

Down Syndrome (DS) Risk Sample Calculations (Wald 00 parameters)

Second Trimester DS Risks 1:n								
Age	Maternal Serum Result (MoM)				LMP		US	
	AFP	uE3	hCG	DIA	Triple	Quad	Triple	Quad
25.0	0.60	0.50	0.70	0.60	1900	12000	890	6500
25.0	0.60	0.50	0.70	2.9	1900	220	890	85
25.0	0.60	0.50	2.30	0.60	72	810	13	160
25.0	0.60	0.50	2.30	2.9	72	14	13	10
25.0	0.60	1.30	0.70	0.60	3100	14000	4300	18000
25.0	0.60	1.30	0.70	2.90	3100	480	4300	680
25.0	0.60	1.30	2.30	0.60	1200	8600	2200	14000
25.0	0.60	1.30	2.30	2.90	1200	270	2200	510
25.0	1.80	0.50	0.70	0.60	99000	99000	99000	99000
25.0	1.80	0.50	0.70	2.90	99000	55000	99000	99000
25.0	1.80	0.50	2.30	0.60	1700	34000	1400	89000
25.0	1.80	0.50	2.30	2.90	1700	460	1400	350
25.0	1.80	1.30	0.70	0.60	6800	99000	99000	99000
25.0	1.80	1.30	0.70	2.90	6800	14000	99000	43000
25.0	1.80	1.30	2.30	0.60	3400	42000	8000	97000
25.0	1.80	1.30	2.30	2.90	3400	1100	8000	2500
35.0	0.60	0.50	0.70	0.60	600	3600	280	2000
35.0	0.60	0.50	0.70	2.90	600	69	280	26
35.0	0.60	0.50	2.30	0.60	22	250	10	50
35.0	0.60	0.50	2.30	2.90	22	10	10	10
35.0	0.60	1.30	0.70	0.60	970	4200	1300	5600
35.0	0.60	1.30	0.70	2.90	970	150	1300	210
35.0	0.60	1.30	2.30	0.60	360	2700	670	4300
35.0	0.60	1.30	2.30	2.90	360	84	670	160
35.0	1.80	0.50	0.70	0.60	99000	99000	99000	99000
35.0	1.80	0.50	0.70	2.90	99000	17000	99000	59000
35.0	1.80	0.50	2.30	0.60	530	10000	450	12000
35.0	1.80	0.50	2.30	2.90	530	140	450	110
35.0	1.80	1.30	0.70	0.60	21000	17000	64000	59000
35.0	1.80	1.30	0.70	2.90	21000	4300	64000	13000
35.0	1.80	1.30	2.30	0.60	1100	13000	2500	30000
35.0	1.80	1.30	2.30	2.90	1100	330	2500	780

Risks (to two significant digits) are based on the biochemical parameters from Wald et al., Prenat Diagn 1994;14:707-716, Wald et al., Prenat Diagn 1996;16:143-154, Wald et al., Prenat Diagn 1997;17:285-290, and Wald et al., J med Screen 2000;7:74-77. The triple test refers to maternal age in combination with AFP, uE3 and hCG measurements. The quad test also include DIA measurements. The age-associated risks are from Cuckle et al., Br. J Obstet Gynaecol 1987;94:387-402.

Wald '00 Parameters Ultrasound Dated

First Trimester (weeks 10 through 13)

Marker	Unaffected		Down Syndrome		truncation limit
	log x	log sd	log x	log sd	
NT (N)	0.0000	0.1717	0.3117	0.2396	0.6-5.0
APP-A (F)	0.0000	0.2659	-0.3704	0.3471	0.2-2.0

Second Trimester (weeks 15 through 20)

Marker	Unaffected		Down Syndrome		truncation limit
	log x	log sd	log x	log sd	
AFP (A)	0.0000	0.1468	-0.1427	0.1507	0.3-3.3
uE3 (E)	0.0000	0.1102	-0.1411	0.1210	0.5-2.0
hCG (H)	0.0000	0.2239	0.3023	0.2520	0.2-5.0
DIA (D)	0.0000	0.2154	0.2522	0.1986	0.4-3.5

Correlations

	UA	T21
N_P	0.0000	0.0000
N_A	0.0000	0.0000
N_E	0.0000	0.0000
N_H	0.0000	0.0000
N_D	0.0000	0.0000
P_A	0.0000	0.0000
P_E	0.0000	0.0000
P_H	0.0000	0.0000
P_D	0.0000	0.0000
A_E	0.1317	0.2333
A_H	0.0955	0.2793
A_D	0.1459	0.1800
E_H	-0.0586	-0.3520
E_D	0.0175	-0.1024
H_D	0.1882	0.2493

Wald '00 Parameters**LMP Dated**

First Trimester (weeks 10 through 13)

Marker	Unaffected		Down Syndrome		truncation limit
	log x	log sd	log x	log sd	
APP-A (F)	0.0000	0.2659	-0.3704	0.3471	0.2-2.0

Second Trimester (weeks 15 through 20)

Marker	Unaffected		Down Syndrome		truncation limit
	log x	log sd	log x	log sd	
AFP (A)	0.0000	0.1649	-0.1427	0.1683	0.3-3.3
uE3 (E)	0.0000	0.1374	-0.1411	0.1462	0.5-2.0
hCG (H)	0.0000	0.2336	0.3023	0.2606	0.2-5.0
DIA (D)	0.0000	0.2154	0.2522	0.1986	0.4-3.5

Correlations

	UA	T21
P_A	0.0000	0.0000
P_E	0.0000	0.0000
P_H	0.0000	0.0000
P_D	0.0000	0.0000
A_E	0.2010	0.2713
A_H	0.0333	0.1995
A_D	0.1326	0.1641
E_H	-0.1688	-0.3860
E_D	-0.0064	-0.1056
H_D	0.2155	0.2753