

Table S1. Association of the *COMT* rs4633 with pain tolerance and pain threshold.

Pain characteristic	General			Dominant		Recessive	
	TT (<i>n</i> = 61)	CT (<i>n</i> = 92)	CC (<i>n</i> = 50)	CC+CT (<i>n</i> = 142)	TT (<i>n</i> = 61)	CC (<i>n</i> = 50)	CT+TT (<i>n</i> = 153)
Pain threshold (LH)	6.71 ± 2.32	6.05 ± 2.41 0.327/0.657	6.30 ± 2.43	6.14 ± 2.41 0.196/0.606	6.71 ± 2.32	6.30 ± 2.43 0.975/0.975	6.31 ± 2.39
Pain threshold (RH)	7.95 ± 2.45	6.83 ± 2.65 0.041/0.246	6.96 ± 2.60	6.87 ± 2.62 0.012/0.246	7.95 ± 2.45	6.96 ± 2.60 0.467/0.657	7.28 ± 2.62
Pain threshold (VASLH)	4.30 ± 1.88	3.73 ± 1.58 0.079/0.3792	3.82 ± 1.76	3.76 ± 1.64 0.024/0.246	4.30 ± 1.88	3.82 ± 1.76 0.445/0.657	3.95 ± 1.72
Pain threshold (VASRH)	4.26 ± 1.85	3.71 ± 1.73 0.118/0.472	3.88 ± 1.98	3.77 ± 1.81 0.040/0.246	4.26 ± 1.85	3.88 ± 1.98 0.628/0.753	3.93 ± 1.79
Pain tolerance (LH)	11.30 ± 4.09	10.60 ± 4.0 0.862/0.899	10.60 ± 4.28	10.60 ± 4.09 0.589/0.744	11.30 ± 4.09	10.60 ± 4.28 0.782/0.853	10.90 ± 4.04
Pain tolerance (RH)	11.90 ± 4.07	10.80 ± 3.90 0.487/0.657	11.40 ± 4.97	11.00 ± 4.30 0.339/0.657	11.90 ± 4.07	11.40 ± 4.97 0.750/0.853	11.20 ± 3.99
Pain tolerance (VASLH)	7.03 ± 1.71	6.68 ± 1.68 0.433/0.657	6.69 ± 1.84	6.68 ± 1.73 0.202/0.606	7.03 ± 1.71	6.69 ± 1.84 0.493/0.657	6.82 ± 1.70
Pain tolerance (VASRH)	7.33 ± 1.40	7.08 ± 1.64 0.454/0.657	7.07 ± 1.67	7.07 ± 1.64 0.240/0.640	7.33 ± 1.40	7.07 ± 1.67 0.394/0.657	7.18 ± 1.55

Adjusted for age and sex. LH- left hand, RH-right hand, VAS – visual analog scale. After slash – FDR adjusted P values

Table S2. Association of the COMT rs4680 with pain tolerance and pain threshold.

Pain characteristic	General			Dominant		Recessive	
	AA (n = 61)	AG (n = 93)	GG (n = 49)	GG+AG (n = 142)	AA (n = 61)	GG (n = 49)	AG+AA (n = 154)
Pain threshold (LH)	6.71 ± 2.32	6.04 ± 2.40 0.368/0.657	6.32 ± 2.45	6.14 ± 2.41 0.196/0.606	6.71 ± 2.32	6.32 ± 2.45	6.31 ± 2.38 0.953/0.953
Pain threshold (RH)	7.95 ± 2.45	6.81 ± 2.64 0.040 /0.240	6.99 ± 2.61	6.87 ± 2.62 0.012 /0.240	7.95 ± 2.45	6.99 ± 2.61	7.26 ± 2.62 0.522/0.659
Pain threshold (VASLH)	4.30 ± 1.88	3.74 ± 1.57 0.079/0.379	3.80 ± 1.77	3.76 ± 1.64 0.024 /0.240	4.30 ± 1.88	3.80 ± 1.77	3.96 ± 1.72 0.385/0.657
Pain threshold (VASRH)	4.26 ± 1.85	3.73 ± 1.73 0.123/0.492	3.84 ± 1.97	3.77 ± 1.81 0.040 /0.240	4.26 ± 1.85	3.84 ± 1.97	3.94 ± 1.79 0.503/0.659
Pain tolerance (LH)	11.30 ± 4.09	10.60 ± 3.99 0.863/0.900	10.70 ± 4.32	10.60 ± 4.09 0.589/0.706	11.30 ± 4.09	10.70 ± 4.32	10.90 ± 4.03 0.806/0.879
Pain tolerance (RH)	11.90 ± 4.07	10.80 ± 3.89 0.453/0.657	11.50 ± 5.00	11.00 ± 4.30 0.339/0.657	11.90 ± 4.07	11.50 ± 5.00	11.20 ± 3.98 0.682/0.779
Pain tolerance (VASLH)	7.03 ± 1.71	6.68 ± 1.67 0.428/0.657	6.68 ± 1.86	6.68 ± 1.73 0.202/0.606	7.03 ± 1.71	6.68 ± 1.86	6.82 ± 1.69 0.466/0.657
Pain tolerance (VASRH)	7.33 ± 1.40	7.09 ± 1.63 0.426/0.657	7.05 ± 1.68	7.07 ± 1.64 0.240/0.640	7.33 ± 1.40	7.05 ± 1.68	7.18 ± 1.54 0.335/0.657

