Supplementary 7. Sleep of athletes recorded during a training or non-competition period

Study	Sport	Training Description	Sex	n	Recording period (per athlete)	Age (yrs)	TST (min)	SE (%)	SOL (min)	WASO (min)
Competitive-elite										
Caia et al. 2017	RL	Pre-season training	Male	7	7 nights	24 (2)	414 (24)	87 (3)	20 (14)	-
Caia et al. 2017	RL	Regular training	Male	63	10 nights*	-	416 (84)	-	-	-
Caia et al. 2017	RL	Regular training	Male	15	7 nights	26 (4)	451 (55)	88 (4)	16 (18)	-
Fuller et al. 2017	Multi-sport	Off-season training	Male	21	3 nights*	23 (3)	447 (46)	89 (5)	16 (16)	41 (22)
George et al. 2003	American football	Pre-season training	Male	52	1 night	26 (2)	359 (27)	90 (7)	21 (20)	-
Knufinke et al. 2017	Multi-sport	Regular training	Both	98	7 nights	19 (3)	470 (68)	88 (5)	14 (16)	33 (17)
Lalor et al. 2018	ARF	Pre-season training	Male	45	10 nights	22 (3)	533 (-)	81(-)	12 (-)	-
Lastella et al. 2015	Cycling	Regular training (base)	Male	21	7 nights	22 (3)	444 (48)	87 (5)	-	-
Lastella et al. 2015	Cycling	Regular training (high load)	Male	21	7 nights	"	432 (54)	84 (5)	-	-
Lastella et al. 2015	Cycling	Regular training (high load)	Male	21	7 nights	"	420 (54)	85 (5)	-	-
Lastella et al. 2015	Cycling	Regular training (high load)	Male	21	7 nights	"	426 (60)	85 (6)	-	-
Lastella et al. 2015	Cycling	Regular training (recovery)	Male	21	7 nights	"	426 (54)	86 (5)	-	-
Lastella et al. 2015	Cycling	Regular training	Male	21	6 nights	20 (2)	444 (36)	86 (0)	28 (14)	-
Lastella et al. 2015	Multi-sport	Regular training (individual sport)	Both	66	12 nights*	22 (3)	390 (66)	86 (6)	22 (27)	-
Lastella et al. 2015	Multi-sport	Regular training (team sport)	Both	58	12 nights*	"	420 (72)	86 (5)	16 (20)	-
Leeder et al. 2012	Multi-sport	Regular training	Both	46	4 nights	-	415 (43)	81 (6)	18 (17)	77 (31)
Miller et al. 2017	ARF	Regular training	Male	16	7 nights	-	408 (72)	-	-	71 (32)
Miller et al. 2017	RU	Regular training	Male	28	7 nights	-	432 (96)	-	-	56 (26)
Miller et al. 2017	Soccer	Regular training	Male	7	7 nights	-	402 (120)	-	-	57 (23)
Nedelec et al. 2017	Soccer	Pre-season training	Male	1	5 nights	31	406 (52)	90 (3)	18 (13)	-
O'Donnell & Driller. 2017^	Netball	Pre-season training	Female	26	7 nights	23 (6)	436 (51)	81 (7)	29 (16)	-
O'Donnell et al. 2018	Netball	In-season training (rest day)	Female	10	1 night	23 (6)	526 (63)	85 (7)	28 (35)	-
O'Donnell et al. 2018	Netball	In-season training (training day)	Female	10	1 night	"	481 (77)	82 (9)	39 (29)	-
Pitchford et al. 2017	ARF	Pre-season training (home)	Male	19	8 nights	22 (4)	419 (26)	85 (7)	-	69 (30)
Pitchford et al. 2017	ARF	Pre-season training (camp)	Male	19	8 nights	"	417 (38)	79 (7)	-	97 (34)
Richmond et al. 2004	ARF	In-season training	Male	10	5 nights	23 (2)	505 (16)	88 (4)	-	57 (18)
Richmond et al. 2007	ARF	In-season training	Male	19	4 nights	24 (3)	531 (6)	93 (1)	-	42 (6)
Sargent et al. 2014	Multi-sport	Regular training	Both	70	14 nights	20 (3)	390 (84)	86 (7)	-	-
Schaal et al. 2015^	Synch Swimming	Regular training (base load)	Female	10	7 nights	20 (0)	433 (11)	85 (1)	17 (2)	-
