

Supplementary File 7

Risk of Bias in Individual Studies (N = 171)

Author (Year)	Randomisation Process	Deviation from Intended Interventions	Missing Outcome Data	Measurement of Outcomes	Selection of the Reported Result	Overall Bias
Alvarado et al. 2023	Low	Low	Low	Low	Some concerns	Some concerns
Arnold et al. 2013	Low	High	High	Low	Some concerns	High
Badiei et al. 2016	Some concerns	High	High	Low	Some concerns	High
Batchelor-Murphy et al. 2015	Low	High	High	Low	Some concerns	High
Bell et al. 2000	Some concerns	Low	Low	Some concerns	Some concerns	Some concerns
Bello et al. 2005	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Benda et al. 2020	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Benjamin et al. 2008	Low	Some concerns	Low	Low	Some concerns	Some concerns
Bhattacharyya et al. 2021	Low	Low	Low	Low	Some concerns	Some concerns
Bohicchio et al. 2006	High	Some concerns	Low	Low	Some concerns	High
Bonabi et al. 2019	Some concerns	Some concerns	High	Low	Some concerns	High
Brateanu et al. 2019	Some concerns	Low	Low	Low	Some concerns	Some concerns
Bredesen et al. 2016	Low	Some concerns	Some concerns	Low	Some concerns	Some concerns
Carrick et al. 2017	Some concerns	Some concerns	Low	Low	Low	Some concerns
Carstensen et al. 2023	Low	High	Low	Low	Some concerns	High
Chaisriya et al. 2024	Low	Low	Low	Low	Some concerns	Some concerns
Chang et al. 2024	Some concerns	High	Some concerns	Some concerns	Some concerns	High
Chenkin et al. 2008	Some concerns	Low	Low	Low	Some concerns	Some concerns
Chisholm et al. 2025	Low	Some concerns	Low	Low	Low	Some concerns
Chuang et al. 2022	Some concerns	High	Some concerns	Low	Some concerns	High
Clancy et al. 2016	High	Some concerns	High	Low	Some concerns	High
Connolly et al. 2014	Some concerns	Some concerns	Some concerns	High	Some concerns	High
Cullinan et al. 2017	Some concerns	High	Some concerns	Low	Some concerns	High
Demir et al. 2024	Some concerns	High	Some concerns	Some concerns	Some concerns	High
Diehl et al. 2017	High	High	High	Low	Some concerns	High

Author (Year)	Randomisation Process	Deviation from Intended Interventions	Missing Outcome Data	Measurement of Outcomes	Selection of the Reported Result	Overall Bias
Dimeff et al. 2009	Some concerns	Low	Low	High	Some concerns	High
Edrich et al. 2016	Some concerns	Some concerns	Low	Some concerns	Some concerns	Some concerns
Ehrenreich-May et al. 2016	Some concerns	Low	Low	Some concerns	Some concerns	Some concerns
El-Helou et al. 2025	Low	Some concerns	Some concerns	Low	Some concerns	Some concerns
Elgie et al. 2010	Some concerns	Some concerns	High	Low	Some concerns	High
Elzeky et al. 2022	Low	Some concerns	Low	Low	Some concerns	Some concerns
Farokhzadian et al. 2023	Low	Low	Low	Low	Some concerns	Some concerns
Fordis et al. 2005	Low	High	High	Low	Some concerns	High
Gallegos et al. 2021	Some concerns	Some concerns	Low	Some concerns	Some concerns	Some concerns
Garcia-Rodriguez et al. 2016	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Gerbert et al. 2002	Some concerns	Some concerns	Low	Some concerns	Some concerns	Some concerns
Gordon et al. 2011	Low	Some concerns	Some concerns	Low	Some concerns	Some concerns
Green et al. 2020	Some concerns	Some concerns	Some concerns	Some concerns	Some concerns	Some concerns
Guden et al. 2024	Low	High	High	Some concerns	Some concerns	High
Halms et al. 2024	Low	Some concerns	Low	Some concerns	Low	Some concerns
Haney et al. 2012	High	Some concerns	Low	Low	Some concerns	High
Harris et al. 2008	Some concerns	High	Some concerns	Some concerns	Some concerns	High
Harris et al. 2013	Some concerns	Some concerns	Some concerns	Low	Some concerns	Some concerns
Hayer et al. 2022	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Heard et al. 2017	Low	High	Some concerns	Low	Some concerns	High
Heidarian et al. 2025	High	Low	Some concerns	Low	Some concerns	High
Horiuchi et al. 2009	Low	High	High	Low	Some concerns	High
Houwink et al. 2014	Some concerns	Some concerns	Some concerns	Low	Some concerns	Some concerns
Hoysted et al. 2019	Low	Low	Low	Low	Some concerns	Some concerns
Hsieh et al. 2021	Low	Some concerns	Low	Low	Some concerns	Some concerns
Huang et al. 2019	Some concerns	Some concerns	Low	Some concerns	Some concerns	Some concerns
Huang et al. 2021	Low	Low	Low	Low	Some concerns	Some concerns
Hugenholtz et al 2008	High	Some concerns	Low	Some concerns	Some concerns	Some concerns
Hurtado et al. 2023	High	High	Some concerns	Low	Some concerns	High
Hussein et al. 2022	Low	High	Low	Low	Some concerns	High

