

Supplementary Materials: Phthalate Exposure and Biomarkers of Oxidation of Nucleic Acids: Results on Couples Attending a Fertility Center

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Table S1. Multiple linear regression data.

Women group: Bases and phthalates logarithmic (log 10) transformed		<i>p</i>
oxoGua = 0.633+0.021 (age) – 0.018 (BMI) – 0.306(smoke) + 0.019(alcohol) + 0.325(MnBP)–0.168(MEP)* + 0.083(MBzP) – 0.016(MnOP) + 0.072(DEHP) – 0.086(BisfenoloA)		* <i>p</i> = 0.019
oxoGuo = 0.376 + 0.006(age) + 0.004(BMI) – 0.157(smoke) – 0.033(alcohol) + 0.123(MnBP) – 0.032(MEP) + 0.029(MBzP) – 0.096(MnOP) + 0.061(DEHP) – 0.038(BisfenoloA)		<i>p</i> > 0.05
oxodGuo = 0.528 + 0.045(age) – 0.007(BMI) – 0.599(smoke) + 0.047(alcohol) – 0.099(MnBP) + 0.043(MEP) – 0.002(MBzP) – 0.252(MnOP)* + 0.001(DEHP) + 0.111(BisfenoloA)		* <i>p</i> = 0.031
NO2Tyr = 0.983 – 0.007(age) – 0.010(BMI) – 0.425(smoke) + 0.118(alcohol) + 0.127(MnBP) – 0.022(MEP) – 0.069(MBzP) + 0.007(MnOP) + 0.143(DEHP) – 0.061(BisfenoloA)		<i>p</i> > 0.05
MeCyt = 0.600 – 0.013(age) – 0.009(BMI) + 0.066(smoke) – 0.018(alcohol) + 0.176(MnBP) – 0.047(MEP) + 0.128(MBzP) + 0.021(MnOP) + 0.125(DEHP) – 0.028(BisfenoloA)		<i>p</i> > 0.05
Men group: Bases and phthalates logarithmic (log 10) transformed		
oxoGua = 1.293 + 0.021(age) – 0.018(BMI) – 0.0306(smoke) + 0.019(alcohol) – 0.347(MnBP) + 0.004(MEP) + 0.515(MBzP)* + 0.079(MnOP) + 0.084(DEHP) + 0.044(BisfenoloA)		* <i>p</i> = 0.011
oxoGuo = 0.779 + 0.006(age) + 0.004(BMI) – 0.157(smoke) – 0.033(alcohol) – 0.076(MnBP) – 0.013(MEP) + 0.219(MBzP) + 0.066(MnOP) + 0.016(DEHP) + 0.061(BisfenoloA)		<i>p</i> > 0.05
oxodGuo = 0.708 + 0.045(age) – 0.007(BMI) – 0.599(smoke) + 0.047(alcohol) – 0.327(MnBP) – 0.002(MEP) + 0.124(MBzP) + 0.072(MnOP) + 0.194(DEHP) + 0.143(BisfenoloA)		<i>p</i> > 0.05
NO2Tyr = 1.192 – 0.007(age) – 0.010(BMI) – 0.425(smoke) + 0.118(alcohol) + 0.025(MnBP) – 0.058(MEP) + 0.197(MBzP) + 0.015(MnOP) + 0.136(DEHP) – 0.022(BisfenoloA)		<i>p</i> > 0.05
MeCyt = 0.994 – 0.013(age) – 0.009(BMI) + 0.066(smoke) – 0.018(alcohol) – 0.087(MnBP) + 0.036(MEP) + 0.226(MBzP)* + 0.045(MnOP) + 0.106(DEHP) + 0.138(BisfenoloA)*		* <i>p</i> = 0.035; <i>p</i> = 0.043

*Significant data with the corresponding *p* value

Table S2. Concentrations of phthalates and biomarkers of oxidative stress: a comparison of published studies.

Reference	analytical method	subjects	Biomarkers of oxidative stress (urine)	Urinary phthalate metabolites
[41]	ESI-MS/MS ¹	364 pregnant women	Median (µg/g creatinine) 8-OHdG ² = 10.7	Median (µg/g creatinine): MEP ³ = 8.17 MBzP ⁴ = nd, MnBP ⁵ = 51.8, ΣDEHP ⁶ = 17.8
[43]	Enzyme immunoassay HPLC-MS/MS ⁷	Multiple time points of pregnant women	Median (µg/L) 8-OHdG = 130	Median (µg/L): MEP = 121, MBzP = 6.38, MnBP = 16.5 ΣDEHP = 0.31 µmoli/L
[44]	HPLC/MS/MS ESI-MS/MS	469 couples	Median (µg/g creatinine): 8-OHdG = 3.13	Median (µg/g creatinine): MMP ⁸ = 0.48, MEP = 85.2, MCPP ⁹ = 4.50, MnBP = 7.66, MiBP = 4.36 MBzP = 3.80, ΣDEHP = 54.8 Σ14phthalates = 249
[45]	ESI-MS/MS	300 children	Median (µg/L): 8-OHdG = 2.80	Median (µg/L): MEP = 57.3, MBzP = 1.91, ΣDEHP = 110
[46]	HPLC/MS/MS	751 students	Geometric means (µg/g creatinine): 8-OHdG = 2.02	Geometric means (µg/g Creatinine): MEP = 31.21 MnBP = 35.52 MBzP = 1.93 MMP = 7.51 MiBP ¹⁰ = 15.09 ΣDEHP = 0.22 µmoli/g creatinine
[52]	HPLC/MS/MS	1034 men	Median (µg/L): 8-OHdG = 8.2	Median (µg/L): MEP = 18, MBzP = 2.9, MBP = 63, MnOP ¹¹ = 0.12

¹ESI-MS/MS: Electrospray Ionization tandem mass spectrometry; ²8OHdG: 8-Oxo-2'-desossiguanosina; ³MEP- monoethyl phthalate; ⁴MBzP- monobenzyl phthalate; ⁵MnBP- mono-n-butyl phthalate; ⁶ΣDEHP- molar sum of the di (ethylhexyl) phthalate metabolites; ⁷ HPLC-MS/MS: high performance liquid chromatography/tandem mass spectrometry; ⁸MMP: Monomethyl phthalate; ⁹MCPP: mono-(3-carboxypropyl) phthalate; ¹⁰MiBP: mono isobutylphthalate; ¹¹MnOP: mono-n-octyl phthalate.