Abstract Number	**P-3-15-23**
Presenter	Christina Porucznik*, Kyley Joell Cox, Lindsey Canfield Schmidt, James VanDerslice, Joseph Stanford, Diana Wilkins, Eric Brozek
Exposure	food
Health domains	reproductive outcomes
Type of research	cohort study

Urinary Bisphenol A Concentrations Measured on Multiple Consecutive Days in a Prospective, Pre-conception Cohort

Background: Bisphenol A (BPA) is an endocrine disrupting chemical found in canned food and other consumer products. BPA has been detected in human specimens throughout the world and at levels similar to those associated with adverse reproductive outcomes in animal models. Objective: To examine and compare the distribution of urinary BPA concentrations collected from partners of a male-female couple. Methods: A prospective, pre-conception cohort of couples (women 18–35, men 18–40) without known infertility were recruited in Utah beginning in early 2012. Recruitment is ongoing. Couples observed cervical mucus to identify an estimated day of ovulation (EDO) and fertile window. Participants collected first-morning urine samples beginning during the fertile window, after which men discontinued collecting but women collected for the remainder of the cycle. BPA was measured in each urine sample using quantitative liquid chromatography-tandem-mass spectrometry. Geometric means with 95% confidence intervals (CI) for BPA concentrations were calculated by taking the antilog of the mean of the natural log-transformed values. Differences in geometric mean by sex were tested using the Wilcoxon Test to account for daily repeated urines and the coupled, matched-pair design. Results: BPA was detected in 100% of samples at concentrations ≥0.4ng/mL. Within-individual values varied several-fold from day-to-day. Preliminary results of 846 urine samples (636 female, 210 male) show a geometric mean of BPA as 2.72ng/mL (95% CI, 2.57–2.88) and median of 2.63ng/mL (interquartile range, 1.78ng/mL). Geometric mean BPA levels were higher among men (p=0.025) at 3.26ng/mL (95% CI, 2.90–3.65) compared to women at 2.57ng/mL (95% CI, 2.41–2.74). Conclusions: These preliminary findings suggest that BPA exposure is higher among men than women. The high daily variability suggests that single-day measurement is likely insufficient for exposure assessment.

Abstract Number	**P-3-15-24**
Presenter	Maria Fiore, Gea Oliveri Conti, Caterina Ledda*, Giorgio Gerratana, Cristina Mauceri, Antonio Maieli Diaz, Roberto Fallico, Giovanni Battista Modonutti, Margherita Ferrante
Exposure	food
Health domains	obesity
Type of research	cross-sectional study

Urinary bisphenol A levels and increasing body mass: results of a cross-sectional study

Background According to the WHO, over 700 million obese people there are in the world and about 2 billion people are overweight. BPA has been shown to have endocrine-disrupting effects like behavioral changes, altered growth, and early secondary sexual maturation. In particular, there is evidence that epigenetic changes associated with the use of manmade chemicals may interact with other factors that influence fetal and postnatal growth in contributing to the current obesity epidemic. Epidemiological data in humans are still lacking. Aims A possible association between the urinary BPA levels and body mass index (BMI) of general adult population of the south Italy was investigate. Methods Occupation, education, and lifestyle habits, such as tobacco smoking, alcohol consumption, and other common demographic data were collected by a specific questionnaire. Overweight was defined as BMI from 25 to less than 29.9 kg/m2 and obesity was defined as BMI ≥30 kg/m2. Pooled 24 h urine samples were collected in polyethylene con-tainers and stored at –20°C until the analysis. BPA was determined by HPLC/MS. Results Participants were adults (61% females) non occupational exposed to BPA with the mean age of 50±13.6 years. 5.6% of the subjects were underweight, 33.3% were normal weight, 55.6% were overweight and 5.6% were obese. Average levels of urinary BPA show a trend from underweight to overweight subjects. The same trend is highlighted both for males and females group. A trend is not highlighted for obese group probably because of the small sample size. Conclusions Our results confirm the link between BPA exposure and the increased body mass as well as a widespread BPA exposure which might be an important risk factor for body weigh increase. Therefore, is recommended the counseling of patients by health professionals to decrease levels of exposure to endocrine disruptors particularly during important periods of development such as pregnancy, infancy and puberty.