

評価対象論文リスト(要因:妊娠中に妊娠糖尿病があった人、アウトカム:糖尿病)

評価判定日:2025/2/26

①既存の系統的レビュー・メタ解析・統合解析

1	Bellamy L, Casas JP, Hingorani AD, Williams D. Type 2 diabetes mellitus after gestational diabetes: a systematic review and meta-analysis. <i>Lancet</i> . 2009;373(9677):1773-1779. doi:10.1016/S0140-6736(09)60731-5
2	Song C, Lyu Y, Li C, et al. Long-term risk of diabetes in women at varying durations after gestational diabetes: a systematic review and meta-analysis with more than 2 million women. <i>Obes Rev</i> . 2018;19(3):421-429. doi:10.1111/obr.12645
3	Benhalima K, Lens K, Bosteels J, Chantal M. The Risk for Glucose Intolerance after Gestational Diabetes Mellitus since the Introduction of the IADPSG Criteria: A Systematic Review and Meta-Analysis. <i>J Clin Med</i> . 2019;8(9):1431. Published 2019 Sep 10. doi:10.3390/jcm8091431
4	Vounzoulaki E, Khunti K, Abner SC, Tan BK, Davies MJ, Gillies CL. Progression to type 2 diabetes in women with a known history of gestational diabetes: systematic review and meta-analysis. <i>BMJ</i> . 2020;369:m1361. Published 2020 May 13. doi:10.1136/bmj.m1361
5	You H, Hu J, Liu Y, Luo B, Lei A. Risk of type 2 diabetes mellitus after gestational diabetes mellitus: A systematic review & meta-analysis. <i>Indian J Med Res</i> . 2021;154(1):62-77. doi:10.4103/ijmr.IJMR_852_18
6	Gadve SS, Chavanda S, Mukherjee AD, Aziz S, Joshi A, Patwardhan M. Risk of Developing Type 2 Diabetes Mellitus in South Asian Women with History of Gestational Diabetes Mellitus: A Systematic Review and Meta-Analysis. <i>Indian J Endocrinol Metab</i> . 2021;25(3):176-181. doi:10.4103/ijem.IJEM_57_21
7	Dennison RA, Chen ES, Green ME, et al. The absolute and relative risk of type 2 diabetes after gestational diabetes: A systematic review and meta-analysis of 129 studies. <i>Diabetes Res Clin Pract</i> . 2021;171:108625. doi:10.1016/j.diabres.2020.108625
8	Tranidou A, Dagklis T, Tsakiridis I, et al. Risk of developing metabolic syndrome after gestational diabetes mellitus - a systematic review and meta-analysis. <i>J Endocrinol Invest</i> . 2021;44(6):1139-1149. doi:10.1007/s40618-020-01464-6
9	Juan J, Sun Y, Wei Y, et al. Progression to type 2 diabetes mellitus after gestational diabetes mellitus diagnosed by IADPSG criteria: Systematic review and meta-analysis. <i>Front Endocrinol (Lausanne)</i> . 2022;13:1012244. Published 2022 Oct 6. doi:10.3389/fendo.2022.1012244
10	Wambua S, Singh M, Okoth K, et al. Association between pregnancy-related complications and development of type 2 diabetes and hypertension in women: an umbrella review. <i>BMC Med</i> . 2024;22(1):66. Published 2024 Feb 14. doi:10.1186/s12916-024-03284-4

②日本人集団の個別疫学研究

11	Kugishima Y, Yasuhi I, Yamashita H, et al. Risk factors associated with the development of postpartum diabetes in Japanese women with gestational diabetes. <i>BMC Pregnancy Childbirth</i> . 2018;18(1):19. Published 2018 Jan 8. doi:10.1186/s12884-017-1654-4
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■ 系統的レビュー・メタ解析・統合解析

No	Author	Title	Year	Study design included	Exposure	Outcomes	Category	Relative risk (95% CI)	Magnitude of association	Studies included from
1	Bellamy, L., et al	Type 2 diabetes mellitus after gestational diabetes: a systematic review and meta-analysis.	2009	only cohort study	Gestational diabetes mellitus	T2DM	Women with a gestational diabetes vs those without gestational diabetes	RR= 7.43 (4.79–11.51)	↑↑↑	Canada, Korea, Hungary, USA, France, Australia, Brazil, India, Finland, Spain, Sweden,
2	Song, C., et al	Long-term risk of diabetes in women at varying durations after gestational diabetes: a systematic review and meta-analysis with more than 2 million women.	2018	only cohort study	Gestational diabetes mellitus	DM	Women with a gestational diabetes vs those without gestational diabetes	Unadjusted model: RR=7.76 (5.81–11.81) Adjusted model: OR=17.92 (16.96–18.94)	↑↑↑	Sweden, China, USA, Brazil, Canada, Denmark, Finland, France, Australia, Hungary, Italy, India, Israel, Iran, Spanish, Turkey
3	Benhalima, K., et al	The Risk for Glucose Intolerance after Gestational Diabetes Mellitus since the Introduction of the IADPSG Criteria: A Systematic Review and Meta-Analysis.	2019	mix	Gestational diabetes mellitus	T2DM Impaired glucose tolerance	Women with a gestational diabetes vs those without gestational diabetes	RR= 7.42 (5.99–9.19) RR= 2.45 (1.92–3.13)	↑↑↑ ↑↑↑	Israel, Finland, Turkey, Sweden, USA, Ireland, Poland, Iran, Australia,
4	Vounzoulaki, E., et al	Progression to type 2 diabetes in women with a known history of gestational diabetes: systematic review and meta-analysis.	2020	only cohort study	Gestational diabetes mellitus	DM	Women with a gestational diabetes vs those without gestational diabetes	RR=9.51 (7.14–12.67)	↑↑↑	Sweden, Spain, Pakistan, Israel, UK, Sri Lanka, Finland, India, Australia, Korea, Hungary, Iran, Canada, Italy, France, United States, Israel

