

*Twin Research and Human Genetics*

Article title: Familial aggregation of migraine and depression: insights from a large Australian twin sample

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## Supplement materials

Table S1: Twin-pair migraine-migraine: cross-tabulations

Zygoty group	Proband	Co-twin				
		No migraine	Self-report migraine	ID migraine	IHS migraine	Any migraine
Total sample	No migraine	1882	356	321	179	856
	Self-report migraine	467	163	146	81	390
	ID migraine	466	159	198	105	462
	IHS migraine	251	102	116	327	545
	Any migraine	1184	424	460	513	1397
MZ	No migraine	905	159	162	63	384
	Self-report migraine	196	89	87	34	210
	ID migraine	186	88	138	58	284
	IHS migraine	67	34	49	141	224
	Any migraine	449	211	274	233	718
DZ	No migraine	977	197	159	116	472
	Self-report migraine	271	74	59	47	180
	ID migraine	280	71	60	47	178
	IHS migraine	184	68	67	186	321
	Any migraine	735	213	186	280	679
Same-sex DZ	No migraine	547	112	105	82	299
	Self-report migraine	134	48	50	40	138
	ID migraine	118	39	36	38	113
	IHS migraine	93	44	45	122	211
	Any migraine	345	131	131	200	462
MZ F-F	No migraine	476	107	120	35	262
	Self-report migraine	121	64	69	28	161
	ID migraine	134	64	113	53	230
	IHS migraine	50	24	41	124	189
	Any migraine	305	152	223	205	580
MZ M-M	No migraine	429	52	42	28	122
	Self-report migraine	75	25	18	6	49
	ID migraine	52	24	25	5	54
	IHS migraine	17	10	8	17	35
	Any migraine	144	59	51	28	138
DZ F-F	No migraine	268	62	69	61	192
	Self-report migraine	76	32	37	28	97
	ID migraine	81	31	33	29	93
	IHS migraine	72	34	42	109	185
	Any migraine	229	97	112	166	375
DZ M-M	No migraine	279	50	36	21	107
	Self-report migraine	58	16	13	12	41
	ID migraine	37	8	3	9	20
	IHS migraine	21	10	3	13	26
	Any migraine	116	34	19	34	87
DZ F-M	No migraine	430	85	54	34	173
	Self-report migraine	137	26	9	7	42
	ID migraine	162	32	24	9	65
	IHS migraine	91	24	22	64	110
	Any migraine	390	82	55	80	217
DZ M-F	No migraine	430	137	162	91	390
	Self-report migraine	85	26	32	24	82
	ID migraine	54	9	24	22	55
	IHS migraine	34	7	9	64	80
	Any migraine	173	42	65	110	217

IHS: the International Headache Society; MZ: monozygotic twin pairs; DZ: dizygotic twin pairs; F: female; M: male.

Table S2: Twin-pair depression-depression: cross-tabulations

Zygoty group	Proband	Co-twin		
		No depression	MDD	Any depression
Total sample	No depression	2017	804	1028
	MDD	857	856	997
	Any depression	1101	991	1173
MZ	No depression	1012	339	441
	MDD	306	439	496
	Any depression	427	497	576
DZ	No depression	1005	465	587
	MDD	551	417	501
	Any depression	674	494	597
Same-sex DZ	No depression	570	300	370
	MDD	282	262	308
	Any depression	344	313	369
MZ F-F	No depression	634	241	301
	MDD	192	334	371
	Any depression	270	372	418
MZ M-M	No depression	378	98	140
	MDD	114	105	125
	Any depression	157	125	158
DZ F-F	No depression	310	202	258
	MDD	199	191	218
	Any depression	240	224	256
DZ M-M	No depression	260	98	112
	MDD	83	71	90
	Any depression	104	89	113
DZ F-M	No depression	435	165	217
	MDD	269	155	193
	Any depression	330	181	228
DZ M-F	No depression	435	269	330
	MDD	165	155	181
	Any depression	217	193	228

MDD: major depressive disorder. MZ: monozygotic twin pairs; DZ: dizygotic twin pairs; F: female; M: male.

