

Supplementary materials

Table 1: Gene Polymorphisms, Reference Sequence (rs) numbers, Primers, annealing temperature and genotyping methodologies for each of the analysed polymorphisms.

Gene Symbols	Studied polymorphisms (NCBI)	Primer sequence	T (°C)	Methodology	PRC Product size (bp)	References
<i>CYP1A1</i> <i>exon 7</i>	(A>G) (Ile462Val) (rs1048943)	5'- AAGACCTCCCAGCGGGCAAT - 3' 5'- AAGACCTCCCAGCGGGCAAC - 3' 5'- CTCTGGTTACAGGAAGCTAT - 3'	60	ARMS-PCR	162	(23)
<i>GSTM1</i>	Presence/absence (rs1183423000)	5- CTGGATTGTAGCAGATCATGC - 3' 5'- CTGCCCTACTTGATTGATGGG - 3'	65	PCR	273	(20)
<i>GSTT1</i>	Presence/Absence (rs1601993659)	5'- TTCCTTACTGGTCCTCACATCTC - 3' 5'- TCACCGGATCATGGCCAGCA - 3'	63	PCR	480	(21)
<i>XRCC1</i>	(C>T) (Arg194Trp) (rs1799782)	5'- GCCCCGTCCCAGGTA - 3' 5'- AGCCCCAAGACCCTTTCCTACT - 3'	60	RFLP (MspI)	Undigested Product: 383 bp C-allele = 346 + 37 bp T-allele = 383 bp	(25)
<i>XPC</i> <i>exon 15</i>	(A>C) (Lys939Gln) (rs2228001)	5' - ACCAGCTCTCAAGCAGAAGC - 3' 5' - CTGCCTCAGTTTGCCCTTCTC - 3'	60	RFLP (Pvu II)	Undigested Product: 281 bp A-allele = 281 C-allele = 150+131 bp	(26)

Table 2: Frequencies of aberrations in the two groups and in the Men/Women subgroups.

		MNi	NBUDs	Notched	Broken eggs	Total Aberrations
Athletes	Total	0.143 ± 0.355	0.714 ± 0.957	0.229 ± 0.598	0.314 ± 0.676	1.400 ± 1.631
Athletes	Men	0.179 ± 0.390	0.643 ± 0.826	0.214 ± 0.568	0.357 ± 0.731	1.393 ± 1.397
Athletes	Women	0.000 ± 0.000	1.000 ± 1.414	0.286 ± 0.756	0.143 ± 0.378	1.429 ± 2.507
Controls	Total	0.943 ± 1.027	0.800 ± 0.868	0.286 ± 0.622	0.229 ± 0.598	2.257 ± 1.669
Controls	Men	1000 ± 1.054	0.786 ± 0.876	0.214 ± 0.418	0.214 ± 0.630	2.214 ± 1.475
Controls	Women	0.714 ± 0.951	0.857 ± 0.900	0.571 ± 1.134	0.286 ± 0.488	2.429 ± 2.440

MNi = micronuclei; NBUDs = nuclear buds

Table 3: Correlation between polymorphisms/supplements intake and the frequency of analyzed aberrations.

Gene	MNi	Buds	Notched	Broken eggs	Total
<i>CYP1A1</i>	0.883	0.862	0.854	0.096	0.387
<i>GSTMI</i>	0.826	0.780	0.262	0.894	0.67
<i>GSTT1</i>	0.201	0.412	0.103	0.457	0.382
<i>XRCC1</i>	0.749	0.328	0.351	0.045	0.940
<i>XPC</i>	0.151	0.509	0.141	0.141	0.320
Supplements	0.260	0.094	0.040	0.907	0.082

MNi = micronuclei; NBUDs = nuclear buds

Table 4: Correlation between the number of trainings per week and the frequency of analyzed aberrations.

	CF	MNi frequency		NBUDs frequency		Notched frequency		Broken eggs frequency		Total frequency	
		Rho	p-value	Rho	p-value	Rho	p-value	Rho	p-value	Rho	p-value
Athletes	Age	0.227	0.188	0.006	0.972	-0.014	0.935	-0.008	0.962	0.078	0.656
Athletes	Sex	0.204	0.239	-0.086	0.623	-0.012	0.948	0.111	0.524	0.140	0.422
Athletes	Weight	0.202	0.243	-0.290	0.091	-0.110	0.529	-0.310	0.071	-0.240	0.165
Athletes	Training	-0.295	0.086	0.055	0.755	0.218	0.207	0.144	0.408	0.079	0.651
Controls	Age	-0.094	0.590	-0.035	0.839	0.006	0.975	0.050	0.775	-0.095	0.588
Controls	Sex	0.109	0.531	-0.042	0.811	-0.097	0.579	-0.140	0.420	0.011	0.951
Controls	Weight	-0.017	0.924	0.271	0.116	-0.099	0.571	-0.080	0.646	0.152	0.382

CF = confounding factors; MNi = micronuclei; NBUDs = nuclear buds