's ranging from 13% (general tea's chicken) to 56% (lemon chicken). The weight of 1 order varied among the different restaurants for each dish, creating an even greater impact on the sodium level per order; e.g. an order of beef and vegetables from OK (average 461 g) had 544 mg sodium compared to 3791 mg in 1 order (average 649 g) from NY. Sodium levels per 100 g were consistent across 4 U.S. regions, but when based on an order size, significant differences were observed (p<0.0001). Significance: Researchers and dietitians should consider the high variability of sodium levels in prepared Chinese foods due to the impact of sodium consumed from these foods.

RESULTS & DISCUSSION
Sodium per 100 g (Table 1)
- Mean sodium levels ranged from 252 mg (lemon chicken) to 533 mg (orange chicken) per 100 g among the 12 dishes.
- General tea's chicken had the lowest variability in sodium levels (CV 13%) and lemon chicken had the greatest (56%).

CONCLUSIONS
- Sodium levels in Chinese restaurant foods are highly variable, which may impact the amount of sodium consumed from these foods.
- The weight of 1 order has an even greater impact on the variability of sodium due to the variability in order size among restaurants for each menu item.
- The wide variability in sodium levels of similarly named Chinese dishes makes monitoring changes in sodium levels especially challenging.
- SR release 26 [2] has 19 Chinese restaurant items, 14 of which are used in the What We Eat in America/NIH-CNHNES 05-06 survey.

REFERENCES