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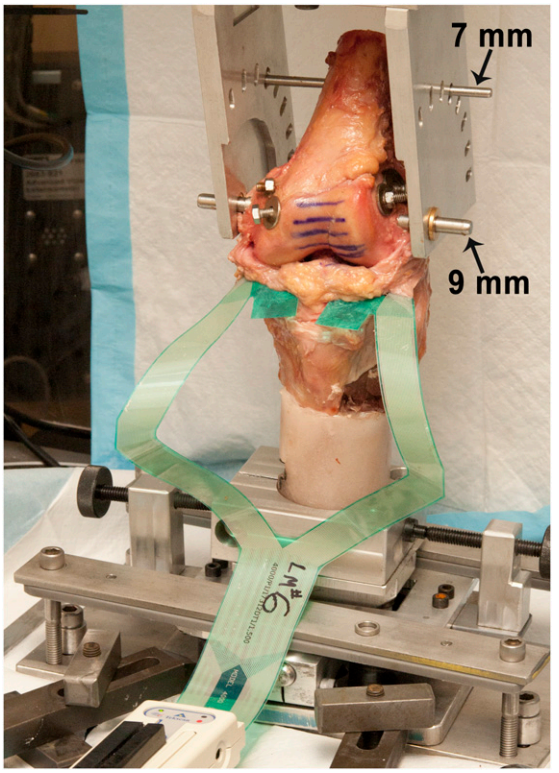

Fig. E-1
Photograph displaying a left knee inside the custom-made jig and pivot table in the tensile testing machine. The 7-mm-diameter angle selector and 9-mm-diameter load pins have been labeled.

TABLE E-1 Lateral Compartment Contact Area, Conditions 1-4

Flexion angle *(deg)*	Intact†*(mm²)*	Percentage Change Relative to the Intact Condition (95% CI)*		
		Footprint Tear	Root Avulsion	Root Repair
0	448	−5 (−20, +11)	−23 (−39, −8)†	−21 (−37, −5)†
30	452	−3 (−21, +15)	−37 (−54, −19)†	−16 (−34, +2)
45	398	+1 (−16, +19)	−32 (−50, −15)†	−13 (−30, +5)
60	402	0 (−15, +15)	−39 (−54, −24)†	−14 (−29, +1)
90	327	+2 (−16, +19)	−40 (−57, −22)†	−10 (−27, +8)
Pooled	406	−1 (−15, +12)	−34 (−47, −20)†	−15 (−29 , −1)

*The values are given as the mean, with the 95% CI in parentheses. Negative values indicate smaller contact areas relative to the intact meniscus. Because tears and repairs were made sequentially while moving away from the posterior root attachment on the same meniscus, the results presented for each condition relative to the intact state were affected by residual changes from the preceding conditions. †Mean contact area of the intact menisci. ‡Holm-Bonferroni adjusted p value < 0.05.

TABLE E-2 Lateral Compartment Contact Area, Conditions 5-8

	Percentage Change Relative to the Intact Condition (95% CI)*			
Flexion angle *(deg)*	3-mm Tear	3-mm Repair	6-mm Tear	6-mm Repair
0	−32 (−48, −16)†	−19 (−35, −4)	−31 (−47, −15)†	−26 (−42, −10)†
30	−41 (−59, −23)†	−19 (−37, −1)	−43 (−62, −25)†	−28 (−47, −10)†
45	−36 (−53, −18)†	−18 (−35, 0)	−37 (−55, −19)†	−21 (−39, −3)
60	−41 (−56, −26)†	−21 (−36, −7)†	−43 (−58, −27)†	−29 (−44, −13)†
90	−37 (−54, −20)†	−15 (−32, +3)	−40 (−58, −22)†	−25 (−43, −7)†
Pooled	−37 (−51, −24)†	−19 (−32, −5)†	−39 (−53, −25)†	−26 (−40, −12)†

*The values are given as the mean, with the 95% CI in parentheses. Negative values indicate smaller contact areas relative to the intact meniscus. Because tears and repairs were made sequentially while moving away from the posterior root attachment on the same meniscus, the results presented for each condition relative to the intact state were affected by residual changes from the preceding conditions.
†Holm-Bonferroni adjusted p value < 0.05.