5	You, H., et al	Risk of type 2 diabetes mellitus after gestational diabetes mellitus: A systematic review & meta-analysis.	2021	only cohort study	Gestational diabetes mellitus	T2DM	Women with a gestational diabetes vs those without gestational diabetes	RR=8.92 (7.84–10.14)	↑↑↑	Europe, Western Pacific, South-East Asia, North America, Middle East
6	Gadve, SS., et al	Risk of Developing Type 2 Diabetes Mellitus in South Asian Women with History of Gestational Diabetes Mellitus: A Systematic Review and Meta-	2021	only cohort study	Gestational diabetes mellitus	T2DM	Women with a gestational diabetes vs those without gestational diabetes mellitus	RR=10.81 (7.61–13.35)	↑↑↑	India, Canada, Sri Lanka, USA, Pakistan
7	Dennison, RA., et al	The absolute and relative risk of type 2 diabetes after gestational diabetes: A systematic review and meta-analysis of 129 studies.	2021	only cohort study	Gestational diabetes mellitus	T2DM	Women with a gestational diabetes mellitus vs those without gestational diabetes	RR=8.3 (6.5–10.6)	↑↑↑	Australia, China, Japan, Canada, USA, Mexico
8	Tranidou, A., et al	Risk of developing metabolic syndrome after gestational diabetes mellitus - a systematic review and meta-analysis.	2021	only cohort study	Gestational diabetes mellitus	T2DM	Women with a history of gestational diabetes mellitus vs those without the history	OR=3.45 (2.80–4.25)	↑↑↑	USA, Italy, Denmark, Spain, Sri Lanka, England, China, Poland, India, Hungary, Canada, Turkey, Iran, Finland,
9	Juan, J., et al	Progression to type 2 diabetes mellitus after gestational diabetes mellitus diagnosed by IADPSG criteria: Systematic review and meta-analysis	2022	only cohort study	Gestational diabetes mellitus	T2DM	Gestational diabetes mellitus vs. healthy controls	RR=6.43 (3.34–11.96)	↑↑↑	Canada, Australia, UAE, Pakistan, Japan
10	Wambua, S., et al	Association between pregnancy-related complications and development of type 2 diabetes and hypertension in women: an umbrella review.	2025	only cohort study	Gestational diabetes mellitus	T2DM	Gestational diabetes mellitus vs. healthy controls	RR=9.51 (7.14–12.67)	↑↑↑	Australia, Canada, Finland, France, Hungary, India, Iran, Israel, Italy, Korea, Pakistan, Spain, Sri Lanka, Sweden, UK, USA

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No	Author	Title	Year	Design	Study period	Number of subjects for analysis	Source of subjects	Event followed	Definitions	Number of incident cases	Participant's race	Category	Number among cases	Relative risk (95%CI)	P for trend	Magnitude of association	Confounding variable considered
11	Kugishima, Y., et al.	Risk factors associated with the development of postpartum diabetes in Japanese women with gestational diabetes.	2018	Retrospective	2003-2014	306	National Hospital Organization Nagasaki Medical Center	6-292 weeks	<u>Postpartum diabetes</u> (FPG $\geq$ 126 mg/dL or/and OGTT 2h PG $\geq$ 200 mg/dL)	32 (10.5%)	Japanese	Continuous 75g OGTT 2-h PG (mg/dL) HbA1c (%) Categorical 75g OGTT 2-h PG $\geq$ 183 mg/dL HbA1c $\geq$ 5.6%	NA	OR=1.02 (1.00-1.04) OR=5.04 (1.27-22.0) OR=7.02 (2.51-20.72) OR=4.67 (1.53-16.73)	0.03 0.021 0.0002 0.0061	$\uparrow\uparrow$ $\uparrow\uparrow\uparrow$ $\uparrow\uparrow\uparrow$ $\uparrow\uparrow\uparrow$	maternal age, parity, family history of diabetes, GA at OGTT, fasting and 1-h PG, weight gain during pregnancy, and follow-up period