Adjusted for age and sex. LH-left hand, RH-right hand, VAS – visual analog scale; PPT: pressure pain threshold, PTOL: pressure pain tolerance. After slash – FDR adjusted P values

Table S3. Association of the COMT rs4818 with pain tolerance and pain threshold.

Pain characteristic	General			Dominant		Recessive	
	CC (n = 82)	CG (n = 98)	GG (n = 23)	GG+CG (n = 121)	CC (n = 82)	GG (n = 23)	CG+CC (n = 180)
Pain threshold (LH)	6.57 ± 2.26	6.07 ± 2.58 0.561/0.674	6.40 ± 2.00	6.13 ± 2.47 0.347/0.520	6.57 ± 2.26	6.40 ± 2.00	6.30 ± 2.44 0.819/0.849
Pain threshold (RH)	7.78 ± 2.47	6.73 ± 2.77 0.048/0.392	7.09 ± 2.02	6.80 ± 2.64 0.016/0.384	7.78 ± 2.47	7.09 ± 2.02	7.21 ± 2.69 0.849/0.849
Pain threshold (VASLH)	4.16 ± 1.80	3.79 ± 1.64 0.134/0.520	3.65 ± 1.80	3.76 ± 1.66 0.049/0.392	4.16 ± 1.80	3.65 ± 1.80	3.96 ± 1.72 0.347/0.520
Pain threshold (VASRH)	4.12 ± 1.81	3.84 ± 1.79 0.158/0.520	3.52 ± 2.09	3.78 ± 1.84 0.081/0.486	4.12 ± 1.81	3.52 ± 2.09	3.97 ± 1.80 0.203/0.520
Pain tolerance (LH)	11.20 ± 4.12	10.40 ± 4.05 0.659/0.718	11.20 ± 4.14	10.60 ± 4.06 0.590/0.674	11.20 ± 4.12	11.20 ± 4.14	10.80 ± 4.09 0.581/0.674
Pain tolerance (RH)	11.70 ± 3.99	10.70 ± 4.27 0.243/0.520	12.20 ± 4.75	11.00 ± 4.39 0.434/0.612	11.70 ± 3.99	12.20 ± 4.75	11.10 ± 4.17 0.231/0.520
Pain tolerance (VASLH)	6.94 ± 1.64	6.73 ± 1.82 0.467/0.622	6.50 ± 1.67	6.69 ± 1.79 0.307/0.520	6.94 ± 1.64	6.50 ± 1.67	6.83 ± 1.74 0.337/0.520
Pain tolerance (VASRH)	7.29 ± 1.43	7.10 ± 1.63 0.286/0.520	6.85 ± 1.84	7.05 ± 1.67 0.184/0.520	7.29 ± 1.43	6.85 ± 1.84	7.19 ± 1.54 0.228/0.520

Adjusted for age and sex. LH- left hand, RH-right hand, VAS – visual analog scale; PPT: pressure pain threshold, PTOL: pressure pain tolerance. After slash – FDR adjusted P values

Table S4. Association of the COMT rs6269 with pain tolerance and pain threshold.

