

評価対象論文リスト(要因:授乳、アウトカム:循環器病)

評価判定日:2025/5/29

①既存の系統的レビュー・メタ解析・統合解析

1	Pathirana MM, Ali A, Lassi ZS, Arstall MA, Roberts CT, Andraweera PH. Protective Influence of Breastfeeding on Cardiovascular Risk Factors in Women With Previous Gestational Diabetes Mellitus and Their Children: A Systematic Review and Meta-Analysis. <i>J Hum Lact.</i> 2022;38(3):501-512. doi:10.1177/08903344211034779
2	Tschiderer L, Seekircher L, Kunutsor SK, Peters SAE, O'Keeffe LM, Willeit P. Breastfeeding Is Associated With a Reduced Maternal Cardiovascular Risk: Systematic Review and Meta-Analysis Involving Data From 8 Studies and 1 192 700 Parous Women. <i>J Am Heart Assoc.</i> 2022;11(2):e022746. doi:10.1161/JAHA.121.022746
3	Nguyen B, Jin K, Ding D. Breastfeeding and maternal cardiovascular risk factors and outcomes: A systematic review. <i>PLoS One.</i> 2017;12(11):e0187923. Published 2017 Nov 29. doi:10.1371/journal.pone.0187923

②日本人集団の個別疫学研究

4	Otsuki S, Saito E, Sawada N, et al. Female reproductive factors and risk of all-cause and cause-specific mortality among women: The Japan Public Health Center-based Prospective Study (JPHC study). <i>Ann Epidemiol.</i> 2018;28(9):597-604.e6. doi:10.1016/j.annepidem.2018.06.001
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■メタ解析、系統的レビュー

Reference			Include study				Design	Category	Relative risk (95% CI or p)	Weight	Magnitude of association
Author	Title	Year	Ref No.	First author	Year	Study period					
Lena Tschidere et al.	Breastfeeding Is Associated With a Reduced Maternal Cardiovascular Risk: Systematic Review and Meta-Analysis Involving Data From 8 Studies and 1 192 700 Parous Women	2022									
			Study	No. of parou	No. of outcom	Level of adjustment	Hazard ratio (95% CI)	Weight (%)			
			CVD								
			HUNT^12	20,007	1,049*	+++	0.68 (0.49, 0.95)	3.66			
			JPHC^13	37,496	1,960†	++	0.84 (0.71, 1.00)	10.43			
			EPIC^9	266,607	1,970‡	+++	0.80 (0.70, 0.91)	12.41			
			45&Up^7	100,864	3,574‡	+++	0.84 (0.76, 0.92)	15.37			
			Gallagher^11	254,116	2,578‡	++	0.92 (0.86, 0.99)	17.9			
			CKB^8	285,603	8,037‡	+	0.90 (0.85, 0.96)	20.98			
			WHI^15	138,681	NR	++	0.95 (0.92, 0.99)	19.25			
			Overall random-effects			79.4% (57.8%, 89.9%)	0.89 (0.83, 0.95)		↓		
			Overall fixed-effects			—	0.95 (0.92, 0.97)				
			CHD								
			EPIC^10	8,044	2,404	+++	0.71 (0.52, 0.98)	6.93			
			JPHC^13	37,496	541*	++	0.88 (0.71, 1.10)	11.17			
			Gallagher^11	254,116	1,318‡	++	0.64 (0.60, 0.68)	23.06			
			CKB^8	285,603	16,401‡	+	0.91 (0.85, 0.96)	19.04			
			WHI^17	62,427	4,607	++	0.90 (0.83, 0.97)	15.72			
			NHS^14	89,326	2,540	++	0.92 (0.85, 1.00)	23.12			
			Overall random-effects			79.7% (55.8%, 90.7%)	0.86 (0.78, 0.95)		↓		
			Overall fixed-effects			—	0.91 (0.88, 0.94)				
			Stroke								
			EPIC^9	266,607	655*	++	0.94 (0.74, 1.21)	12.22			
			JPHC^13	37,496	945†	++	0.79 (0.63, 0.99)	13.41			
			WHI^16	80,191	3,194‡	+++	0.84 (0.77, 0.91)	25.05			
			Gallagher^11	254,116	1,318‡	++	1.00 (0.92, 1.08)	25.24			
			CKB^8	285,603	23,631‡	+	0.92 (0.85, 0.99)	24.08			
			Overall random-effects			79.6% (51.6%, 91.4%)	0.88 (0.79, 0.99)		↓		
			Overall fixed-effects			—	0.90 (0.86, 0.94)				
			Fatal CVD								
			HUNT^12	20,007	1,049*	+++	0.68 (0.49, 0.95)	6.85			
			45&Up^7	100,864	3,574‡	+++	0.76 (0.49, 0.89)	8.24			
			CKB^8	285,603	7,155‡	+	0.90 (0.80, 1.01)	19.72			
			JPHC^13	37,496	960†	++	0.84 (0.70, 1.00)	12.18			
			EPIC^9	266,607	674*	+++	0.92 (0.86, 0.98)	22.86			
			Gallagher^11	254,116	2,578‡	++	0.92 (0.86, 0.99)	30.13			
			Overall random-effects			47.7% (0.0%, 79.3%)	0.83 (0.76, 0.91)		↓		
			Overall fixed-effects			—	0.87 (0.82, 0.92)				