Table S3: Twin-pair any migraine-any depression: cross-tabulations

Zygoty group	Proband	Co-twin	
		No any depression	Any depression
Total sample	No any migraine	1669	1069
	any migraine	1449	1132
MZ	No any migraine	813	476
	any migraine	626	541
DZ	No any migraine	856	593
	any migraine	823	591
Same-sex DZ	No any migraine	479	367
	any migraine	435	372
MZ F-F	No any migraine	441	297
	any migraine	463	422
MZ M-M	No any migraine	372	179
	any migraine	163	119
DZ F-F	No any migraine	241	219
	any migraine	309	295
DZ M-M	No any migraine	238	148
	any migraine	126	77
DZ F-M	No any migraine	377	226
	any migraine	388	219
DZ M-F	No any migraine	444	376
	any migraine	208	182

MZ: monozygotic twin pairs; DZ: dizygotic twin pairs; F: female; M: male.

Table S4: Twin-pair any depression-any migraine: cross-tabulations

Zygoty group	Proband	Co-twin	
		No any migraine	Any migraine
Total sample	No any depression	1848	1197
	any depression	1218	1056
MZ	No any depression	884	569
	any depression	470	533
DZ	No any depression	964	628
	any depression	748	523
Same-sex DZ	No any depression	520	420
	any depression	372	341
MZ F-F	No any depression	501	434
	any depression	280	408
MZ M-M	No any depression	383	135
	any depression	190	125
DZ F-F	No any depression	267	301
	any depression	230	266
DZ M-M	No any depression	253	119
	any depression	142	75
DZ F-M	No any depression	444	208
	any depression	376	182
DZ M-F	No any depression	377	388
	any depression	226	219

MZ: monozygotic twin pairs; DZ: dizygotic twin pairs; F: female; M: male.

Table S5: Twin-pair IHS migraine-MDD: cross-tabulations

Zygoty group	Proband	Co-twin	
		No MDD	MDD
Total sample	No IHS migraine	1669	876
	IHS migraine	424	318
MZ	No IHS migraine	813	384
	IHS migraine	139	137
DZ	No IHS migraine	856	492
	IHS migraine	285	181
Same-sex DZ	No IHS migraine	479	308
	IHS migraine	167	114
MZ F-F	No IHS migraine	441	256
	IHS migraine	109	119
MZ M-M	No IHS migraine	372	128
	IHS migraine	30	18
DZ F-F	No IHS migraine	241	184
	IHS migraine	143	98
DZ M-M	No IHS migraine	238	124
	IHS migraine	24	16
DZ F-M	No IHS migraine	377	184
	IHS migraine	118	67
DZ M-F	No IHS migraine	444	313
	IHS migraine	52	53

IHS: the International Headache Society; MDD: major depressive disorder; MZ: monozygotic twin pairs; DZ: dizygotic twin pairs; F: female; M: male.

Table S6: Twin-pair MDD-IHS migraine: cross-tabulations

Zygoty group	Proband	Co-twin	
		No IHS migraine	IHS migraine
Total sample	No MDD	1848	324
	MDD	959	319
MZ	No MDD	884	132
	MDD	348	142
DZ	No MDD	964	192
	MDD	611	177
Same-sex DZ	No MDD	520	140
	MDD	298	124
MZ F-F	No MDD	501	101
	MDD	210	122
MZ M-M	No MDD	383	31
	MDD	138	20
DZ F-F	No MDD	267	112
	MDD	189	100
DZ M-M	No MDD	253	28
	MDD	109	24
DZ F-M	No MDD	444	52
	MDD	313	53
DZ M-F	No MDD	377	118
	MDD	184	67

IHS: the International Headache Society; MDD: major depressive disorder; MZ: monozygotic twin pairs; DZ: dizygotic twin pairs; F: female; M: male.