

Supplemental Online Content

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eTable. Participants and Quality Assessment of 315 Included Studies

eFigure. Study Flowchart

This supplemental material has been provided by the authors to give readers additional information about their work.

eTable. Participants and Quality Assessment of 315 Included Studies

Author, Year	Total Participants (N)	Participants with Delirium (N)	Newcastle-Ottawa Scale (9 points maximum)
Aldemir 2001 ¹	818	90	9
Angles 2008 ²	69	41	8
Ansaloni 2010 ³	351	47	9
Bakker 2012 ⁴	201	63	9
Banach 2008 ⁵	260	30	8
Banjongrewadee 2020 ⁶	429	22	9
Behrends 2013 ⁷	472	137	9
Beishuizen 2017 ⁸	385	127	8
Beland 2021 ⁹	612	68	9
Bell 2021 ¹⁰	127	69	8
Benoit 2005 ¹¹	102	34	8
Bisschop 2011 ¹²	143	70	7
Bo 2016 ¹³	330	52	9
Bohner 2003 ¹⁴	153	60	8
Brouquet 2010 ¹⁵	118	28	7
Bryson 2011 ¹⁶	87	30	8
Budenas 2018 ¹⁷	522	22	8
Burkhardt 2010 ¹⁸	113	35	8
Caeiro 2004 ¹⁹	218	29	9
Caeiro 2004 ^{20,a}	74	22	9
Cai 2020 ²¹	635	73	9
Caldas 2019 ²²	67	17	8
Carrasco 2014 ²³	374	25	9
Cavallari 2015 ²⁴	146	32	9
Cavallari 2016 ²⁵	136	29	9
Cerejeira 2011 ²⁶	101	37	9
Chaiwat 2019 ²⁷	250	61	8
Chan 2021 ²⁸	199	73	9
Chen 2017 ²⁹	212	35	9
Chen 2020 ³⁰	370	63	9
Chen 2021 ³¹	383	66	9
Cheng 2019 ³²	119	28	8
Chou 2019 ³³	461	37	9
Chouet 2020 ³⁴	240	6	9
Chu 2016 ³⁵	544	52	9

Author, Year	Total Participants (N)	Participants with Delirium (N)	Newcastle-Ottawa Scale (9 points maximum)
Cole 2011 ³⁶	104	68	6
Colkesen 2013 ³⁷	52	25	9
Contin 2005 ³⁸	236	52	8
Cunningham 2017 ³⁹	315	40	8
Cunningham 2019 ^{40,a}	282	40	8
Dahl 2010 ⁴¹	178	18	8
Daoust 2020 ⁴²	338	41	8
Day 2021 ⁴³	1182	172	7
De la Varga-Martinez ⁴⁴	345	58	8
De Rooij 2007 ⁴⁵	185	64	8
Detroyer 2008 ⁴⁶	104	27	9
Dillon 2017 ⁴⁷	150	75	9
Douglas 2013 ⁴⁸	209	25	9
Du Plooy 2020 ⁴⁹	808	99	7
Duceppe 2019 ⁵⁰	150	58	8
Dworkin 2016 ⁵¹	76	10	9
Edlund 1999 ⁵²	54	15	8
Edlund 2001 ⁵³	101	49	8
Edlund 2006 ⁵⁴	400	125	8
Egberts 2015 ⁵⁵	86	23	8
Egberts 2019 ⁵⁶	210	80	8
Eide 2015 ⁵⁷	143	76	8
Ely 2007 ⁵⁸	53	47	8
Fan 2019 ⁵⁹	336	68	8
Fann 2002 ^{60,a}	90	49	8
Fann 2011 ⁶¹	90	45	8
Feast 2018 ⁶²	227	26	9
Feng 2021 ⁶³	51	20	8
Fick 2013 ⁶⁴	139	44	8
Fisher 1995 ⁶⁵	80	14	8
Flink 2012 ⁶⁶	106	27	9
Fong 2015 ⁶⁷	300	82	9
Fortini 2014 ⁶⁸	560	63	8
Foy 1995 ⁶⁹	418	21	8
Franco 2010 ⁷⁰	291	34	9
Freter 2005 ⁷¹	100	24	7
Freter 2015 ⁷²	283	163	8