Table 1. Characteristics of Included Studies

Study	Country	Year of baseline	No. of women	Mean age at study entry (y)	Mean parity	Mean age at first birth (y)	No. of women who had ever breastfed (%)	Mean lifetime duration of breastfeeding (mo)	CVD	CHD	Stroke	Fatal CVD	Median follow-up duration (y)	NOS score
45&Up	Australia	2006–2009	100 864	60.2	2.7	25	88 347 (88)	14.6	●	○	○	●	6.1 [*] , †	7
CKB	China	2004–2008	285 603	50.5	2	23.4	277 818 (97)	24.0 ‡	●	●	●	●	8.1	7
EPIC	Multinational	1992–2000	266 607	50.3 §	2.3	24.9	212 041 (80)	9.6	●	×	●	●	12.9 [*]	7
			8044	52.6	2.2	NR	7016 (87)	9.7	○	●	○	○	11.1	7
Gallagher	China	1989–1991	254 116	43.0 ‡	2.1	25.7	214 614 (84)	18.9	●	●	●	●	9.6 [*]	5
HUNT2	Norway	1995–1997	20 007	52.1	2.6	23.4	19 350 (97)	16.5	●	○	○	●	14.5	7
JPHC	Japan	1990–1994	37 496	50.6 §	2.7	25.1	32 622 (87)	NR	●	●	●	●	20.9 [*]	8
NHS	United States	1986	89 326	40–65 ¶	2.5	NR	56 619 (63)	8.4	○	●	○	○	15.1 [*]	6
WHI	United States	1993–1998	138 681	63.3	3.1	NR	81 155 (59)	9.4	●	○	○	○	7.9	7
			80 191	63.7	2.9	NR	46 699 (58)	7.4	○	○	●	○	12.6	6
			62 427	63.2 §	3.1	24.3	36 884 (59)	NR	○	●	○	○	12	8
Total		1986–2009	1 192 700	51.3	2.3	24.6	982 566 (82)	15.6					10.3	6.5

If different publications were analyzed for a study, the publication with the largest number of participants was used to compute overall estimates; alternatively, if this publication did not report a variable, the publication that provided this information was used. 45&Up indicates 45 and Up Study; ● = provided; ○ = not provided; × = provided but not used for analysis; CHD, coronary heart disease; CKB, China Kadoorie Biobank; CVD, cardiovascular disease; EPIC, European Prospective Investigation Into Cancer and Nutrition; HUNT2, Nord-Trøndelag Health Survey 2; JPHC, Japan Public Health Center-based prospective study; NHS, Nurses' Health Study; NOS, Newcastle-Ottawa Scale; NR, not reported; and WHI, Women's Health Initiative.

- *Mean.
- † Mean of 6.1 for nonfatal CVD and 5.7 for fatal CVD.
- ‡ Median.
- § Nulliparous women included.
- || Fatal only.
- ¶ Minimum–maximum.

■コホート研究(コホートのプール解析含む)

Reference			Study subjects						Category	Number among cases	Relative risk (95%CI or p)	P for trend	Confounding variables considered	Magnitude of association	
Author	Title	Year	Study period	Number of subjects	Source of subjects	Event followed	Number of incident cases or deaths	Participant's race							
Otsuki S, et al.	Female reproductive factors and risk of all-cause and cause-specific mortality among women: The Japan Public Health Center-based Prospective Study	2018	1990–1994 to 2014 (Follow-up of 20.9 years)	40,149 women aged 40–69	JPHC Study	All-cause mortality	4788 total deaths	Japanese	Breastfeeding						
									All-cause mortality	Never	498	ref	-		
										Ever	3843	0.81 (0.75, 0.87)			
									Cerebrovascular disease	Never	47	ref	-		
										Ever	494	0.88 (0.71–1.10)			
									Heart disease	Never	40	ref	-		
	Ever	405	0.79 (0.63–0.99)												