TABLE E-3 Lateral Compartment Mean Contact Pressure, Conditions 1-4

		Percentage Change Relative to the Intact Condition (95% CI)*		
Flexion angle *(deg)*	Intact *(N/mm^2)*	Footprint Tear	Root Avulsion	Root Repair
0	1.19	+4 (−25, +32)	+29 (0, +57)	+19 (−9, +48)
30	1.21	+4 (−33, +40)	+54 (+18, +91)†	+12 (−24, +49)
45	1.35	−4 (−32, +24)	+43 (+15, +71)†	+2 (−26, +30)
60	1.23	+4 (−26, +35)	+70 (+39, +100)†	+16 (−14, +47)
90	1.32	+4 (−29, +37)	+83 (+51, +116)†	+15 (−18, +48)
Pooled	1.26	+2 (−25, +30)	+56 (+29, +84)†	+13 (−14 , +40)

*The values are given as the mean, with the 95% CI in parentheses. Positive values indicate higher contact pressures relative to the intact meniscus. Because tears and repairs were made sequentially while moving away from the posterior root attachment on the same meniscus, the results presented for each condition relative to the intact state were affected by residual changes from the preceding conditions.
†Holm-Bonferroni adjusted p value < 0.05.

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TABLE E-4 Lateral Compartment Mean Contact Pressure, Conditions 5-8

	Percentage Change Relative to the Intact Condition (95% CI)*			
Flexion angle *(deg)*	3-mm Tear	3-mm Repair	6-mm Tear	6-mm Repair
0	+51 (+22, +79)†	+26 (−3, +54)	+48 (+19, +78)†	+28 (−2, +57)
30	+69 (+33, +105)†	+25 (−12, +61)	+75 (+37, +113)†	+35 (−2, +73)
45	+53 (+25, +81)†	+18 (−10, +46)	+59 (+30, +88)†	+16 (−13, +45)
60	+80 (+49, +110)†	+31 (0, +61)	+86 (+55, +118)†	+38 (+7, +70)
90	+83 (+50, +115)†	+25 (−8, +57)	+90 (+57, +124)†	+40 (+6, +74)
Pooled	+67 (+40, +94)†	+25 (−3, +52)	+72 (+44, +100)†	+31 (+3, +60)

*The values are given as the mean, with the 95% CI in parentheses. Positive values indicate higher contact pressures relative to the intact meniscus. Because tears and repairs were made sequentially while moving away from the posterior root attachment on the same meniscus, the results presented for each condition relative to the intact state were affected by residual changes from the preceding conditions.
†Holm-Bonferroni adjusted p value < 0.05.

TABLE E-5 Lateral Compartment Peak Contact Pressure, Conditions 1-4

		Percentage Change Relative to the Intact Condition (95% CI)*		
Flexion angle *(deg)*	Intact *(N/mm^2)*	Footprint Tear	Root Avulsion	Root Repair
0	2.72	−1 (−28, +26)	+32 (+5, +59)	+15 (−12, +42)
30	2.58	+3 (−35, +41)	+63 (+25, +101)†	+34 (−4, +72)
45	2.98	+1 (−28, +30)	+50 (+21, +79)†	+10 (−19, +39)
60	2.51	+4 (−29, +37)	+78 (+45, +111)†	+35 (+2, +69)
90	2.92	+1 (−29, +31)	+57 (+27, +87)†	+28 (−2, +58)
Pooled	2.74	+2 (−23, +26)	+56 (+31, +80)†	+24 (0 , +48)

*The values are given as the mean, with the 95% CI in parentheses. Positive values indicate higher peak contact pressures relative to the intact meniscus. Because tears and repairs were made sequentially while moving away from the posterior root attachment on the same meniscus, the results presented for each condition relative to the intact state were affected by residual changes from the preceding conditions.
†Holm-Bonferroni adjusted p value < 0.05.

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TABLE E-6 Lateral Compartment Peak Contact Pressure, Conditions 5-8

	Percentage Change Relative to the Intact Condition (95% CI)*			
Flexion angle *(deg)*	3-mm Tear	3-mm Repair	6-mm Tear	6-mm Repair
0	+48 (+21, +75)†	+31 (+4, +57)	+54 (+26, +82)†	+34 (+6, +62)
30	+90 (+52, +128)†	+35 (−3, +73)	+100 (+61, +140)†	+49 (+9, +88)
45	+64 (+35, +93)†	+17 (−12, +46)	+73 (+43, +103)†	+32 (+2, +62)
60	+79 (+46, +112)†	+53 (+20, +86)†	+100 (+65, +134)†	+60 (+26, +95)†
90	+68 (+38, +98)†	+24 (−6, +54)	+74 (+43, +105)†	+49 (+18, +80)†
Pooled	+69 (+45, +93)†	+31 (+7, +55)	+80 (+54, +105)†	+44 (+19, +69)†

*The values are given as the mean, with the 95% CI in parentheses. Positive values indicate higher peak contact pressures relative to the intact meniscus. Because tears and repairs were made sequentially while moving away from the posterior root attachment on the same meniscus, the results presented for each condition relative to the intact state were affected by residual changes from the preceding conditions.
†Holm-Bonferroni adjusted p value < 0.05.