Introduction
Bisphenol A (BPA) is an endocrine disruptor. Exposure is nearly ubiquitous and often involuntary. BPA is found primarily in canned food and other consumer products including polycarbonate plastics. BPA has been detected in human specimens throughout the world at levels similar to those associated with adverse reproductive outcomes in animal models. In limited human studies, BPA exposure has been associated with sperm damage, changes in male reproductive hormones, male sexual dysfunction, and sexual maturation.

Motivation
Examine and compare the distribution of urinary BPA concentrations collected from partners of a male-female couple.

Methods
Prospective, pre-conception cohort of couples
- Females age 18-35, Males age 18-40
- Recruitment is ongoing, results are preliminary
- Couples excluded if either partner had history of infertility or subfertility
- Women observed cervical mucus to identify an estimated day of ovulation and fertile window
- Both men and women collected first-morning urine samples beginning during the fertile window, after which men discontinued but women continued collecting 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

Results and Discussion
BPA was detected in 100% of samples at concentrations ≥0.4 ng/mL. Within-individual values varied several-fold from day-to-day
- Preliminary results of 846 urine samples
  - (636 female, 210 male)
  - Geometric mean of BPA 2.72 ng/mL (95% CI, 2.57-2.88)
  - Median of 2.63 ng/mL (interquartile range, 1.78 ng/mL)
- Geometric mean BPA levels were higher among men (p=0.025) at 3.26 ng/mL (95% CI, 2.90-3.65) compared to women at 2.57 ng/mL (95% CI, 2.41-2.74)

Conclusion
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.

Acknowledgements
National Institute of Environmental Health Sciences (NIEHS), Outstanding New Environmental Scientist Award (1R01ES020488-01)

Contact Information
The University of Utah
Department of Family & Preventive Medicine
Division of Public Health
Office of Cooperative Reproductive Health
375 Chipeta Way, Ste. A
Salt Lake City, UT 84108
christy.porucznik@utah.edu
(801) 581-4330