Author, Year	Total Participants (N)	Participants with Delirium (N)	Newcastle-Ottawa Scale (9 points maximum)
Galanakis 2001 ⁷³	105	25	9
Girard 2012 ⁷⁴	138	107	8
Girard 2018 ⁷⁵	1040	740	8
Giroux 2018 ⁷⁶	335	40	8
Goldenberg 2006 ⁷⁷	77	37	9
Goudzwaard 2020 ⁷⁸	543	75	8
Greene 2009 ⁷⁹	100	16	8
Gu 2021 ⁸⁰	618	131	8
Gual 2018 ⁸¹	909	352	7
Guo 2016 ⁸²	572	120	8
Guo 2017 ⁸³	385	56	9
Hall 2016 ⁸⁴	139	64	8
Hatta 2019 ⁸⁵	526	93	9
Hayhurst 2020 ⁸⁶	427	327	8
He 2020 ⁸⁷	780	182	9
Hein 2014 ⁸⁸	410	102	8
Heng 2016 ⁸⁹	739	83	6
Henjum 2018 ⁹⁰	146	65	8
Hirsch 2015 ⁹¹	540	178	8
Hsieh 2015 ⁹²	532	241	8
Huang 2021 ⁹³	800	157	8
Hughes 2013 ⁹⁴	147	103	8
Hughes 2016 ⁹⁵	134	94	8
Humbert 2021 ⁹⁶	93	51	8
Hwang 2018 ⁹⁷	162	21	9
Iamaroon 2020 ⁹⁸	249	29	8
Idland 2017 ⁹⁹	129	70	8
Inouye 1993 ¹⁰⁰	107	27	9
Inouye 1996 ¹⁰¹	196	35	9
Inouye 2007 ¹⁰²	491	106	9
Jankowski 2011 ¹⁰³	418	42	9
Jones 2006 ¹⁰⁴	952	169	9
Joosten 2006 ¹⁰⁵	190	34	8
Joosten 2014 ¹⁰⁶	220	24	8
Juliebo 2009 ¹⁰⁷	364	168	8
Kagansky 2004 ¹⁰⁸	102	12	8
Kalisvaart 2006 ¹⁰⁹	603	74	9

Author, Year	Total Participants (N)	Participants with Delirium (N)	Newcastle-Ottawa Scale (9 points maximum)
Kang 2020 ¹¹⁰	138	25	7
Kanova 2017 ¹¹¹	284	74	8
Kazmierski 2010 ¹¹²	563	92	9
Kazmierski 2013 ^{113,a}	113	41	9
Kazmierski 2014 ^{114,a}	113	41	9
Kazmierski 2014 ^{115,a}	113	41	9
Kazmierski 2014 ^{116,a}	102	32	9
Kennedy 2014 ¹¹⁷	676	63	7
Khan 2016 ¹¹⁸	1589	150	8
Khan 2020 ¹¹⁹	321	321	8
Khan 2020 ¹²⁰	2742	452	9
Kim 2016 ¹²¹	561	112	9
Kim 2017 ¹²²	194	37	9
Kim 2018 ¹²³	104	15	9
Kim 2020 ¹²⁴	175	107	8
Kong 2021 ¹²⁵	98	30	8
Korevaar 2005 ¹²⁶	126	36	8
Kosar 2014 ¹²⁷	459	106	9
Koskderelioglu 2017 ¹²⁸	109	20	9
Kostalova 2012 ¹²⁹	100	43	8
Krzych 2013 ¹³⁰	5781	236	8
Kumar 2017 ¹³¹	120	21	9
Kupiec 2020 ¹³²	149	30	8
Kwizera 2015 ¹³³	160	81	8
Lai 2012 ¹³⁴	300	300	7
Lee 2011 ¹³⁵	425	149	9
Lee 2011 ¹³⁶	232	70	8
Lee 2019 ¹³⁷	132	41	9
Leung 2005 ¹³⁸	219	101	8
Leung 2007 ¹³⁹	203	29	9
Leung 2011 ¹⁴⁰	63	16	9
Leung 2013 ¹⁴¹	581	234	9
Levkoff 1992 ¹⁴²	325	125	8
Lewis 2017 ¹⁴³	494	89	8
Li 2017 ¹⁴⁴	336	102	9
Li 2020 ¹⁴⁵	115	76	9
Liang 2015 ¹⁴⁶	461	37	9

