

Sample Size requirements for comparison of proportions

Row: **Smaller** proportion p_1

Column: Difference $D = p_2 - p_1$

p_1	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60
0.05	435 583 719	141 189 233	76 102 126	50 67 83	36 48 60	28 37 46	22 30 37	18 25 30	15 21 26	13 18 22	11 15 19	10 13 16
0.10	686 919 1134	200 268 330	101 135 166	63 84 104	44 59 72	33 44 54	26 34 42	21 28 34	17 23 28	14 19 24	12 16 20	10 14 17
0.15	906 1212 1497	251 336 415	122 163 201	74 98 122	50 67 83	37 49 60	28 38 46	22 30 37	18 24 30	15 20 25	13 17 21	11 14 18
0.20	1094 1464 1808	294 394 486	139 186 230	82 110 136	55 74 91	40 53 66	30 40 50	24 31 39	19 25 31	16 21 26	13 17 21	11 15 18
0.25	1250 1674 2067	329 441 544	153 205 253	89 119 147	59 79 97	42 56 69	31 42 52	24 32 40	19 26 32	16 21 26	13 17 21	11 14 18
0.30	1376 1842 2274	357 478 590	163 219 270	94 126 156	61 82 101	43 58 71	32 43 53	24 33 40	19 26 32	16 21 26	13 17 21	10 14 17
0.35	1470 1968 2430	376 504 622	170 228 282	97 130 160	63 84 103	44 58 72	32 43 53	24 32 40	19 25 31	15 20 25	12 16 20	10 13 16
0.40	1533 2052 2534	388 520 642	174 233 287	98 131 162	63 84 103	43 58 71	31 42 52	24 31 39	18 24 30	14 19 24	11 15 19	
0.45	1564 2094 2586	392 525 648	174 233 287	97 130 160	61 82 101	42 56 69	30 40 50	22 30 37	17 23 28	13 18 22		
0.50	1564 2094 2586	388 520 642	170 228 282	94 126 156	59 79 97	40 53 66	28 38 46	21 28 34	15 21 26			
0.55	1533 2052 2534	376 504 622	163 219 270	89 119 147	55 74 91	37 49 60	26 34 42	18 25 30				
0.60	1470 1968 2430	357 478 590	153 205 253	82 110 136	50 67 83	33 44 54	22 30 37					
0.65	1376 1842 2274	329 441 544	139 186 230	73 98 121	44 59 72	28 37 46	Shown in the body of the table are the sample sizes <u>required in each group</u> to give the specified power					
0.70	1250 1674 2067	294 394 486	122 163 201	63 84 104	36 48 60	Upper figure: power = 80 per cent; Middle figure: power = 90 per cent; Lower figure: power = 95 per cent.						
0.75	1094 1464 1808	251 336 415	101 135 166	50 67 83	Using a two-sided significance test with $p < 0.05$.							
0.80	906 1212 1497	200 268 330	76 102 126	The two groups are assumed to be of equal size.								
0.85	686 919 1134	141 189 233	Table 3-3 Sample Size requirements for comparison of proportions									
0.90	435 583 719	taken from Smith and Morrow "Methods for Field Trials of Interventions against Tropical Diseases: a 'Toolbox', Oxford University Press, 1991 See also Fleiss: Statistical Methods for Rates and Proportions										
		EXAMPLE: $p_1 = 0.4$; $p_2 = 0.6$, so Difference = 0.2; 80% power: number per group = 98										