Author (Year)	Randomisation Process	Deviation from Intended Interventions	Missing Outcome Data	Measurement of Outcomes	Selection of the Reported Result	Overall Bias
Jain et al. 2010	Low	Some concerns	Low	Low	Some concerns	Some concerns
Jalali et al. 2022	High	High	Low	Low	Some concerns	High
Jaunay et al. 2019	Low	High	Some concerns	Low	Low	High
Jensen et al. 2009	High	Low	Some concerns	Low	Some concerns	High
Johannsen et al. 2023	Some concerns	Some concerns	Low	Some concerns	Low	Some concerns
Kang et al. 2022	Low	High	Low	Low	Some concerns	High
Karvinen & Reed 2022	Low	Low	High	Some concerns	Some concerns	High
Karvinen et al. 2017	Low	Some concerns	Low	Low	Some concerns	Some concerns
Kato et al. 2017	Low	Low	Low	Low	Some concerns	Some concerns
Keleekai et al. 2016	Some concerns	High	Low	Low	Some concerns	High
Kemper et al. 2002	Some concerns	Low	Low	Low	Some concerns	Some concerns
Kerfoot et al. 2009	Some concerns	Some concerns	Some concerns	Some concerns	Some concerns	Some concerns
Khoshbaten et al. 2014	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
KhoshnoodiFar et al. 2019	Some concerns	Some concerns	Some concerns	Low	Some concerns	Some concerns
Kim & Hwang, 2022	Some concerns	Low	Low	Low	Some concerns	Some concerns
Kim & Shin. 2013	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Kim et al. 2023	Low	Low	Low	Low	Some concerns	Some concerns
Kimemia, J. 2018	Low	Some concerns	Low	Low	Some concerns	Some concerns
Koeppen et al. 2024	Low	Low	Some concerns	Some concerns	Low	Some concerns
Krishnamachari et al. 2018	Some concerns	Low	Low	Low	Some concerns	Some concerns
Le et al. 2010	High	High	High	Some concerns	Some concerns	High
Lee & Choi 2024	High	High	Some concerns	Low	Some concerns	High
Leiva-Fernández et al. 2020	Some concerns	Low	Low	Some concerns	Some concerns	Some concerns
Lhibibani et al. 2022	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Li A. 2022	Some concerns	High	High	Some concerns	Some concerns	High
Liaw et al. 2015	Some concerns	Low	Some concerns	Low	Some concerns	Some concerns
Liaw et al. 2016	Some concerns	Low	Some concerns	Low	Some concerns	Some concerns
Liaw et al. 2017	Low	Some concerns	Low	Low	Some concerns	Some concerns
Liu et al. 2020	Low	Low	Low	Low	Some concerns	Some concerns
Los et al. 2023	Some concerns	High	High	Some concerns	Some concerns	High

