

Supplementary Digital Content 1

Extant resting state fMRI studies of sedation and anesthesia. Anesthetic agent and protocol are listed. Sample size, field strength, and imaging paradigm (rest- or task-based), and motion censoring/denoising strategies are included. When reported, end-tidal carbon dioxide (EtCO₂) or arterial partial pressures (PaCO₂) are documented. *Sedation* includes moderate sedation, characterized by the depression of consciousness but preserved response to verbal commands, and deep sedation, in which purposeful responses and arousability are maintained in response to repeated or painful stimulation. *General* denotes general anesthesia with loss of consciousness and inability to be aroused even by painful stimulation, as defined by the Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia, approved by the American Society of Anesthesiologists House of Delegates in 1999 and last amended 2014.

Report	Anesthetic Agent	Anesthetic Protocol	N	Field Strength	Rest or Task	Motion Artifact Censoring And Motion Denoising	Mean CO ₂ (mmHg) Awake/Sedation/General
Peltier et al., 2005 ¹	Sevoflurane	Sedation General	6	3 T	Rest	-	EtCO ₂ - / 38.2 / 38.7
Kerssens et al., 2005 ²	Sevoflurane	Sedation General	6	3 T	Task	-	EtCO ₂ - / 38.2 / 38.7
Ramani et al., 2007 ³	Sevoflurane	Sedation	16	3 T	Rest	-	EtCO ₂ 36.3 / 36.3 / -
Qiu et al., 2008 ⁴	Sevoflurane	Sedation	22	3 T	Rest	-	EtCO ₂ 36.1 / 36.1 / -
Qiu et al., 2008 ⁵	Sevoflurane	Sedation	16	3 T	Rest	-	EtCO ₂ 36.3 / 36.3 / -
Martuzzi et al., 2010 ⁶	Sevoflurane	General	14	3 T	Rest	Head motion regressed	EtCO ₂ 36 / 35 / -
Deshpande et al., 2010 ⁷	Sevoflurane	General	6	3 T	Rest	Wavelet denoising	EtCO ₂ 38.2 / 38.7 / -
Martuzzi et al., 2011 ⁸	Sevoflurane	General	14	3 T	Rest	Head motion, WB signal regressed	EtCO ₂ 35 / 36 / -
Huang et al., 2014 ⁹	Sevoflurane Propofol	General General	6 6	3 T	Rest	Data excluded (motion > 0.3 mm) Head motion regressed	EtCO ₂ - / - / 35-40

Dueck et al., 2005 ¹⁰	Propofol	Sedation	8	1.5 T	Task	Data excluded (motion > 3 mm)	Δ EtCO ₂ 3
Davis et al., 2007 ¹¹	Propofol	Sedation	12	3 T	Task	Head motion regressed	-
Purdon et al., 2009 ¹²	Propofol	General	8	3 T	Rest	-	PaCO ₂ 36.7 / - / 39.5
Boveroux et al., 2010 ¹³	Propofol	Sedation General	19	3 T	Rest	Head motion, WB signal regressed Spatial ICA denoising	PaCO ₂ 38.2 / 40.4 / 48.2
Mhuirheartaigh et al., 2010 ¹⁴	Propofol	Sedation General	8	3 T	Task	Head motion regressed	Δ EtCO ₂ < 5
Mhuirheartaigh et al., 2013 ¹⁵	Propofol	Sedation	12	3T	Task	Head motion regressed	-
Stamatakis et al., 2010 ¹⁶	Propofol	Sedation	16	3 T	Rest	Head motion, WB signal regressed	-
Schrouff et al., 2011 ¹⁷	Propofol	General	18	3 T	Rest	Spatial ICA denoising	-
Schroter et al., 2012 ¹⁸	Propofol	General	11	3 T	Rest	Four excluded (motion > 2 mm) Head motion regressed	EtCO ₂ 29.5 / - / 35.3
Liu et al., 2012 ¹⁹	Propofol	Sedation	8	1.5 T	Task	Head motion regressed	-
Adapa et al., 2013 ²⁰	Propofol	Sedation	20	3 T	Task	Head motion regressed	-
Jordan et al., 2013 ²¹	Propofol	General	12	3 T	Rest	Three excluded Head motion regressed	EtCO ₂ 28 / - / 35
Monti et al., 2013 ²²	Propofol	Sedation General	12	3 T	Rest	Eight excluded (motion > 0.5 mm) Head motion regressed	-

