

Fertility and Early Pregnancy Working Group: Chemical Sampling Table

				1st trimester	2nd Trimester	3rd Trimester	Newborn	Toddler	Juvenile	>Peri-pubertal		
			Periconception	1st Month	2nd Mo.	3rd Mo.	5th Mo.	8th Mo.	0-2 yrs	3-6 yrs	7-12 yrs	13-18 yrs
								(or at birth)				
Hormones, males			men: blood for hormone profiles (medium priority)***	men: blood for hormone profiles (medium priority) if not done periconceptionally***								sons at 18: blood for hormone profile (high priority)***
Hormones, Women	LH, FSH, Estradiol within 5 days of menses. Ca. 7 days post-ovulation: E2 and Progesterone (p4). When pregnancy is suspected: P4 and hCG				E2, P4., hCG		E2, P4., hCG	E2, P4, hCG				
Chemicals with t1/2 of <3 d			Women, men: blood, 2 samples, 1-2 weeks apart	Women, men*: blood, 1 sample	Women, men: blood, 2 samples, 1-2 wks apart	Women, men: blood, 2 samples, 1-2 wks apart	Women, men: blood, 2 samples, 1-2 wks apart	Women, men: blood, 2 samples, 1-2 wks apart	Diaper extract, 2 samples, 1-2 wks apart, 1x/yr**	Daily Urines, 2 samples, 1-2 wks apart, 1x/yr	Daily Urines, 2 samples, 1-2 wks apart, 1x/yr	Daily Urines, 2 samples, 1-2 wks apart, 1x/yr
			Semen 1x, for quality (high priority and chemicals (medium priority)****)	Semen 1x if not done periconceptionally								sons at 18: Semen for quality and chemicals (highest priority)
3d. ">Chemicals with t1/2 of >3d.			Women, men: blood, 1 sample	Women, men: blood, 1 sample	Women, men: 1 sample	Women, men: 1 sample	Women, men: 1 sample	Women, men: 1 sample	Diaper extract, 2 samples, 1-2 wks apart, 1x/yr	Daily Urines, 2 samples, 1-2 wks apart, 1x/yr	Daily Urines, 2 samples, 1-2 wks apart, 1x/yr	Daily Urines, 2 samples, 1-2 wks apart, 1x/yr
			Semen 1x, for quality (high priority) and chemicals (medium priority)**** >	Semen 1x if not done periconceptionally								sons at 18: Semen for quality and chemicals (highest priority)

It's hoped that the short half-life and the long half-life compounds will be measured in the same samples, if at all technically possible. The breakpoint of 3 days between short- and long-half-life chemicals is approximate, and can be moved at the discretion of the Analysis WG.

\* This sample will probably be inconsistently captured.

\*\* For example, Jan 6-7 and Jan 17-18

\*\*\* hormone profiles for men: peri-conceptually or at enrollment are medium priority (as indicator of general reproductive health) but high priority in sons (indicator of adult reproductive function)

Hormone profile includes inhibin B, FSH, LH and testosterone

\*\*\*\* semen is medium priority for chemicals since blood/urine are more interpretable; but highest priority periconceptionally as indicator of father's reproductive health and potential male-mediated effects in kids;

and highest in sons as indicator of reproductive health and consequences of earlier exposures. Semen analysis includes new tests for chromosome and DNA damage.

Chemicals with t1/2 = <3d = phthalates (DEHP, DBP, butylbenzyl, dihexyl), Organophosphates, phytoestrogens, triazines, vinclozolin and fungicides, bisphenol A, trichloropropane, formamide, acrylamide, and nonylphenol

Chemicals with  $t_{1/2} = >3d$  are TCDD, PCB's, dieldrin and other OC's, and metals (Pb, Hg, As, Cd, etc)

*What about PFOS/PFOA? associated with early postnatal death and altered thyroid hormones*