

## **Central Lancashire Online Knowledge (CLoK)**

Title	Effects of a prophylactic knee bracing on patellofemoral loading during
	cycling
Type	Article
URL	https://clok.uclan.ac.uk/id/eprint/23271/
DOI	https://doi.org/10.1007/s11332-018-0482-x
Date	2018
Citation	Sinclair, Jonathan Kenneth, Butters, Bobbie, Brooks, Darrell and Stainton, Philip (2018) Effects of a prophylactic knee bracing on patellofemoral loading during cycling. Sport Sciences for Health, 14. pp. 645-654. ISSN 1824-7490
Creators	Sinclair, Jonathan Kenneth, Butters, Bobbie, Brooks, Darrell and Stainton, Philip

It is advisable to refer to the publisher's version if you intend to cite from the work. https://doi.org/10.1007/s11332-018-0482-x

For information about Research at UCLan please go to <a href="http://www.uclan.ac.uk/research/">http://www.uclan.ac.uk/research/</a>

All outputs in CLoK are protected by Intellectual Property Rights law, including Copyright law. Copyright, IPR and Moral Rights for the works on this site are retained by the individual authors and/or other copyright owners. Terms and conditions for use of this material are defined in the <a href="http://clok.uclan.ac.uk/policies/">http://clok.uclan.ac.uk/policies/</a>

Table 1: Patellofemoral loading parameters (Mean  $\pm$  SD) in males as a function of both brace condition and workload.

	Male												
	No-Brace					Brace							
	70RPM		80RPM		90RPM		70RPM		80RPM		90RPM		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Peak patellofemoral force (N/kg)	15.19	8.12	16.39	8.88	21.05	12.91	11.47	6.64	12.22	6.15	20.45	14.23	A
Patellofemoral force integral (N/kg·s)	3.69	1.21	4.01	1.39	4.82	3.38	3.15	0.95	3.50	0.91	4.71	3.43	AB
Peak patellofemoral stress (KPa/kg)	38.13	18.34	41.82	20.48	53.00	35.96	31.62	14.55	32.99	13.31	49.53	39.03	A
Patellofemoral stress integral (KPa/kg·s)	10.23	3.07	10.96	3.44	13.20	8.52	8.89	2.64	9.76	2.19	12.30	9.32	В
Patellofemoral contact area at peak force (mm²)	374.16	56.17	365.58	66.31	357.70	68.76	335.81	50.04	343.93	72.36	352.77	71.62	
Mean patellofemoral contact area (mm²)	369.65	18.78	369.50	18.55	369.54	20.12	366.32	17.13	370.29	19.71	368.66	22.20	_
Patellofemoral load rate (N/kg/s)	538.51	259.36	554.55	303.14	560.00	399.77	418.41	164.11	393.57	226.67	546.11	407.32	

A =Main effect of WORKLOAD

B = Main effect of BRACE