Author (Year)	Randomisation Process	Deviation from Intended Interventions	Missing Outcome Data	Measurement of Outcomes	Selection of the Reported Result	Overall Bias
Lyon et al. 2022	Some concerns	High	Low	Low	High	High
Maertens et al. 2017	Low	High	Some concerns	Low	Some concerns	High
Mallon et al. 2022	Some concerns	Low	Some concerns	Low	Some concerns	Some concerns
Maloney et al. 2011	Low	High	High	Some concerns	Some concerns	Some concerns
Marriott et al. 2023	Some concerns	Low	Low	Some concerns	Some concerns	Some concerns
Maruyama et al. 2022	Low	Low	Some concerns	Low	Some concerns	Some concerns
Maruyama et al., 2022	High	Low	High	Low	Some concerns	High
McCrow et al. 2014	High	Low	Low	Low	Some concerns	High
Mesquita et al. 2019	Some concerns	Low	Low	Some concerns	Some concerns	Some concerns
Mohan et al. 2018	Low	Low	Low	Low	Some concerns	Some concerns
Monti & Perreault 2020	Low	Some concerns	Low	Low	Some concerns	Some concerns
Mun and Hwang 2020	Low	Low	Low	Low	Some concerns	Some concerns
Murray et al. 2010	Low	High	High	Low	High	High
NajafiGhezeljeh et al. 2019	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Nakamura et al. 2022	Low	Low	High	Low	Some concerns	High
Ng et al. 2022	Some concerns	Some concerns	High	Low	Some concerns	High
Nixon et al. 2019	Some concerns	Low	Low	Low	Some concerns	Some concerns
Nyberg et al. 2022	Low	Low	Low	Low	Some concerns	Some concerns
Ozawa et al. 2022	Some concerns	High	Some concerns	High	Some concerns	High
Padalino et al. 2007	High	Some concerns	Low	Some concerns	High	High
Pahud et al. 2020	Some concerns	Some concerns	High	Low	Some concerns	High
Passos et al. 2022	Some concerns	High	High	Low	Some concerns	High
Peabody et al. 2017	Some concerns	High	High	Low	Some concerns	High
Pelayo et al. 2011	Low	Low	Low	Low	Some concerns	Some concerns
Pelayo-Alvarez et al. 2013	Low	Some concerns	Some concerns	Low	High	High
Perkins et al. 2012	Low	Low	Low	Some concerns	Some concerns	Some concerns
Petit et al. 2019	Some concerns	Low	Low	Low	Some concerns	Some concerns
Philbrook et al. 2010	Some concerns	High	Low	High	Some concerns	High
Phuangngoenmak et al. 2019	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Platz et al. 2010	High	High	High	Some concerns	Some concerns	High

