

Supplementary materials (Table S1, Table S2, Table S3, Supplementary figure's legend)

Article title: DNA damage and oxidative stress response to selenium yeast in non-smoking individuals - short term supplementation trial with respect to *GPXI* and *SEPP1* polymorphism

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Table S1. Nucleotide sequences of primers and products' length for Real Time PCR.

Gene	Gene product	NCBI accession number	Starter F¹	Starter R¹	Amplicon size (nt)
<i>GPX1</i>	Glutathione peroxidase 1	NM_000581	caa cca gtt tgg gc tca g	gtt cac ctc gca ctt ctc g	121
<i>GPX4</i>	Glutathione peroxidase 4	NM_002085	ccc gat acg ctg agt gtg gtt tg	tta ctc cct ggc tcc tgc ttc c	76
<i>SEPP1</i>	Selenoprotein P	NM_005410	cag cct gga gca taa gag	cga gaa gag att cct tga tg	196
<i>SEP15</i>	15 kDa selenoprotein	NM_004261	ttg ggc tac ggt tgt tgt t	gca tgc ctc cga tga aaa	77
<i>SBP2</i>	SECIS binding protein	AF380995	atc tcc act cct tcg gtt g	gtc ggt aac aca agc atc c	180
<i>SELS</i>	Selenoprotein S	NM_203472	cgg atg agg cta aga atc ttg t	cag agc gct cct caa gag at	103
<i>SEPWI</i>	Selenoprotein W	NM_003009	ttg gct cag ggc taa tgc	ttc cta tca tga agc gtc tgc	82
<i>TRXR1</i>	Thioredoxin reductase 1	NM_003330	aca caa agc ttc agc atg tca	caa ttc cga gag cgt tcc	63
<i>GAPDH</i>	Glyceraldehyde 3-phosphate dehydrogenase	NM_002046	agc cac atc gct cag aca c	gcc caa tac gac caa atc c	66

¹ from 5' to 3'

Table S2. Questionnaire data collected from 95 selenium supplemented subjects during trial and during washout, concerning consumption of drugs, hormones, dietary supplements and herbs.

Type of consumption	Number of subjects (%)	
	During supplementation	During washout
Non-steroidal anti-inflammatory drugs	41 (43.2)	26 (27.4)
Antibiotics	11 (11.6)	4 (4.2)
Antihistamines	8 (8.4)	6 (6.3)
Statins	0 (0.0)	0 (0.0)
Hormones	8 (8.4)	6 (6.3)
Dietary supplements*	10 (10.5)	10 (10.5)
Sporadic use	8 (8.4)	8 (8.4)
Regular use	2 (2.1)	2 (2.1)
Selenium supplements	0 (0.0)	0 (0.0)
Herbs	14 (14.7)	9 (9.5)

* - multivitamins and/or minerals (excluding selenium)

Table S3. The effects of *GPXI* rs1050450 and *SEPP1* rs3877899 on mRNA expression and the interaction with time.

Gene	<i>p</i> -value for genotype effect (regardless of time, F test)* and for time interaction (MANCOVA)*		
	<i>GPXI</i> rs1050450	<i>SEPP1</i> rs3877899	<i>GPXI</i> rs1050450 x <i>SEPP1</i> rs3877899
<i>GPXI</i>	<i>p</i> =0.37	<i>p</i> =0.96	<i>p</i> =0.95
<i>GPX4</i>	<i>p</i> =0.64	<i>p</i> =0.79	<i>p</i> =0.98
<i>TRXR1</i>	<i>p</i> =0.95	<i>p</i> =0.72	<i>p</i> =0.62
<i>SEPP1</i>	<i>p</i> =0.76	<i>p</i> =0.92	<i>p</i> =0.41
<i>SEPI5</i>	<i>p</i> =1.00	<i>p</i> =0.96	<i>p</i> =0.58
	Interaction with time <i>p</i>=0.03		
<i>SELS</i>	<i>p</i> =0.87	<i>p</i> =0.98	<i>p</i> =0.63
<i>SELW</i>	<i>p</i> =0.74	<i>p</i> =0.91	<i>p</i> =0.72
<i>SBP2</i>	<i>p</i> =1.00	<i>p</i> =1.00	<i>p</i> =0.46

* models adjusted for age, sex, BMI and baseline plasma Se
Statistically significant *p*-values are typed in bold and supplied with graphical explanation on the assigned figure. For the interaction with time, only statistically significant *p*-values are presented

Supplementary figure's legend

Figure S1. Distribution of combined *GPX1* and *SEPP1* genotypes within study group (95 subjects). 0 – wild type homozygote, 1 – heterozygote, 2 – recessive homozygote.

Figure S2. Data from dietary questionnaires collected from selenium supplemented subjects, concerning consumption of food products with high Se content (eggs, fish and nuts) – during supplementation and during washout.

Figure S3. Nonsignificant effect of *GPX1* rs1050450 polymorphism on plasma Se (a), plasma Sepp1 (b), SOD1 activity (c), Cp activity (d), plasma TBARS (e), plasma TAC (f), and RFT (g), and nonsignificant effect of *SEPP1* rs3877899 polymorphism on plasma Se (h), plasma Sepp1 (i), GPx1 activity (j), GPx3 activity (k), Cp activity (l), plasma TBARS (m), plasma TAC (n), RFT (o), DNA strand breaks (p) and DNA oxidation (q). Relevant p-values indicated in Table 5.