

TABLE E-1 Dose-Dependent Effects of Celecoxib Treatment on Fracture-Healing

	Control (N = 37)	Celecoxib, 2 mg/kg (N = 14)	Celecoxib, 4 mg/kg (N = 23)	Celecoxib, 8 mg/kg (N = 13)
Torque (<i>Nmm</i>)				
Mean	427	391	348	336
Standard deviation	149	115	177	125
Standard error of the mean	25	31	37	35
P value*	—	0.44	0.04	0.05
Torsional rigidity (<i>Nmm²/radians</i>)				
Mean	28,146	16,522	17,507	15,826
Standard deviation	15,219	9970	11,596	8334
Standard error of the mean	2505	2665	2418	2312
P value*	—	<0.001	<0.001	<0.001
Shear modulus (<i>MPa/radians</i>)				
Mean	1984	880	1051	844
Standard deviation	1170	577	962	489
Standard error of the mean	192	154	200	136
P value*	—	<0.001	<0.001	<0.001
Maximum shear stress (<i>MPa</i>)				
Mean	87	64	63	53
Standard deviation	43	25	37	22
Standard error of the mean	7	7	8	6
P value*	—	0.05	0.01	<0.01

*Statistical comparisons were made against the control group with use of Holm-Sidak tests.

TABLE E-2 Time-Dependent Effects of Celecoxib Treatment on Fracture-Healing

	Control (N = 37)	5-day (N = 25)	10-day (N = 26)	15-day (N = 23)	21-day (N = 12)	28-day (N = 20)
Torque (<i>Nmm</i>)						
Mean	427	312	400	348	284	304
Standard deviation	149	135	131	177	102	126
Standard error of the mean	25	27	26	37	29	28
P value*	—	<0.01	0.48	0.04	<0.01	<0.01
Torsional rigidity (<i>Nmm²/radians</i>)						
Mean	28,146	11,627	16,677	17,507	14,488	14,109
Standard deviation	15,219	5731	9818	11,596	12,490	8175
Standard error of the mean	2505	1146	1926	2418	3606	1828
P value*	—	<0.001	<0.001	<0.001	<0.001	<0.001
Shear modulus (<i>MPa/radians</i>)						
Mean	1984	985	1196	1051	1029	672
Standard deviation	1170	842	716	962	801	501
Standard error of the mean	192	168	140	200	231	112
P value*	—	<0.001	<0.001	<0.001	<0.001	<0.001
Maximum shear stress (<i>MPa</i>)						
Mean	87	66	82	63	60	44
Standard deviation	43	42	36	37	27	23
Standard error of the mean	7	8	7	8	8	5
P value*	—	0.03	0.62	0.01	0.03	<0.01

*Statistical comparisons were made against the control group with use of Holm-Sidak tests.

TABLE E-3 Time-Delay Effects of Celecoxib Treatment on Fracture-Healing

	Pre-5-Day (N = 14)	Control (N = 37)	14 to 28-day (N = 12)	7 to 28-day (N = 15)	28-day (N = 20)
Torque (<i>Nmm</i>)					
Mean	499	427	393	426	304
Standard deviation	240	149	77	133	126
Standard error of the mean	64	25	22	34	28
P value*	0.11	—	0.49	0.99	<0.01
Torsional rigidity (<i>Nmm²/radians</i>)					
Mean	19,639	28,146	16,612	19,829	14,109
Standard deviation	5222	15,219	5348	10,354	8175
Standard error of the mean	1396	2505	1544	2673	1828
P value*	0.010	—	0.001	0.010	<0.001
Shear modulus (<i>MPa/radians</i>)					
Mean	1546	1984	1183	967	672
Standard deviation	824	1170	461	526	501
Standard error of the mean	220	192	133	136	112
P value*	0.089	—	0.004	<0.001	<0.001
Maximum shear stress (<i>MPa</i>)					
Mean	106	87	82	66	44
Standard deviation	56	43	28	24	23
Standard error of the mean	15	7	8	6	5
P value*	0.08	—	0.68	0.07	<0.01

* Statistical comparisons were made against the control group with use of Holm-Sidak tests.

TABLE E-4 Radiographic Analysis of Effects of Celecoxib on Fracture-Healing

Treatment Group	Radiographic Score			P Value
	Mean	Standard Deviation	Standard Error of the Mean	
Control (n = 44)	2.86	0.94	0.14	—
2 mg/kg celecoxib (n = 16)	2.71	1.33	0.35	0.705
4 mg/kg celecoxib (15 days post-fracture) (n = 28)	1.54	1.40	0.27	<0.001
8 mg/kg celecoxib (n = 25)	1.67	1.49	0.31	<0.001
5 days post-fracture (n = 28)	2.28	1.49	0.28	0.053
10 days post-fracture (n = 32)	2.47	1.52	0.27	0.181
21 days post-fracture (n = 14)	1.50	1.16	0.31	<0.001
28 days post-fracture (n = 27)	1.41	1.29	0.25	<0.001
Pre-5-day (n = 15)	3.13	0.68	0.18	0.486
7 to 28 days post-fracture (n = 16)	2.08	0.93	0.23	0.030
14 to 28 days post-fracture (n = 17)	2.86	0.84	0.20	0.995