

Supplementary Table 1. Second-level agreement between ProcessingPAL and CREA for non-wear and in bed classification (Study 1)

	CREA		
	Out of bed	In bed	Non-wear
All participants (N = 12,819,661 seconds)			
ProcessingPAL ^a			
Out of bed	7,397,443 (90.5%)	384,516 (8.3%)	
In bed/non-wear	777,042 (9.5%)	4,260,660 (91.7%)	
F1 score	92.7%	88.0%	
Adults (N = 6,044,980 seconds)			
ProcessingPAL ^a			
Out of bed	3,608,272 (90.4%)	173,711 (8.5%)	
In bed/non-wear	384,056 (9.6%)	1,878,941 (91.5%)	
F1 score	92.8%	87.1%	
Children (N = 6,774,681 seconds)			
ProcessingPAL ^a			
Out of bed	3,789,171 (90.6%)	210,805 (8.1%)	
In bed/non-wear	392,986 (9.4%)	2,381,719 (91.9%)	
F1 score	92.6%	88.8%	

^aProcessing PAL groups in bed and non-wear time together