Guldenmund et al., 2013 ²³	Propofol	Sedation General	17	3 T	Rest	Spatial ICA denoising	-
Gomez et al, 2013 ²⁴	Propofol	Sedation General	11	3 T	Rest	Head motion regressed	-
Gili et al., 2013 ²⁵	Propofol	Sedation	15	3 T	Rest	Head motion regressed	-
Liu et al., 2013 ²⁶	Propofol	Sedation	8	1.5 T	Task	Head motion regressed	-
Liu et al., 2013 ²⁷	Propofol	Sedation	8	1.5 T	Task	Head motion regressed	-
Liu et al., 2014 ²⁸	Propofol	Sedation	8	1.5 T	Task	Head motion regressed	-
Amico et al., 2014 ²⁹	Propofol	Sedation General	18	3 T	Rest	Censoring with FD < 0.5 mm and DVARS Head motion regressed	-
Pizoli et al., 2011 ³⁰	Propofol Pentobarbital	General General	14 8	3 T	Rest	Head motion, WB signal regressed	-
DiFrancesco et al., 2013 ³¹	Propofol Pentobarbital	General General	9 11	3 T	Rest	-	-
Martin et al., 2000 ³²	Pentobarbital	Sedation General	15	2 T	Rest	Two excluded (visually)	-
Kiviniemi et al., 2000 ³³	Thiopental	General	12	1.5 T	Rest	Five excluded (visually)	-
Kiviniemi et al., 2005 ³⁴	Midazolam	Sedation	12	1.5 T	Rest	One excluded (motion > 0.5 mm)	-
Wise et al., 2007 ³⁵	Midazolam	Sedation	8	3 T	Task	-	-

Greicius et al., 2008 ³⁶	Midazolam	Sedation	9	1.5 T	Rest	Spatial ICA for denoising	-
Tian et al., 2010 ³⁷	Midazolam	Sedation General	6	3 T	Task	-	-
Rogers et al., 2004 ³⁸	Ketamine	Sedation	8	3 T	Task	-	-
Fu et al., 2005 ³⁹	Ketamine	Sedation	10	1.5 T	Task	-	-
Honey et al., 2004 ⁴⁰	Ketamine	Sedation	12	3 T	Task	-	-
Honey et al., 2005 ⁴¹	Ketamine	Sedation	12	3 T	Task	-	-
Sprenger et al., 2006 ⁴²	Ketamine	Sedation	12	1.5 T	Task	Censored for motion > 2 mm or > 3°	-
Musso et al., 2011 ⁴³	Ketamine	Sedation	24	3 T	Task	-	-
Niesters et al., 2012 ⁴⁴	Ketamine	Sedation	12	3 T	Rest	Spatial ICA denoising	-
Anticevic et al., 2012 ⁴⁵	Ketamine	Sedation	19	3 T	Task	Head motion regressed	-
Scheidegger et al., 2012 ⁴⁶	Ketamine	Sedation	19	3 T	Rest	Head motion, WB signal regressed	-
Driesen et al., 2013 ⁴⁷	Ketamine	Sedation	22 14	3 T	Rest	Censored for motion > 2 mm or > 3°	-
Driesen et al., 2013 ⁴⁸	Ketamine	Sedation	22	3 T	Task	Censored for motion > 2 mm or > 3°	-

Hayama et al., 2012 ⁴⁹	Dexmedetomidine	Sedation	48	3 T	Task	Three excluded for motion > 3 mm or > 3° Head motion regressed	-
Akeju et al., 2014 ⁵⁰	Dexmedetomidine	Sedation	16	3T	Rest	Spatial ICA denoising Head motion regressed	-

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