

Appendix B - Overview of the selected studies by publication date

References	Dependent Variables				Measurement Times (weeks or days)	Sample size (n)	Mean age (years)	Main results (*Particularities)
	BRT	RT	MT	Force				
Spalding, T.J.W. et al. (1994)	Yes	Yes	Yes	Yes	Before, 4, 6, 8 and 10 weeks after	n=29 (18 drivers; 11 non drivers) . 20 right TKA . 9 left TKA	74 (61-83)	Right TKA: - RT remained unchanged at 4weeks - MT was 50% increased at 4 weeks; at 8 weeks returned to pre-op values Left TKA: - BRT, RT and MT remained unchanged 4 weeks after surgery. *High drop-out rates: 27.5% started the study but did not finish it. *From 29 subjects included for analysis, 11 have been non-drivers.
Pierson, J.L. et al. (2003)	Yes	No	No	No	Before, 3, 6 and 9 weeks after	n= 31 (17M; 14W) . 13 bilateral TKA . 18 unilateral TKA: - 12 right TKA - 6 left TKA	68.6 (±7.6)	BRT: - 12.5% quicker response at 6 weeks - 17.5% quicker response at 9 weeks * Since 3x4 ANOVA revealed no significant differences in average BRT x laterality of TKA, the authors have collapsed all patients across the variable “side of surgery” for all statistical analysis. For this reason the results are probably biased.
Marques, C.J. et al. (2008)	Yes	Yes	Yes	No	Before, 10 and 30 days after	n=21 . 21 right TKA: (9M; 12W)	69.1 (±7.8)	Right BRT: - was 9.01% increased at 10 days - was still 1.7% increased at 30 days (statistically not significant) RT: - no significant differences across the measurements MT: - was significantly increased at 10 days - at 30 days it was still significantly increased - high drop out rates (22% were not assessed at the 3 rd measurement)
Marques, C.J. et al. (2008)	Yes	Yes	Yes	No	Before, 10 and 30 days after	n=24 . 24 left TKA (13M; 11W)	63.2 (±8.5)	Left TKA: - BRT, RT and MT were not affected 10 days after surgery
Liebensteiner, M.C. et al. (2010)	Yes	No	No	No	Before, 2 and 8 weeks after	n= 31 (14M, 17W) . 13 right TKA . 18 left TKA Control group n= 31 (12M; 19W)	65.7 (±10.2)	Right TKA: - BRT was not significant increased at 2 weeks - BRT decreased significantly from 2 to 8 weeks. Left TKA: - BRT was not significantly increased at 2 weeks - Significant decrease between 2 and 8weeks *High dropout rates between Pre-Op and 2 weeks due to discomfort while seating in the car simulator. *Control-group was not age and gender matched..

Dalury, D.F. et al. (2011)	Yes	Yes	Yes	No	Before, 4, 6 and 8 weeks after	n= 29 . 29 right TKA	66 (47-81)	- At 4 weeks all patients performed faster than preoperatively - RT: significantly faster at 4 weeks - FTT: no significant difference at 4 weeks
Liebensteiner, M.C. et al. (2014)	Yes	No	No	No	Before, 1 and 6 weeks	n= 43(22M; 21W) . 21 right TKA . 22 left TKA	59.8 (±7.5)	Right UKA (Unicompartmental knee arthroplasty): - BRT was significant increased at 1 week. - Baseline values were achieved at week 6 Left UKA: - BRT was not significantly changed at 1 week *High drop-out rates: 26% of the patients assessed preoperatively dropped out at 6 weeks.
Huang, Hsuan-Ti et al. (2014)	Yes	Yes	Yes	No	Before, 2 and 4 weeks	n= 14 . 14 right TKA: (4M; 10W)	63.1 (±6.6)	Right TKA: - BRT returned to baseline at 4 weeks at a driving speed of 50 and 70 Km/h - At a driving speed of 90Km/h the BRT was still significantly increased at 4 weeks. *Minimally invasive surgery (MIS) was used for all surgeries. All subjects were tested at 3 different speeds (50, 70 and 90 Km/h). The order of performing at different speeds was not randomized. Are the patients performing at a 90 Km/h speed slower as an effect of fatigue?
Jordan, M. et al. (2015)	Yes	Yes	Yes	Yes	Before, 8 days and 6, 12 and 52 weeks	n= 40 . 20 right TKA: (10M; 10W) . 20 left TKA: (8M; 12W)	69 (right TKA) 73 (left TKA)	Right TKA: - BRT was significantly increased at 8 days by 30% - BF was significantly decreased by 35% - Baseline values were reached at week 12 Left TKA: - BRT was not significant increased at 8 days (2%) - BF was significantly decreased by 25% at 8 days -BRT below baseline at week 6 -11% were lost to follow-up
Hernandez, V.H. et al. (20016)	Yes	No	No	No	Before, 2, 4 and 6 weeks	n= 47 . 47 right TKA (48,3% M; 61.7% W)	67.5 (±10.0)	- BRT of 39 patients (80%) was at baseline by 2 weeks - 20% reached baseline by 4 weeks *All patients managed with spinal anesthesia. Multimodal pain management and rapid mobilization physical therapy protocol were used.