Schaal et al. 2015^	Synch Swimming	Regular training (high load)	Female	10	7 nights	"	413 (9)	83 (2)	28 (6)	-
Staunton et al. 2017	Basketball	In-season training (home)	Female	17	30 weeks	28 (4)	450 (90)	92 (3)	-	-
Staunton et al. 2017	Basketball	In-season training (away)	Female	17	30 weeks	"	432 (78)	91 (3)	-	-
Thornton et al. 2017	RL	Pre-season training (home)	Male	31	7 nights	25 (4)	437 (67)	88 (4)	21 (19)	42 (17)
Thornton et al. 2017	RL	Pre-season training (camp)	Male	31	13 nights	"	351 (63)	80 (8)	9 (7)	82 (40)
Thornton et al. 2017	RL	Pre-season training	Male	14	16 weeks	26 (3)	415 (84)	92 (3)	-	35 (16)
Tuomilehto et al. 2016	Ice Hockey	Not specified	Male	23	1 night	25 (2)	415 (88)	-	18 (21)	-
Van Ryswyk et al. 2017	ARF	Pre-season training	Male	22	7 nights	24 (2)	427 (55)	82 (7)	-	-
Mean (SD)						**24 (3)**	**433 (57)**	**86 (5)**	**21 (17)**	**58 (24)**
Semi-elite										
Caia et al. 2017	RL	Regular training (sub-elite juniors)	Male	15	7 nights	22 (2)	409 (69)	85 (6)	20 (18)	-
Caia et al. 2017	RL	Regular training (elite juniors)	Male	15	7 nights	19 (1)	438 (98)	86 (7)	24 (27)	-
Dobrosielski et al. 2016	American football	Pre-season camp (high risk for sleep disorder)	Male	25	1 night	20 (1)	252 (66)	-	-	-
Dobrosielski et al. 2016	American football	Pre-season camp (low risk for sleep disorder)	Male	26	1 night	"	228 (54)	-	-	-
Dunican et al. 2017	Judo	Training camp	Both	9	6 nights	18 (2)	450 (42)	88 (6)	29 (28)	8 (7)
Fietze et al. 2009	Ballet	Regular training (10 weeks prior to premiere)	Both	24	1 week	27 (5)	418 (43)	81 (4)	18 (10)	72 (28)
Fietze et al. 2009	Ballet	Regular training (1 week prior to premiere)	Both	24	1 week	"	392 (42)	79 (5)	15 (7)	74 (27)
Fowler et al. 2017	Soccer	Training camp	Male	20	6 nights	16 (1)	424 (76)	82 (7)	-	-
Hoshikawa et al. 2013	Running	Training camp (normoxic)	Female	7	1 night	20 (1)	461 (72)	94 (6)	6 (9)	25 (20)
Hoshikawa et al. 2013	Running	Training camp (hypoxic first night)	Female	7	1 night	"	442 (56)	92 (7)	14 (11)	25 (25)
Hoshikawa et al. 2013	Running	Training camp (hypoxic sixth night)	Female	7	1 night	"	415 (63)	90 (12)	17 (22)	29 (32)
Juliff et al. 2018	Netball	Regular training (successful teams)	Female	42	12 nights	19 (1)	447 (62)	88 (4)	8 (4)	-
Juliff et al. 2018	Netball	Regular training (unsuccessful teams)	Female	42	12 nights	"	440 (51)	87 (4)	6 (6)	-
Kolling et al. 2016	Rowing	Tournament preparation (camp week 1 – higher load)	Both	14	1 week	18 (1)	343 (30)	84 (5)	21 (10)	37 (15)
Kolling et al. 2016	Rowing	Tournament preparation (camp week 2 – higher load)	Both	14	1 week	"	340 (32)	82 (7)	20 (10)	48 (25)
Kolling et al. 2016	Rowing	Tournament preparation (camp week 3 - lower load)	Both	14	1 week	"	357 (25)	82 (6)	22 (13)	50 (21)
Kolling et al. 2016	Rowing	Tournament preparation (camp week 4 – lower load)	Both	14	1 week	"	369 (45)	81 (8)	20 (14)	57 (25)
Kolling et al. 2017	Rowing	Tournament preparation (2 nights before travel)	Both	23	1 night	18 (1)	349 (37)	-	-	-
Kolling et al. 2017	Rowing	Tournament preparation (1 night before travel)	Both	23	1 night	"	395 (57)	-	-	-
Kolling et al. 2017	Rowing	Tournament preparation (1 night after travel)	Both	23	1 night	"	415 (64)	-	-	-
