

評価対象論文リスト(要因:多量飲酒[過剰飲酒]、アウトカム:循環器病)

評価判定日:2024/11/25

①既存の系統的レビュー・メタ解析・統合解析

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| 1 | Zheng YL, Lian F, Shi Q, et al. Alcohol intake and associated risk of major cardiovascular outcomes in women compared with men: a systematic review and meta-analysis of prospective observational studies. BMC Public Health. 2015;15:773. Published 2015 Aug 12. doi:10.1186/s12889-015-2081-y |
| 2 | Ronksley PE, Brien SE, Turner BJ, Mukamal KJ, Ghali WA. Association of alcohol consumption with selected cardiovascular disease outcomes: a systematic review and meta-analysis. BMJ. 2011;342:d671. Published 2011 Feb 22. doi:10.1136/bmj.d671 |
| 3 | Inoue M, Nagata C, Tsuji I, et al. Impact of alcohol intake on total mortality and mortality from major causes in Japan: a pooled analysis of six large-scale cohort studies. J Epidemiol Community Health. 2012;66(5):448-456. doi:10.1136/jech.2010.121830 |

②日本人集団の個別疫学研究

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| 4 | Saito E, Inoue M, Sawada N, et al. Impact of Alcohol Intake and Drinking Patterns on Mortality From All Causes and Major Causes of Death in a Japanese Population. J Epidemiol. 2018;28(3):140-148. doi:10.2188/jea.JE20160200 |
| 5 | Ikehara S, Iso H, Toyoshima H, et al. Alcohol consumption and mortality from stroke and coronary heart disease among Japanese men and women: the Japan collaborative cohort study. Stroke. 2008;39(11):2936-2942. doi:10.1161/STROKEAHA.108.520288 |
| 6 | Iso H, Kitamura A, Shimamoto T, et al. Alcohol intake and the risk of cardiovascular disease in middle-aged Japanese men. Stroke. 1995;26(5):767-773. doi:10.1161/01.str.26.5.767 |
| 7 | Ikehara S, Iso H, Yamagishi K, et al. Alcohol consumption and risk of stroke and coronary heart disease among Japanese women: the Japan Public Health Center-based prospective study. Prev Med. 2013;57(5):505-510. doi:10.1016/j.ypmed.2013.07.003 |
| 8 | Shirakawa T, Yamagishi K, Yatsuya H, et al. Alcohol consumption and mortality from aortic disease among Japanese men: The Japan Collaborative Cohort study. Atherosclerosis. 2017;266:64-68. doi:10.1016/j.atherosclerosis.2017.08.025 |
| 9 | Higashiyama A, Okamura T, Watanabe M, et al. Alcohol consumption and cardiovascular disease incidence in men with and without hypertension: the Suita study [published correction appears in Hypertens Res. 2013 Jan;36(1):89]. Hypertens Res. 2013;36(1):58-64. doi:10.1038/hr.2012.133 |
| 10 | Nakamura Y, Ueshima H, Kadota A, et al. Alcohol intake and 19-year mortality in diabetic men: NIPPON DATA80. Alcohol. 2009;43(8):635-641. doi:10.1016/j.alcohol.2009.06.005 |
| 11 | Ikehara S, Iso H, Yamagishi K, et al. Alcohol consumption, social support, and risk of stroke and coronary heart disease among Japanese men: the JPHC Study. Alcohol Clin Exp Res. 2009;33(6):1025-1032. doi:10.1111/j.1530-0277.2009.00923.x |

