

The effect of gender on the development of anti-anthrax post-vaccination immunity and the duration of circulation of IgG to PA.

Statistical analysis was performed using a Two-way ANOVA with Tukey's multiple comparison (determination of significance and confidence intervals). The histograms show the mean and the confidence interval as an interval estimate of the general frame.

	Months after Vaccination				Nonvaccinated
	1-3	4-8	9-11	>12	
Titers in the group of men	200	800	100	100	100
	800	400	1600	50	400
	800	400	200	50	200
	100	100	0	200	400
	800	25	50	0	0
	400	25	25	0	50
	100	0	400	25	100
	800	100	200	0	25
	400	100			50
	800	0			0
Titers in the group of women	100	25	0	50	0
	800	400	400	100	0
	1600	800	50	200	50
	1600	400	200	100	200
	800	25	100	400	400
	400	100	50	25	0
		50	100	100	400
		100		25	100
		400		100	50
					25
					200

Two-Way ANOVA						
Table Analyzed	Gender vs. PA titers					
	Ordinary					
Alpha	0,05					
Source of Variation	% of total variation	P value	P value summary	Significant?		
Interaction	5,672	0,1401	ns	No		
Row Factor	35,78	< 0,0001	****	Yes		
Column Factor	0,7036	0,3494	ns	No		
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value	
Interaction	605263	4	151316	F (4, 78) = 1,786	P = 0,1401	
Row Factor	3818000	4	954559	F (4, 78) = 11,27	P < 0,0001	
Column Factor	75084	1	75084	F (1, 78) = 0,8862	P = 0,3494	
Residual	6608000	78	84722			
Number of missing values	22					

ANOVA Multiple Comparison								
Number of families	1							
Number of comparisons per family	10							
Alpha	0,05							
Tukey's multiple comparisons test	Mean Diff,	95% CI of diff,	Significant?	Summary				
<i>Men</i>								
1-3 vs. 4-8	325	-38,52 to 688,5	No	ns				
1-3 vs. 9-12	198,1	-187,4 to 583,7	No	ns				
1-3 vs. >12	466,9	81,31 to 852,4	Yes	**				
1-3 vs. Nonvaccinated	387,5	23,98 to 751,0	Yes	*				
4-8 vs. 9-12	-126,9	-512,4 to 258,7	No	ns				
4-8 vs. >12	141,9	-243,7 to 527,4	No	ns				
4-8 vs. Nonvaccinated	62,5	-301,0 to 426,0	No	ns				
9-12 vs. >12	268,8	-137,7 to 675,2	No	ns				
9-12 vs. Nonvaccinated	189,4	-196,2 to 574,9	No	ns				
>12 vs. Nonvaccinated	-79,38	-464,9 to 306,2	No	ns				
<i>Woman</i>								
1-3 vs. 4-8	627,8	199,4 to 1056	Yes	***				
1-3 vs. 9-12	754,8	302,5 to 1207	Yes	***				
1-3 vs. >12	761,1	332,7 to 1190	Yes	****				
1-3 vs. Nonvaccinated	753,8	341,3 to 1166	Yes	****				
4-8 vs. 9-12	127	-282,7 to 536,6	No	ns				
4-8 vs. >12	133,3	-249,8 to 516,5	No	ns				
4-8 vs. Nonvaccinated	126	-239,3 to 491,4	No	ns				
9-12 vs. >12	6,349	-403,3 to 416,0	No	ns				
9-12 vs. Nonvaccinated	-0,974	-394,0 to 392,0	No	ns				
>12 vs. Nonvaccinated	-7,323	-372,7 to 358,0	No	ns				
Test details	Mean 1	Mean 2	Mean Diff,	SE of diff,	N1	N2	q	DF
<i>Men</i>								
1-3 vs. 4-8	520	195	325	130,2	10	10	3,531	78
1-3 vs. 9-11	520	321,9	198,1	138,1	10	8	2,029	78
1-3 vs. >12	520	53,13	466,9	138,1	10	8	4,782	78
1-3 vs. Nonvaccinated	520	132,5	387,5	130,2	10	10	4,21	78
4-8 vs. 9-11	195	321,9	-126,9	138,1	10	8	1,3	78
4-8 vs. >12	195	53,13	141,9	138,1	10	8	1,453	78
4-8 vs. Nonvaccinated	195	132,5	62,5	130,2	10	10	0,679	78
9-11 vs. >12	321,9	53,13	268,8	145,5	8	8	2,612	78

9-11 vs. Nonvaccinated	321,9	132,5	189,4	138,1	8	10	1,94	78
>12 vs. Nonvaccinated	53,13	132,5	-79,38	138,1	8	10	0,813	78
<i>Woman</i>								
1-3 vs. 4-8	883,3	255,6	627,8	153,4	6	9	5,787	78
1-3 vs. 9-11	883,3	128,6	754,8	161,9	6	7	6,591	78
1-3 vs. >12	883,3	122,2	761,1	153,4	6	9	7,016	78
1-3 vs. Nonvaccinated	883,3	129,5	753,8	147,7	6	11	7,216	78
4-8 vs. 9-11	255,6	128,6	127	146,7	9	7	1,224	78
4-8 vs. >12	255,6	122,2	133,3	137,2	9	9	1,374	78
4-8 vs. Nonvaccinated	255,6	129,5	126	130,8	9	11	1,362	78
9-11 vs. >12	128,6	122,2	6,349	146,7	7	9	0,06121	78
9-11 vs. Nonvaccinated	128,6	129,5	-0,974	140,7	7	11	0,009788	78
>12 vs. Nonvaccinated	122,2	129,5	-7,323	130,8	9	11	0,07916	78