Kolling et al. 2017	Rowing	Tournament preparation (2 nights after travel)	Both	23	1 night	"	437 (65)	-	-	-
Lastella et al. 2014	Soccer	Tournament preparation (sea level)	Male	16	3 nights	19 (1)	450 (78)	85 (-)	-	-
Lastella et al. 2014	Soccer	Tournament preparation (low altitude)	Male	16	10 nights	"	396 (78)	-	-	-

Study	Sport	Context	Sex	N	Duration					
Lastella et al. 2014	Soccer	Tournament preparation (moderate altitude)	Male	16	6 nights	"	414 (54)	-	-	-
Lastella et al 2017	Soccer	Tournament preparation	Male	16	15 nights	19 (1)	396 (48)	84 (1)	-	-
Netzer et al. 2001	Cycling	Regular training	Male	15	1 night	24 (-)	-	93 (3)	20 (-)	-
Roach et al. 2013	Soccer	Tournament preparation (sea level)	Male	14	2 nights	16 (1)	420 (30)	80 (3)	-	-
Roach et al. 2013	Soccer	Tournament preparation (at altitude one day)	Male	14	1 night	"	366 (42)	75 (5)	-	-
Roach et al. 2013	Soccer	Tournament preparation (at altitude two weeks)	Male	14	4 nights	"	390 (42)	77 (5)	-	-
Roach et al. 2013	Soccer	Tournament preparation (sea level)	Male	12	2 nights	17 (1)	342 (42)	78 (6)	-	-
Roach et al. 2013	Soccer	Tournament preparation (at altitude one day)	Male	12	1 night	"	354 (54)	78 (8)	-	-
Roach et al. 2013	Soccer	Tournament preparation (at altitude two weeks)	Male	12	4 nights	"	384 (60)	80 (6)	-	-
Robey et al. 2014[^]	Soccer	Regular training (light load)	Male	12	12 nights*	19 (1)	433 (39)	89 (6)	21 (11)	15 (11)
Robey et al. 2014[^]	Soccer	Regular training (heavy load)	Male	12	3 nights*	"	455 (56)	90 (5)	19 (13)	16 (7)
Romyn et al. 2016	Netball	Tournament preparation	Female	8	7 nights	20 (2)	491 (27)	85 (4)	28 (26)	35 (8)
Sargent et al. 2014	Swimming	Regular training (prior to training)	Both	7	12 nights	23 (2)	324 (78)	71 (15)	41 (43)	-
Sargent et al. 2014	Swimming	Regular training (prior to rest)	Both	7	2 nights	"	426 (72)	77 (8)	32 (22)	-
Sargent et al. 2013	Soccer	Tournament preparation (sea level)	Male	6	1 night	16 (1)	480 (42)	86 (5)	18 (8)	64 (39)
Sargent et al. 2013	Soccer	Tournament preparation (at altitude one day)	Male	6	1 night	"	444 (48)	82 (6)	14 (7)	81 (34)
Sargent et al. 2013	Soccer	Tournament preparation (at altitude one week)	Male	6	1 night	"	480 (66)	86 (5)	23 (19)	59 (32)
Sargent et al. 2013	Soccer	Tournament preparation (at altitude two weeks)	Male	6	1 night	"	462 (54)	89 (4)	12 (8)	47 (31)
Taylor et al. 1997	Swimming	Regular training (normal load)	Female	7	1 night	19 (2)	451 (30)	-	19 (4)	4 (6)
Taylor et al. 1997	Swimming	Regular training (high load)	Female	7	1 night	"	472 (61)	-	17 (6)	9 (14)
Taylor et al. 1997	Swimming	Taper	Female	7	1 night	"	458 (14)	-	17 (9)	9 (5)
Whitworth-Turner et al. 2017[^]	Soccer	Training camp	Male	11	3 nights	18 (1)	488 (65)	94 (3)	24 (15)	6 (9)
Mean (SD)						**19 (1)**	**409 (53)**	**84 (6)**	**19 (14)**	**37 (20)**
Overall Mean (SD)						**22 (2)**	**420 (55)**	**85 (5)**	**20 (15)**	**45 (22)**

[^] Indicates only 'control' data included due to manipulation of sleep/wake or recovery behaviour for an experimental trial. * Indicates mean number of nights per participant.