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|----------------------|---|---------------------|-------------------------------|----------------------------------|-----------------------------|-----------------------------------|---------------------|--|---|--|--|--|--|--|--|
| Ronksley PE et al | Association of alcohol consumption with selected cardiovascular disease outcomes: a systematic review and meta-analysis | 2011 | No of studies: 21 | Cardiovascular disease mortality | Prospective cohort study | Active drinkers v non-drinkers | 0.75 (0.70 to 0.80) | | ↓ | | | | | | |
| | | | No of studies: 29 | Coronary heart disease incident | | | 0.71 (0.66 to 0.77) | | ↓ | | | | | | |
| | | | No of studies: 31 | Coronary heart disease mortality | | | 0.75 (0.68 to 0.81) | | ↓ | | | | | | |
| | | | No of studies: 17 | Stroke incident | | | 0.98 (0.91 to 1.06) | | - | | | | | | |
| | | | No of studies: 10 | Stroke mortality | | | 1.06 (0.91 to 1.23) | | - | | | | | | |
| | | | No of studies: 9 | Cardiovascular disease mortality | | | 0.82 (0.78 to 0.86) | | ↓ | | | | | | |
| | | | No of studies: 9 | Coronary heart disease incident | | | 0.73 (0.61 to 0.88) | | ↓ | | | | | | |
| | | | No of studies: 7 | Coronary heart disease mortality | | | 0.75 (0.66 to 0.85) | | ↓ | | | | | | |
| | | | No of studies: 7 | Stroke incident | | | 0.93 (0.85 to 1.02) | | - | | | | | | |
| | | | No of studies: 3 | Stroke mortality | | | 1.29 (1.09 to 1.53) | | ↑ | | | | | | |
| | | | No of studies: 6 | Cardiovascular disease mortality | | | 1.48 (1.23 to 1.79) | | ↑ | | | | | | |
| | | | No of studies: 8 | Coronary heart disease incident | | | 1.10 (0.91 to 1.33) | | - | | | | | | |
| | | | No of studies: 6 | Coronary heart disease mortality | | | 1.31 (1.02 to 1.68) | | ↑ | | | | | | |
| | | | No of studies: 4 | Stroke incident | | | 0.87 (0.72 to 1.07) | | - | | | | | | |
| | | | No of studies: 2 | Stroke mortality | | | Not reported | | | | | | | | |
| | | | Alcohol intake (g/day) v none | | | | | | | | | | | | |
| | | | No of studies: 7 | Cardiovascular disease mortality | | | 0.71 (0.57 to 0.89) | | ↓ | | | | | | |
| | | | No of studies: 6 | Coronary heart disease incident | | | 0.96 (0.86 to 1.06) | | - | | | | | | |
| | | | No of studies: 6 | Coronary heart disease mortality | | | 0.92 (0.80 to 1.06) | | - | | | | | | |
| | | | No of studies: 3 | Stroke incident | | | 0.81 (0.74 to 0.89) | | ↓ | | | | | | |
| | | | No of studies: 3 | Stroke mortality | | | 1.00 (0.75 to 1.34) | | - | | | | | | |
| | | | No of studies: 15 | Cardiovascular disease mortality | | | 0.77 (0.71 to 0.83) | | ↓ | | | | | | |
| | | | No of studies: 9 | Coronary heart disease incident | | | 0.75 (0.65 to 0.88) | | ↓ | | | | | | |
| | | | No of studies: 18 | Coronary heart disease mortality | | | 0.79 (0.73 to 0.86) | | ↓ | | | | | | |
| No of studies: 3 | Stroke incident | 0.80 (0.74 to 0.87) | ↓ | | | | | | | | | | | | |
| No of studies: 6 | Stroke mortality | 0.86 (0.75 to 0.99) | ↓ | | | | | | | | | | | | |
| No of studies: 13 | Cardiovascular disease mortality | 0.75 (0.70 to 0.80) | ↓ | | | | | | | | | | | | |
| No of studies: 15 | Coronary heart disease incident | 0.66 (0.59 to 0.75) | ↓ ↓ | | | | | | | | | | | | |
| No of studies: 15 | Coronary heart disease mortality | 0.79 (0.71 to 0.88) | ↓ | | | | | | | | | | | | |
| No of studies: 5 | Stroke incident | 0.92 (0.82 to 1.04) | - | | | | | | | | | | | | |
| No of studies: 6 | Stroke mortality | 1.15 (0.86 to 1.54) | - | | | | | | | | | | | | |
| No of studies: 10 | Cardiovascular disease mortality | 0.85 (0.73 to 0.98) | ↓ | | | | | | | | | | | | |
| No of studies: 9 | Coronary heart disease incident | 0.67 (0.56 to 0.79) | ↓ | | | | | | | | | | | | |
| No of studies: 12 | Coronary heart disease mortality | 0.77 (0.72 to 0.83) | ↓ | | | | | | | | | | | | |
| No of studies: 4 | Stroke incident | 1.15 (0.98 to 1.35) | - | | | | | | | | | | | | |
| No of studies: 5 | Stroke mortality | 1.10 (0.85 to 1.45) | - | | | | | | | | | | | | |
| No of studies: 6 | Cardiovascular disease mortality | 0.99 (0.84 to 1.17) | - | | | | | | | | | | | | |
| No of studies: 9 | Coronary heart disease incident | 0.76 (0.52 to 1.09) | - | | | | | | | | | | | | |
| No of studies: 9 | Coronary heart disease mortality | 0.75 (0.63 to 0.89) | - | | | | | | | | | | | | |
| No of studies: 4 | Stroke incident | 1.62 (1.32 to 1.98) | ↑ ↑ | | | | | | | | | | | | |
| No of studies: 3 | Stroke mortality | 1.44 (0.99 to 2.10) | - | | | | | | | | | | | | |

