Appendix A – Known polymorphisms of deiodinases DIO1, DIO2 and DIO3

Polymorphism	Exon	TSH	T4/FT4	T3/FT3	rT3	Remarks	References
DIO1							1, 2
rs2235544 (c.682C>A)	4	0	–	+	–		2
rs11206237							
rs2268181							
rs11206244 (c.779C>T)	4	0	+	–	+		2
rs12095080		0	0	+	(-)		
rs2294511							
rs2294512 (c.338-33G>C)	(2)					Intronic location, shortly before Exon 2	
(c.785C>T / D1-C785T / DIO1-785T)		0	+	–	+	Negatively associated with DIO1 activity. Positively associated with IGF1 levels, fat-free body mass, risk for depression and severe preeclampsia [7]. Predicts potentiated effect of therapy with Sertralin and T3 in depression [8].	4, 5, 6, 7, 8
D1-A1814G				+/–	–		3
rs731828							
rs7527713							
DIO2							
rs225011							
rs225014 (c.274A>G / p.Thr92Ala)	3	0	0	0	0	Reduced DIO2 activity. Increased risk for insulin resistance [9, 18] (but not in Amish-People [10]), for hypertension, osteoporosis and bipolar affective disorders. Delayed T3 secretion in TRH test [16]. Probably increased necessary T4 substitution dose by virtue of an elevated set-point [17]. In combination with wild type for rs12885300 increased risk for osteoarthritis. Increased GHQ-12 scores in both heterozygous and homozygous individuals	9, 10, 11, 12, 13, 15, 16, 17, 18, 19
rs225015						Increased GHQ-12 scores in both heterozygous and homozygous individuals	13
rs12885300 (ORFa-Gly3Asp / –258A/G)	1		–	(+)	–	Hyperdeiodination and slightly reduced TSH-FT4-set-point [20] in one trial, slightly elevated setpoint in a different population [21]. Reduced response for TSH and FT4 in TRH test [22]. Reduced risk for bipolar affective disorders.	15, 20, 21, 22
rs7333522	1						
rs56033314 (c.223-30T>C)						Observed in a family with Gille-de-la-Tourette-Syndrome, but unclear causal association [23]	23
DIO3							
rs17716499							
rs7150269							
rs8011440							
rs94500613		0	0	0	0	Possibly decreased risk for osteoarthritis.	2, 24

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