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Variability of urinary concentrations of polycyclic aromatic hydrocarbon metabolite in general population and comparison of spot, first-morning, and 24-h void sampling

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Correction to: *Journal of Exposure Science and Environmental Epidemiology* (2010) **20**, 526–535; doi:10.1038/jes.2009.41

Tables 2 and 3 contained transcription errors that gave rise to minor errors in the calculated sample-size results. The corrected tables are reproduced below in their entirety and the values presented correctly. The author regrets the error.

Table 2

Variance apportionment for creatinine-adjusted concentrations of 4 PAH metabolites in urine samples from 8 subjects over a period of 7 days.

	Spot sample	s	1st morning vo	oids	24 hour voids		
	Variance component	Percent of total variance (%)	Variance component	Percent of total variance (%)	Variance component	Percent of total variance (%)	
1-NAPc							
Subject	0.20	30*	0.27	33	0.33	44	
Day	0.19	29	0.55	67	0.42	56	
Hour	0.27	41	-	-	-	-	
3-FLUOc							
Subject	0.14	44	0.10	50	0.14	67	
Day	0.04	13	0.10	50	0.07	33	
Hour	0.14	43	-	-	-	-	
3-PHENc							
Subject	0.11	40	0.13	60	0.13	76	
Day	0.01	4	0.07	40	0.04	24	
Hour	0.16	56	-	-	-	-	
1-PYRc							
Subject	0.26	55	0.21	65	0.25	77	
Day	0.03	7	0.12	35	0.07	23	
Hour	0.18	38	-	-	-	-	

Numbers in italic are intraclass correlation coefficients (ICC), defined as the ratio of between-subject variance to total variance.

Table 3

Estimated number of samples needed to detect a difference of 10%, 25%, 50%, and 100% in the 1-hydroxypyrene geometric mean concentration with a statistical power of 80% (p<0.05), for single and repeated sampling for spot, first-morning, and 24-hour void sampling.

	Number of repeated samples											
Target % difference on GM	Spot samples			First morning voids			24-Hour voids					
	1	2	3	4	1	2	3	4	1	2	3	4
Wet weight concentration (ng/L urine)												
10%	1069	624	475	401	618	420	353	320	296	230	208	197
25%	195	114	87	73	113	77	64	58	54	42	38	36
50%	59	34	26	22	34	23	20	18	16	13	11	11
100%	20	12	9	8	12	8	7	6	6	4	4	4
Creatinine-adjusted concentration (ng/g creatinine)												
10%	606	470	424	401	415	343	318	306	399	353	338	330
25%	111	86	77	73	76	63	58	56	73	64	62	60
50%	33	26	23	22	23	19	18	17	22	19	19	18
100%	11	9	8	8	8	6	6	6	8	7	6	6

Additional corrections are described below.

Abstract: the tenth sentence in the abstract should have read: "Intraclass correlation coefficients of 1-PYR levels were 0.55 for spot urine samples, 0.65 [not 0.60] for first-morning voids, and 0.77 [not 0.76] for 24-h voids, indicating a high degree of correlation between urine measurements collected from the same subject over time."

Statistical Analysis: In the third paragraph, eighth sentence (beginning "The percentage differences"), "controls *vs* cases" should have been "controls *vs* exposed group".

In the last sentence of that section, "(one-tailed)" was omitted from the definition of the next to last term; it should have read " $Z_y = y$ th percentile of a standard Gaussian distribution (one-tailed)".

Sample Size Recommendation: The fifth sentence in the first paragraph should have read: "The ICCs for 1-PYR in our study were 0.55, 0.65 [not 0.60], and 0.77 [not 0.76], for spot samples, first-morning-voids, and 24-h voids, respectively, indicating considerable agreement between repeated measurements." The third sentence in the second paragraph should have read "For example, taking an additional sample per person reduces the sample size by 23%, 17% [not 20%], and 12% [not 13%] for spot samples, first-morning, and 24-h voids, respectively."

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