| Saito E et al | Impact of Alcohol Intake and Drinking Patterns on Mortality From All Causes and Major Causes of Death in a Japanese Population | 2018 | BL: 1990-1994, end of follow-up: 2011 | 102,849 | Japan Public Health Center-based Prospective Study | Japanese | Men | | | [linear trend in drinkers] | | |
|---------------|--|------|---------------------------------------|---------|--|----------|----------------------------------|-----|------------------|-----------------------------|--|--|
| | | | | | | | | | | | | |
| | | | | | | | Cumulative Average Intake | | | | | |
| | | | | | Mortality from heart disease | 1,203 | Non-drinkers | 224 | 1.00 (Reference) | | | |
| | | | | | | | Occasional drinkers (<once/week) | 131 | 0.73 (0.59-0.91) | | | |
| | | | | | | | 0-149 g/week | 247 | 0.67 (0.56-0.80) | | | |
| | | | | | | | 150-299 g/week | 267 | 0.59 (0.49-0.71) | <0.112 | | age, public health center area, smoking status, BMI, history of |
| | | | | | | | 300-449 g/week | 193 | 0.71 (0.57-0.87) | | | hypertension, |
| | | | | | | | 340-599 g/week | 80 | 0.72 (0.55-0.95) | | | flushing response, history of |
| | | | | | | | ≥500 g/week | 61 | 0.93 (0.69-1.24) | | | diabetes, leisure-time sports or physical exercise, intake of coffee and green tea, energy intake, intakes of fruits, vegetables, fish, meat, dairy products, and job status |
| | | | | | Mortality from Cerebrovascular disease | 905 | Non-drinkers | 151 | 1.00 (Reference) | | | |
| | | | | | | | Occasional drinkers (<once/week) | 78 | 0.61 (0.46-0.82) | | | |
| | | | | | | | 0-149 g/week | 181 | 0.74 (0.60-0.92) | | | |
| | | | | | | | 150-299 g/week | 255 | 0.78 (0.63-0.96) | <0.001 | | |
| | | | | | | | 300-449 g/week | 146 | 0.83 (0.65-1.06) | | | |
| | | | | | | | 340-599 g/week | 59 | 0.90 (0.65-1.23) | | | |
| | | | | | | | ≥500 g/week | 65 | 1.35 (0.98-1.87) | | | |
| | | | | | Mortality from heart disease | 696 | Cumulative Average Intake | | | | | |
| | | | | | | | Non-drinkers | 525 | 1.00 (Reference) | | | |
| | | | | | | | Occasional drinkers (<once/week) | 94 | 0.58 (0.44-0.76) | | | |
| | | | | | | | 0-149 g/week | 62 | 0.68 (0.51-0.92) | | | |
| | | | | | | | 150-299 g/week | 8 | 0.71 (0.35-1.44) | 0.004 | | |
| | | | | | | | 300-449 g/week | 3 | 0.84 (0.27-2.67) | | | |
| | | | | | | | ≥450 g/week | 4 | 2.05 (0.74-5.62) | | | ↑ ↑ |
| | | | | | Mortality from Cerebrovascular disease | 588 | Non-drinkers | 441 | 1.00 (Reference) | | | |
| | | | | | | | Occasional drinkers (<once/week) | 75 | 0.49 (0.36-0.66) | | | |
| | | | | | | | 0-149 g/week | 45 | 0.56 (0.40-0.78) | | | |
| | | | | | | | 150-299 g/week | 17 | 1.34 (0.79-2.27) | 0.016 | | |
| | | | | | | | 300-449 g/week | 4 | 0.81 (0.25-2.58) | | | |
| | | | | | | | ≥450 g/week | 6 | 2.70 (1.15-6.30) | | | ↑ ↑ ↑ |

