

Down Syndrome Risk Sample Calculations

(Appropriate for use by laboratories using the 'Wald 92' parameters)

Decimal Maternal Age (years)	Maternal Serum Result (MoM)			Down Syndrome Risk (1:n)			
				LMP		US	
	AFP	uE3	hCG	Double	Triple	Double	Triple
25.0	0.5	0.6	0.7	1600	1100	1300	450
25.0	0.5	0.6	1.0	860	560	660	200
25.0	0.5	0.6	2.5	130	93	81	23
25.0	0.5	1.0	0.7	1600	1700	1300	1800
25.0	0.5	1.0	1.0	860	1100	660	1100
25.0	0.5	1.0	2.5	130	290	81	230
25.0	0.5	1.4	0.7	1600	2400	1300	3900
25.0	0.5	1.4	1.0	860	1700	660	2700
25.0	0.5	1.4	2.5	130	610	81	890
25.0	1.0	0.6	0.7	6500	4700	9000	3400
25.0	1.0	0.6	1.0	3300	2100	4100	1300
25.0	1.0	0.6	2.5	410	230	390	100
25.0	1.0	1.0	0.7	6500	6400	9000	10000
25.0	1.0	1.0	1.0	3300	3400	4100	5300
25.0	1.0	1.0	2.5	410	600	390	800
25.0	1.0	1.4	0.7	6500	8100	9000	19000
25.0	1.0	1.4	1.0	3300	4800	4100	11000
25.0	1.0	1.4	2.5	410	1100	390	2700
25.0	2.0	0.6	0.7	27000	22000	62000	27000
25.0	2.0	0.6	1.0	12000	8300	25000	9200
25.0	2.0	0.6	2.5	1200	610	1900	500
25.0	2.0	1.0	0.7	27000	25000	62000	65000
25.0	2.0	1.0	1.0	12000	12000	25000	29000
25.0	2.0	1.0	2.5	1200	1400	1900	3000
25.0	2.0	1.4	0.7	27000	29000	62000	99000
25.0	2.0	1.4	1.0	12000	15000	25000	52000
25.0	2.0	1.4	2.5	1200	2300	1900	8400

Risks (to two significant digits) are based on the biochemical parameters from Wald NJ *et al.*, *Br J of Obstet and Gynaecol* 1992; **99**:144-9 and Wald NJ *et. al.* *Prenat Diagn* 1993; 13:1149-66. The 'double' test refers to maternal age in combination with AFP and hCG measurements. The 'triple' test also includes uE3 measurements. The age-associated risks are from Cuckle *et al.*, *Br. J Obstet Gynaecol* 1987;**94**:387-402.

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				LMP		US	
	AFP	uE3	hCG	Triple	Quad	Triple	Quad
35.0	0.5	0.6	0.7	480	330	410	140
35.0	0.5	0.6	1.0	270	170	210	63
35.0	0.5	0.6	2.5	42	29	25	10
35.0	0.5	1.0	0.7	480	540	410	560
35.0	0.5	1.0	1.0	270	340	210	330
35.0	0.5	1.0	2.5	42	89	25	71
35.0	0.5	1.4	0.7	480	750	410	1200
35.0	0.5	1.4	1.0	270	530	210	830
35.0	0.5	1.4	2.5	42	190	25	280
35.0	1.0	0.6	0.7	2000	1500	2800	1000
35.0	1.0	0.6	1.0	1000	650	1300	410
35.0	1.0	0.6	2.5	130	72	120	32
35.0	1.0	1.0	0.7	2000	2000	2800	3200
35.0	1.0	1.0	1.0	1000	1100	1300	1600
35.0	1.0	1.0	2.5	130	190	120	250
35.0	1.0	1.4	0.7	2000	2500	2800	5900
35.0	1.0	1.4	1.0	1000	1500	1300	3500
35.0	1.0	1.4	2.5	130	360	120	820
35.0	2.0	0.6	0.7	8300	6800	19000	8300
35.0	2.0	0.6	1.0	3800	2600	7900	2800
35.0	2.0	0.6	2.5	370	190	580	160
35.0	2.0	1.0	0.7	8300	7900	19000	20000
35.0	2.0	1.0	1.0	3800	3600	7900	8900
35.0	2.0	1.0	2.5	370	420	580	930
35.0	2.0	1.4	0.7	8300	8900	19000	31000
35.0	2.0	1.4	1.0	3800	4500	7900	16000
35.0	2.0	1.4	2.5	370	720	580	2600

Risks (to two significant digits) are based on the biochemical parameters from Wald NJ *et al.*, *Br J of Obstet and Gynaecol* 1992; **99**:144-9 and Wald NJ *et. al.* *Prenat Diagn* 1993; 13:1149-66. The 'double' test refers to maternal age in combination with AFP and hCG measurements. The 'triple' test also includes uE3 measurements. The age-associated risks are from Cuckle *et al.*, *Br. J Obstet Gynaecol* 1987;**94**:387-402.

Wald '92 Parameters Ultrasound Dated

Second Trimester (weeks 15 through 20)

Marker	Unaffected		Down Syndrome		truncation limit
	log x	log sd	log x	log sd	
AFP (A)	0.0000	0.1806	-0.1427	0.1838	0.3-3.3
uE3 (E)	0.0000	0.1153	-0.1411	0.1256	0.4-2.5
hCG (H)	0.0000	0.2372	0.3023	0.2638	0.2-5.0

Correlations

	UA	T21
A_E	0.0586	0.0713
A_H	0.1322	0.2392
E_H	-0.0869	-0.2885

LMP Dated

Second Trimester (weeks 15 through 20)

Marker	Unaffected		Down Syndrome		truncation limit
	log x	log sd	log x	log sd	
AFP (A)	0.0000	0.1976	-0.1427	0.2004	0.3-3.3
uE3 (E)	0.0000	0.1437	-0.1411	0.1521	0.4-2.5
hCG (H)	0.0000	0.2419	0.3023	0.2681	0.2-5.0

Correlations

	UA	T21
A_E	0.2321	0.2302
A_H	0.0338	0.1405
E_H	-0.2112	-0.3562