Author, Year	Total Participants (N)	Participants with Delirium (N)	Newcastle-Ottawa Scale (9 points maximum)
Lin 2020 ¹⁴⁷	301	106	8
Lin 2020 ¹⁴⁸	447	51	8
Lin 2021 ¹⁴⁹	214	57	8
Limpawattana 2016 ¹⁵⁰	99	44	8
Lindroth 2019 ¹⁵¹	97	31	8
Litaker 2001 ¹⁵²	500	57	9
Ma 2020 ¹⁵³	119	19	8
Ma 2021 ¹⁵⁴	325	64	8
Mahanna-Gabrielli 2020 ¹⁵⁵	178	45	8
Marcantonio 1994 ¹⁵⁶	245	91	8
Marcantonio 1998 ¹⁵⁷	1341	117	8
Martin 2000 ¹⁵⁸	156	28	9
Martinez 2012 ¹⁵⁹	397	52	7
Matsuda 2020 ¹⁶⁰	566	566	7
Matsuo 2017 ¹⁶¹	207	35	9
Mazzola 2017 ¹⁶²	415	124	9
McAlpine 2008 ¹⁶³	103	18	7
McAvay 2007 ¹⁶⁴	416	36	9
McCusker 2011 ¹⁶⁵	279	82	8
McManus 2009 ¹⁶⁶	82	23	7
McNicoll 2003 ¹⁶⁷	118	83	8
McPherson 2013 ¹⁶⁸	200	53	8
Meziere 2013 ¹⁶⁹	52	7	7
Miao 2018 ¹⁷⁰	112	49	8
Miu 2013 ¹⁷¹	314	86	8
Miu 2016 ¹⁷²	261	89	8
Moorey 2016 ¹⁷³	251	125	8
Morandi 2011 ¹⁷⁴	110	72	8
Morandi 2013 ¹⁷⁵	120	37	8
Morandi 2014 ¹⁷⁶	763	588	8
Mori 2016 ¹⁷⁷	149	69	8
Morrison 2003 ¹⁷⁸	541	87	9
Mu 2010 ¹⁷⁹	243	123	8
Muangpaisan 2015 ¹⁸⁰	80	36	8
Neerland 2017 ¹⁸¹	696	124	9
Nekrosius 2019 ¹⁸²	89	17	8

Author, Year	Total Participants (N)	Participants with Delirium (N)	Newcastle-Ottawa Scale (9 points maximum)
Neufeld 2013 ¹⁸³	91	41	8
Ngo 2017 ¹⁸⁴	78	39	9
Nie 2012 ¹⁸⁵	123	16	8
Noriega 2015 ¹⁸⁶	203	35	9
Norkiene 2007 ¹⁸⁷	1367	42	8
O'Regan 2018 ¹⁸⁸	191	61	9
Oh 2016 ¹⁸⁹	431	147	9
Ojagbemi 2017 ¹⁹⁰	111	33	7
Oldham 2019 ¹⁹¹	131	21	9
Oliveira 2018 ¹⁹²	173	59	9
Osse 2012 ¹⁹³	125	58	9
Otomo 2013 ¹⁹⁴	153	16	8
Pandharipande 2006 ¹⁹⁵	198	Not reported	8
Pandharipande 2009 ¹⁹⁶	97	Not reported	8
Park 2016 ¹⁹⁷	293	210	8
Pasinska 2018 ¹⁹⁸	750	203	8
Patrono 2020 ¹⁹⁹	306	41	7
Pedemonte 2020 ²⁰⁰	141	20	9
Pendlebury 2015 ²⁰¹	503	101	9
Peng 2019 ²⁰²	272	55	8
Perez-Ros 2019 ²⁰³	443	83	8
Pioli 2019 ²⁰⁴	939	292	9
Pipanmekaporn 2021 ²⁰⁵	429	23	9
Pisani 2015 ²⁰⁶	309	239	8
Pollmann 2021 ²⁰⁷	197	80	9
Pompei 1994 ²⁰⁸	432	64	8
Qi 2020 ²⁰⁹	326	68	9
Qu 2018 ²¹⁰	261	38	7
Racine 2017 ²¹¹	145	32	8
Radinovic 2015 ²¹²	270	143	9
Radinovic 2019 ²¹³	277	148	9
Ranhoff 2006 ²¹⁴	401	117	9
Rao 2020 ²¹⁵	187	67	8
Ren 2020 ²¹⁶	206	12	8
Ritchie 2014 ²¹⁷	710	87	7
Rizzi 2015 ²¹⁸	239	35	8

Author, Year	Total Participants (N)	Participants with Delirium (N)	Newcastle-Ottawa Scale (9 points maximum)
Robinson 2009 ²¹⁹	144	64	8
Roggenbach 2014 ²²⁰	92	44	8
Rudolph 2006 ²²¹	80	40	9
Rudolph 2007 ²²²	1161	99	8
Rudolph 2009 ²²³	68	33	9
Saczynski 2014 ²²⁴	566	135	8
Sanchez-Hurtado 2018 ²²⁵	109	25	8
Santos 2004 ²²⁶	220	74	8
Schoen 2011 ²²⁷	231	62	8
Schor 1992 ²²⁸	291	91	9
Schreiber 2014 ²²⁹	330	99	9
Serafim 2012 ²³⁰	465	43	8
Seymour 2012 ²³¹	140	Not reported	8
Shen 2016 ²³²	140	36	9
Sheng 2006 ²³³	156	39	8
Shim 2015 ²³⁴	631	195	8
Shin 2016 ²³⁵	78	40	9
Shioiri 2010 ²³⁶	116	19	8
Shioiri 2016 ^{237,a}	116	19	8
Sieber 2011 ²³⁸	236	60	9
Siew 2017 ²³⁹	466	350	8
Singler 2014 ²⁴⁰	133	19	7
Slatore 2012 ²⁴¹	105	54	7
Slor 2011 ²⁴²	526	60	9
Slor 2019 ²⁴³	121	41	8
Smulter 2013 ²⁴⁴	142	78	7
Smulter 2018 ^{245,a}	142	78	7
Soehle 2015 ²⁴⁶	81	26	8
Soh 2020 ²⁴⁷	113	16	9
Sosa 2018 ²⁴⁸	178	49	9
Srinonprasert 2011 ²⁴⁹	225	110	8
Stubljär 2019 ²⁵⁰	103	7	7
Styra 2019 ²⁵¹	173	20	8
Susano 2020 ²⁵²	219	55	8
Tahir 2018 ²⁵³	381	70	7
Taipale 2012 ²⁵⁴	122	27	8
Tan 2008 ²⁵⁵	53	12	7