Author (Year)	Randomisation Process	Deviation from Intended Interventions	Missing Outcome Data	Measurement of Outcomes	Selection of the Reported Result	Overall Bias
Richmond et al. 2016	Low	Some concerns	Low	Low	Some concerns	Some concerns
Robinson et al. 2018	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Sabaghnejad et al. 2024	High	Some concerns	Some concerns	Some concerns	Some concerns	High
Sadegh Madani et al. 2023	Some concerns	Some concerns	Some concerns	Low	Some concerns	Some concerns
Saunders et al. 2016	High	Low	Low	Low	Some concerns	High
Scheetz et al. 2019	Some concerns	Some concerns	High	Low	Some concerns	High
Schulman et al. 2012	Some concerns	Some concerns	High	Low	Some concerns	High
Schumacher 2009	Low	High	Some concerns	Low	Some concerns	High
Serwetnyk et al. 2013	Some concerns	Some concerns	Some concerns	High	High	High
Sheen et al. 2008	Some concerns	High	High	High	Some concerns	High
Siebert et al. 2022	Low	Low	Low	Some concerns	Some concerns	Some concerns
Silab et al. 2024	Low	Low	Low	Low	Some concerns	Some concerns
Silva et al. 2016	Some concerns	High	High	Low	Some concerns	High
Simonsen et al. 2014	Some concerns	Some concerns	Some concerns	Low	Some concerns	Some concerns
Smeekeens et al. 2011	Low	Low	Low	Low	Some concerns	Some concerns
Snippen et al. 2023	High	Low	Low	Low	Some concerns	High
Soon et al. 2020	Some concerns	Some concerns	Some concerns	Low	Some concerns	Some concerns
Soper 2017	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Sperl-Hillen et al. 2014	Low	High	High	Low	Some concerns	High
Stacey et al. 2006	Low	Some concerns	Low	Low	Some concerns	Some concerns
Steele et al. 2013	Some concerns	High	High	Low	High	High
Stewart et al. 2005	High	Some concerns	Some concerns	Low	Some concerns	High
Takeuchi et al. 2023	Low	High	High	Low	Some concerns	High
Tang et al. 2024	Low	High	High	Low	Some concerns	High
Tassi, A. 2017	Low	Some concerns	High	Low	Some concerns	High
Taylor et al. 2013	Low	High	High	High	Some concerns	High
Taylor et al. 2020	Some concerns	High	High	Low	Some concerns	High
Thai et al. 2020	Some concerns	Some concerns	Low	Low	Some concerns	High
Thompson et al. 2016	Some concerns	Low	Low	Low	Some concerns	Some concerns
Toole et al. 2013	Low	High	High	Low	Some concerns	High

Author (Year)	Randomisation Process	Deviation from Intended Interventions	Missing Outcome Data	Measurement of Outcomes	Selection of the Reported Result	Overall Bias
Triola et al. 2006	Some concerns	High	High	Low	Some concerns	High
Van Stiphout et al. 2018	Low	Some concerns	Low	Low	Some concerns	Some concerns
Velasco et al. 2015	Some concerns	High	High	Low	Some concerns	High
Viguiet et al. 2015	Low	Low	High	Low	Some concerns	High
Vollmar et al. 2010	Low	Some concerns	Some concerns	Low	Low	Some concerns
Wadey et al. 2022	Some concerns	Low	Some concerns	Some concerns	Some concerns	Some concerns
Wakefield et al. 2014	Some concerns	Some concerns	High	Low	Some concerns	High
Walker et al. 2020	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Wang et al. 2017	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Wang et al. 2024	Some concerns	Some concerns	Some concerns	High	High	High
Wanty et al. 2023	Some concerns	Some concerns	High	Low	Some concerns	High
Weaver et al. 2016	Some concerns	Some concerns	Low	Low	Some concerns	High
Wee et al. 2016	Low	Low	Some concerns	Low	Some concerns	Some concerns
Welch et al. 2014	Some concerns	Some concerns	Some concerns	Low	Some concerns	Some concerns
Westmoreland et al. 2010	Some concerns	High	High	Low	Some concerns	High
Wilkes et al. 2017	Some concerns	High	High	Low	Some concerns	High
Williams et al. 2021	Some concerns	High	High	Low	Some concerns	High
Worm 2013	Some concerns	Some concerns	Low	Low	Some concerns	Some concerns
Wright 2008	High	High	High	Low	Some concerns	High
Yao et al. 2015	High	High	High	Low	Some concerns	High
Yoo et al. 2019	Some concerns	High	High	Low	Some concerns	High
Zarifsanaiey et al. 2022	Low	Low	Low	Low	Some concerns	Some concerns
Zhang et al. 2024	Low	Some concerns	Low	Low	Some concerns	Some concerns
Zhao et al. 2024	Low	Some concerns	Low	Low	Some concerns	Some concerns
das Graças Silva Matsubara et al. 2016	Some concerns	High	Low	Low	Some concerns	High
de Gannes et al. 2004	Some concerns	High	High	Low	Some concerns	High