Pain characteristic	General			Dominant		Recessive	
	AA (n = 82)	GA (n = 98)	GG (n = 23)	GG+GA (n = 121)	AA (n = 82)	GG (n = 23)	GA+AA (n = 180)
Pain threshold (LH)	6.57 ± 2.26	6.06 ± 2.58 0.499/0.700	6.44 ± 1.97	6.13 ± 2.74 0.347/0.682	6.57 ± 2.26	6.44 ± 1.97	6.29 ± 2.45 0.680/0.709
Pain threshold (RH)	7.78 ± 2.47	6.75 ± 2.77 0.050/0.400	7.01 ± 2.05	6.80 ± 2.64 0.016/0.384	7.78 ± 2.47	7.01 ± 2.05	7.22 ± 2.68 0.775/0.775
Pain threshold (VASLH)	4.16 ± 1.80	3.76 ± 1.64 0.145/0.544	3.78 ± 1.78	3.76 ± 1.66 0.049/0.400	4.16 ± 1.80	3.78 ± 1.78	3.94 ± 1.72 0.579/0.700
Pain threshold (VASRH)	4.12 ± 1.81	3.80 ± 1.78 0.209/0.544	3.70 ± 2.12	3.78 ± 1.84 0.081/0.486	4.12 ± 1.81	3.70 ± 2.12	3.94 ± 1.80 0.428/0.682
Pain tolerance (LH)	11.20 ± 4.12	10.40 ± 4.06 0.556/0.700	11.20 ± 4.12	10.60 ± 4.06 0.590/0.700	11.20 ± 4.12	11.20 ± 4.12	10.80 ± 4.10 0.455/0.682
Pain tolerance (RH)	11.70 ± 3.99	10.70 ± 4.27 0.189/0.544	12.20 ± 4.73	11.00 ± 4.39 0.434/0.682	11.70 ± 3.99	12.20 ± 4.73	11.10 ± 4.17 0.176/0.544
Pain tolerance (VASLH)	6.94 ± 1.64	6.70 ± 1.84 0.227/0.544	6.63 ± 1.58	6.69 ± 1.79 0.307/0.669	6.94 ± 1.64	6.63 ± 1.58	6.81 ± 1.75 0.613/0.700
Pain tolerance (VASRH)	7.29 ± 1.43	7.05 ± 1.68 0.414/0.682	7.07 ± 1.65	7.05 ± 1.67 0.184/0.544	7.29 ± 1.34	7.07 ± 1.65	7.16 ± 1.57 0.671/0.709

Adjusted for age and sex. LH- left hand, RH-right hand, VAS – visual analog scale; PPT: pressure pain threshold, PTOL: pressure pain tolerance. After slash – FDR adjusted P values

Table S5. Association of the *OPRM1* rs1799971 with pain tolerance and pain threshold.

Pain characteristic	General			Dominant		Recessive	
	AA (<i>n</i> = 163)	AG (<i>n</i> = 36)	GG (<i>n</i> = 3)	GG+AG (<i>n</i> = 39)	AA (<i>n</i> = 163)	GG (<i>n</i> = 3)	AG+AA (<i>n</i> = 199)
Pain threshold (LH)	6.34 ± 2.50	6.09 ± 1.88 0.848/0.878	5.63 ± 1.00	6.06 ± 1.82 0.566/0.754	6.34 ± 2.50		NA
Pain threshold (RH)	7.14 ± 2.68	7.38 ± 2.37 0.878/0.878	6.77 ± 0.81	7.33 ± 2.29 0.628/0.772	7.14 ± 2.68		NA
Pain threshold (VASLH)	3.87 ± 1.73	3.97 ± 1.59 0.026/0.208	6.67 ± 1.53	4.18 ± 1.73 0.310/0.551	3.87 ± 1.73		NA
Pain threshold (VASRH)	3.82 ± 1.82	4.17 ± 1.66 0.011/0.176	7.00 ± 1.73	4.38 ± 1.82 0.081/0.324	3.82 ± 1.82		NA
Pain tolerance (LH)	11.00 ± 4.27	10.30 ± 3.26 0.450/0.720	7.67 ± 0.90	10.10 ± 3.22 0.256/0.512	11.00 ± 4.27		NA
Pain tolerance (RH)	11.30 ± 4.26	10.90 ± 4.09 0.809/0.878	9.37 ± 1.31	10.80 ± 3.96 0.526/0.754	11.30 ± 4.26		NA
Pain tolerance (VASLH)	6.70 ± 1.72	7.03 ± 1.75 0.068/0.324	8.67 ± 1.15	7.15 ± 1.76 0.119/0.368	6.70 ± 1.72		NA
Pain tolerance (VASRH)	7.08 ± 1.53	7.33 ± 1.79 0.138/0.368	8.67 ± 0.58	7.44 ± 1.76 0.171/0.390	7.08 ± 1.53		NA

Adjusted for age and sex. LH- left hand, RH-right hand, VAS – visual analog scale; PPT: pressure pain threshold, PTOL: pressure pain tolerance. After slash – FDR adjusted P values