Author, Year	Total Participants (N)	Participants with Delirium (N)	Newcastle-Ottawa Scale (9 points maximum)
Tao 2019 ²⁵⁶	507	112	8
Thillainadesan 2021 ²⁵⁷	150	15	8
Thisayakorn 2021 ²⁵⁸	65	19	8
Theologou 2018 ²⁵⁹	179	20	8
Tiwary 2021 ²⁶⁰	80	13	7
Todd 2017 ²⁶¹	101	27	8
Tong 2020 ²⁶²	154	34	8
Tow 2016 ²⁶³	142	45	8
Tripp 2021 ²⁶⁴	104	52	9
Tsuruta 2010 ²⁶⁵	106	21	8
Tully 2010 ²⁶⁶	158	49	8
Uchida 2015 ²⁶⁷	61	26	8
Uguz 2010 ²⁶⁸	212	12	8
Van der Mast 2000 ²⁶⁹	296	40	8
Van der Wulp 2019 ²⁷⁰	703	116	8
VanGrootven 2016 ²⁷¹	86	24	9
vanMunster 2008 ²⁷²	98	50	8
vanMunster 2010 ²⁷³	412	126	8
vanMunster 2010 ²⁷⁴	720	264	8
vanMunster 2010 ²⁷⁵	120	62	8
vanMunster 2012 ²⁷⁶	142	72	8
Vasunilashorn 2017 ²⁷⁷	560	134	8
Vasunilashorn 2019 ²⁷⁸	547	127	8
Vaurio 2006 ²⁷⁹	333	144	8
Veliz-Reissmuller 2007 ²⁸⁰	107	25	8
Verloo 2016 ²⁸¹	114	22	8
Villalpando-Berumen 2003 ²⁸²	667	80	9
Vondeling 2020 ²⁸³	1090	513	9
Wada 2019 ²⁸⁴	91	29	8
Wan 2020 ²⁸⁵	62	15	9
Wang 2018 ²⁸⁶	128	54	8
Wang 2020 ²⁸⁷	800	157	8
Wang 2020 ²⁸⁸	310	118	8
Wang 2021 ²⁸⁹	319	85	9
Wang 2021 ²⁹⁰	1266	317	8

Author, Year	Total Participants (N)	Participants with Delirium (N)	Newcastle-Ottawa Scale (9 points maximum)
Watne 2014 ²⁹¹	151	72	8
Watne 2016 ²⁹²	77	53	8
Wesselink 2015 ²⁹³	734	99	8
Wilson 2005 ²⁹⁴	100	12	9
Witlox 2011 ²⁹⁵	76	30	8
Witlox 2020 ²⁹⁶	75	27	9
Wood 2017 ²⁹⁷	103	19	8
Wu 2021 ²⁹⁸	228	57	7
Xie 2014 ²⁹⁹	153	31	8
Xing 2019 ³⁰⁰	320	92	8
Xu 2021 ³⁰¹	568	82	8
Yam 2018 ³⁰²	575	91	8
Yang 2008 ³⁰³	779	Not reported	8
Yen 2016 ³⁰⁴	106	22	9
Yoshimura 2004 ³⁰⁵	100	17	8
Yuan 2020 ³⁰⁶	202	17	9
Zaal 2013 ³⁰⁷	130	62	8
Zhang 2018 ³⁰⁸	700	111	8
Zhang 2020 ³⁰⁹	288	49	7
Zhang 2021 ³¹⁰	915	339	8
Zhang 2021 ³¹¹	1083	196	8
Zhao 2020 ³¹²	288	49	9
Zhao 2021 ³¹³	740	101	9
Zipprich 2020 ³¹⁴	611	64	7
Zrour 2020 ³¹⁵	230	59	7

^a Participants were also included in another study in this table and therefore were not included in the sum of total participants.

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eFigure. Study Flowchart

