

Analysis of the effect of age on the development and duration of anti-anthrax post-vaccination immunity (Age vs. LF titers).

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 (CI) as an interval estimate of the general frame.

	Months after Vaccination				Nonvaccinated
	1-3	4-8	9-11	>12	
Titers in the group ages 20-40	200	100	0	0	50
	400	400	400	0	200
	100	1600	200	50	50
	200	400	800	0	50
	800	800	100	25	100
	400	800	200	25	50
	800	25	100	50	0
	400	100	0	25	0
	50	400	100		0
	400	25	25		0
		100	25		
Titers in the group ages 40-60	800	100	400	0	25
	400	20	0	0	25
	800	25	200	0	200
	800	400	100	25	0
	100	25		0	25
	400	25		200	0
		100		0	0
				200	100
				0	200
					100
					0

Two-Way ANOVA						
Table Analyzed	Age vs. LF titers					
	Ordinary					
Alpha	0,05					
Source of Variation	% of total variation	P value	P value summary	Significant?		
Interaction	6,403	0,1116	ns	No		
Row Factor	28,99	< 0,0001	****	Yes		
Column Factor	0,04649	0,8129	ns	No		
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value	
Interaction	440156	4	110039	F (4, 78) = 1,943	P = 0,1116	
Row Factor	1,993e+006	4	498245	F (4, 78) = 8,797	P < 0,0001	
Column Factor	3196	1	3196	F (1, 78) = 0,05643	P = 0,8129	
Residual	4,418e+006	78	56637			
Number of missing values	32					

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>20-40 years</i>								
1-3 vs. 4-8	-22,92	-307,5 to 261,6	No	ns				
1-3 vs. 9-12	197,7	-92,66 to 488,1	No	ns				
1-3 vs. >12	353,1	37,88 to 668,4	Yes	*				
1-3 vs. Nonvaccinated	325	27,78 to 622,2	Yes	*				
4-8 vs. 9-12	220,6	-56,78 to 498,1	No	ns				
4-8 vs. >12	376	72,69 to 679,4	Yes	**				
4-8 vs. Nonvaccinated	347,9	63,35 to 632,5	Yes	**				
9-12 vs. >12	155,4	-153,4 to 464,2	No	ns				
9-12 vs. Nonvaccinated	127,3	-163,1 to 417,7	No	ns				
>12 vs. Nonvaccinated	-28,13	-343,4 to 287,1	No	ns				
<i>40-60 years</i>								
1-3 vs. 4-8	425	55,25 to 794,8	Yes	*				
1-3 vs. 9-12	375	-54,00 to 804,0	No	ns				
1-3 vs. >12	502,8	152,5 to 853,1	Yes	**				
1-3 vs. Nonvaccinated	488,6	151,3 to 825,9	Yes	**				
4-8 vs. 9-12	-50	-466,6 to 366,6	No	ns				
4-8 vs. >12	77,78	-257,2 to 412,7	No	ns				
4-8 vs. Nonvaccinated	63,64	-257,7 to 385,0	No	ns				
9-12 vs. >12	127,8	-271,6 to 527,2	No	ns				
9-12 vs. Nonvaccinated	113,6	-274,4 to 501,7	No	ns				
>12 vs. Nonvaccinated	-14,14	-312,9 to 284,6	No	ns				
Test details	Mean 1	Mean 2	Mean Diff,	SE of diff,	N1	N2	q	DF
<i>20-40 years</i>								
1-3 vs. 4-8	375	397,9	-22,92	101,9	10	12	0,318	78
1-3 vs. 9-11	375	177,3	197,7	104	10	11	2,689	78
1-3 vs. >12	375	21,88	353,1	112,9	10	8	4,424	78
1-3 vs. Nonvaccinated	375	50	325	106,4	10	10	4,318	78
4-8 vs. 9-11	397,9	177,3	220,6	99,34	12	11	3,141	78
4-8 vs. >12	397,9	21,88	376	108,6	12	8	4,896	78
4-8 vs. Nonvaccinated	397,9	50	347,9	101,9	12	10	4,829	78
9-11 vs. >12	177,3	21,88	155,4	110,6	11	8	1,987	78

9-11 vs. Nonvaccinated	177,3	50	127,3	104	11	10	1,731	78
>12 vs. Nonvaccinated	21,88	50	-28,13	112,9	8	10	0,3523	78
<i>40-60 years</i>								
1-3 vs. 4-8	550	125	425	132,4	6	7	4,539	78
1-3 vs. 9-11	550	175	375	153,6	6	4	3,452	78
1-3 vs. >12	550	47,22	502,8	125,4	6	9	5,669	78
1-3 vs. Nonvaccinated	550	61,36	488,6	120,8	6	11	5,721	78
4-8 vs. 9-11	125	175	-50	149,2	7	4	0,474	78
4-8 vs. >12	125	47,22	77,78	119,9	7	9	0,9171	78
4-8 vs. Nonvaccinated	125	61,36	63,64	115,1	7	11	0,7821	78
9-11 vs. >12	175	47,22	127,8	143	4	9	1,264	78
9-11 vs. Nonvaccinated	175	61,36	113,6	139	4	11	1,157	78
>12 vs. Nonvaccinated	47,22	61,36	-14,14	107	9	11	0,187	78

