

Fig. E-1
Figs. E-1, E-2, and E-3 Extension, flexion, and arc from preoperative to final follow-up visit. The bold line represents the sample mean across patients.

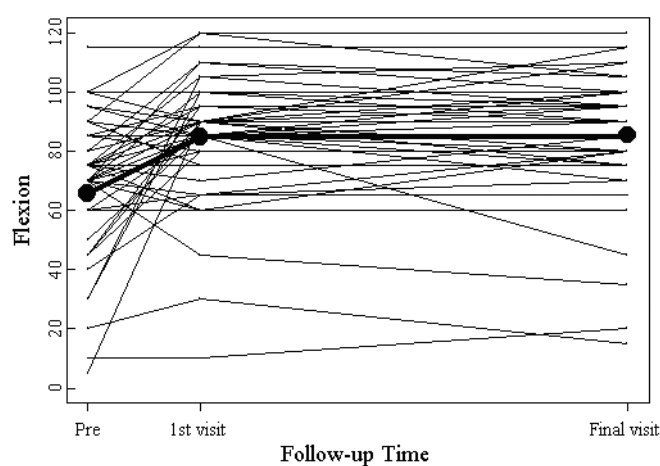


Fig. E-2

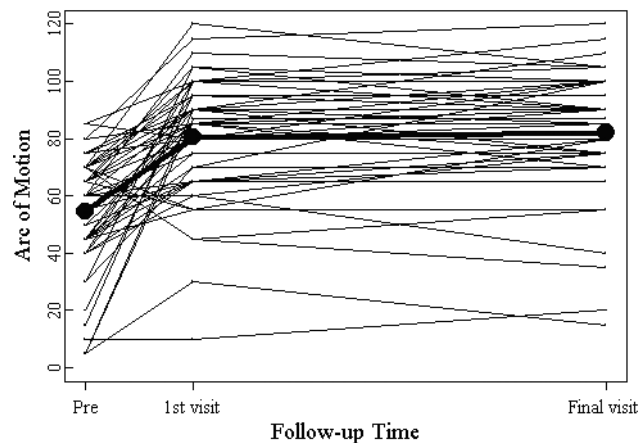


Fig. E-3

TABLE E1. Results of knees that lost some degree of motion after revision surgery

| Lost extension n = 4 (degrees) | Change in flexion (degrees) | Change in arc (degrees) |
|------------------------------------|-------------------------------|-----------------------------|
| 5 | 85 gained | 80 gained |
| 25 | 45 gained | 20 gained |
| 5 | 65 gained | 60 gained |
| 15 | no change | 15 lost |
| Lost flexion n = 7 (degrees) | Change in extension (degrees) | Change in arc (degrees) |
| 5 | 15 gained | 10 gained |
| 15 | no change | 15 lost |
| 5 | 10 gained | 5 gained |
| 10 | 15 gained | 5 gained |
| 5 | 5 gained | no change |
| 35 | no change | 35 lost |
| 10 | 60 gained | 50 gained |
| Lost arc of motion n = 3 (degrees) | Change in extension (degrees) | Change in flexion (degrees) |
| 15 | 15 lost | no change |
| 15 | no change | 15 lost |
| 35 | no change | 35 lost |

TABLE E2. Results of knees that had no change in some aspect of motion after revision surgery

| Unchanged extension (n = 17) | n | Preoperative extension (degrees) | Change in flexion (degrees) | Change in arc (degrees) |
|---------------------------------|----|--------------------------------------|-------------------------------|-----------------------------|
| | 1 | 15 | gained 5 | gained 15 |
| | 2 | 5 | gained 45 | gained 50 |
| | 15 | 0 | | |
| Unchanged flexion (n = 4) | n | Preoperative flexion (degrees) | Change in extension (degrees) | Change in arc (degrees) |
| | 1 | 115 | gained 30 | gained 30 |
| | 2 | 60 | gained 10 | gained 5 |
| | 3 | 70 | lost 15 | lost 15 |
| | 4 | 75 | gained 5 | gained 10 |
| Unchanged arc of motion (n = 1) | n | Preoperative arc of motion (degrees) | Change in extension (degrees) | Change in flexion (degrees) |
| | 1 | 75 | gained 5 | lost 5 |

TABLE E3. Factors potentially affecting range of motion after revision surgery

| | Change in Extension | Change in Flexion | Change in Arc of Motion |
|-----------------------------------|---------------------|-------------------|-------------------------|
| Parameter | Mean \pm SD | Mean \pm SD | Mean \pm SD |
| Location where surgery performed* | | | |
| Study Institution (n = 19) | -8.53 \pm 7.83 | 24.21 \pm 21.94 | 32.74 \pm 20.43 |
| Outside Hospital (n = 37) | -7.24 \pm 14.24 | 17.30 \pm 24.91 | 24.73 \pm 24.58 |
| Revision Implant* | | | |
| PFC (n = 8) | -3.75 \pm 7.44 | 17.50 \pm 20.87 | 21.25 \pm 19.96 |
| PFC-S (n = 15) | -5.87 \pm 8.98 | 20.67 \pm 25.97 | 26.67 \pm 26.44 |
| Scorpio (n = 7) | -17.9 \pm 21.96 | 27.14 \pm 31.34 | 45.00 \pm 19.58 |
| Sigma (n = 13) | -8.46 \pm 11.07 | 16.15 \pm 21.13 | 24.62 \pm 25.61 |
| TC3 (n = 8) | -2.75 \pm 13.22 | 23.75 \pm 29.49 | 26.50 \pm 23.92 |
| Lateral Retinacular Release* | | | |
| No (n = 50) | -7.50 \pm 12.49 | 19.70 \pm 24.75 | 27.34 \pm 24.46 |
| Yes (n = 6) | -9.17 \pm 12.42 | 19.17 \pm 17.72 | 28.33 \pm 12.11 |
| Quadriceps Snip* | | | |
| No (n = 48) | -7.50 \pm 13.15 | 20.94 \pm 25.26 | 28.58 \pm 24.80 |
| Yes (n = 8) | -8.75 \pm 6.41 | 11.88 \pm 12.23 | 20.63 \pm 10.16 |
| Tibial Tubercle Osteotomy* | | | |
| No (n = 52) | -8.08 \pm 12.67 | 18.08 \pm 24.11 | 26.29 \pm 23.77 |
| Yes (n = 4) | -2.50 \pm 6.45 | 40.00 \pm 7.07 | 42.50 \pm 9.57 |
| Constrained* (n = 8) | -2.75 \pm 13.22 | 23.75 \pm 29.49 | 26.50 \pm 23.92 |
| Posterior Stabilized* (n = 48) | -8.50 \pm 12.18 | 18.96 \pm 23.22 | 27.60 \pm 23.54 |
| Pre-Revision Etiology* | | | |
| Heterotopic Ossification (n = 3) | -10.00 \pm 8.66 | 35.00 \pm 31.22 | 45.00 \pm 22.91 |
| Loose (n = 18) | -11.80 \pm 15.62 | 16.94 \pm 20.87 | 29.17 \pm 19.35 |
| Oversized (n = 10) | -6.20 \pm 8.82 | 24.00 \pm 24.01 | 30.20 \pm 21.61 |
| Scarring only (n = 25) | -5.00 \pm 10.99 | 18.00 \pm 25.78 | 23.00 \pm 26.54 |

*No significant differences in change of mean range of motion based on p value from analysis of covariance (ANCOVA) and Kruskal-Wallis test.