| Ikehara S et al | Alcohol consumption and mortality from stroke and coronary heart disease among Japanese men and women: the Japan collaborative cohort study | 2008 | 1988-2003 | men; 34,776 women; 48,906 | Japan Collaborative Cohort Study | Japanese | Men | | | | | |
|-----------------|---|------|-----------|---------------------------|----------------------------------|----------|-------------------------------------|-----|------------------|--|---------------------------|-------|
| | | | | | | | Alcohol Consumption Category | | | | | |
| | | | | | | | Nondrinkers | 200 | 1.00 (Reference) | | | |
| | | | | | | | Ex-drinkers | 126 | 1.90 (1.52–2.39) | | | |
| | | | | | | | Ethanol intake, g/day | | | | | |
| | | | | | | | 0.1-22.9 | 114 | 0.95 (0.75–1.20) | | | |
| | | | | | | | 23.0-45.9 | 168 | 0.96 (0.78–1.19) | | | |
| | | | | | | | 46.0-68.9 | 173 | 1.39 (1.12–1.73) | | | |
| | | | | | | | 69.0 | 83 | 1.71 (1.31–2.24) | | | ↑ ↑ |
| | | | | | | | Alcohol Consumption Category | | | | | |
| | | | | | | | Nondrinkers | 55 | 1.00 (Reference) | | | |
| | | | | | | | Ex-drinkers | 31 | 1.79 (1.15–2.80) | | | |
| | | | | | | | Ethanol intake, g/day | | | | | |
| | | | | | | | 0.1-22.9 | 41 | 1.16 (0.76–1.76) | | | |
| | | | | | | | 23.0-45.9 | 52 | 1.02 (0.69–1.51) | | | |
| | | | | | | | 46.0-68.9 | 60 | 1.47 (1.00–2.16) | | | |
| | | | | | | | 69.0 | 37 | 2.16 (1.39–3.35) | | | ↑ ↑ ↑ |
| | | | | | | | Alcohol Consumption Category | | | | | |
| | | | | | | | Nondrinkers | 41 | 1.00 (Reference) | | | |
| | | | | | | | Ex-drinkers | 26 | 2.00 (1.22–3.30) | | | |
| | | | | | | | Ethanol intake, g/day | | | | | |
| | | | | | | | 0.1-22.9 | 30 | 1.16 (0.71–1.88) | | | |
| | | | | | | | 23.0-45.9 | 39 | 1.05 (0.67–1.64) | | | |
| | | | | | | | 46.0-68.9 | 44 | 1.52 (0.97–2.38) | | | |
| | | | | | | | 69.0 | 22 | 1.87 (1.09–3.22) | | | ↑ ↑ |
| | | | | | | | Alcohol Consumption Category | | | | | |
| | | | | | | | Nondrinkers | 14 | 1.00 (Reference) | | | |
| | | | | | | | Ex-drinkers | 5 | 1.16 (0.41–3.26) | | | |
| | | | | | | | Ethanol intake, g/day | | | | | |
| | | | | | | | 0.1-22.9 | 11 | 1.16 (0.51–2.63) | | | |
| | | | | | | | 23.0-45.9 | 13 | 0.96 (0.44–2.12) | | | |
| | | | | | | | 46.0-68.9 | 16 | 1.38 (0.65–2.96) | | | |
| | | | | | | | 69.0 | 15 | 2.81 (1.29–6.12) | | | ↑ ↑ ↑ |
| | | | | | | | Alcohol Consumption Category | | | | | |
| | | | | | | | Nondrinkers | 126 | 1.00 (Reference) | | | |
| | | | | | | | Ex-drinkers | 88 | 2.11 (1.59–2.78) | | | |
| | | | | | | | Ethanol intake, g/day | | | | | |
| | | | | | | | 0.1-22.9 | 60 | 0.81 (0.59–1.11) | | | |
| | | | | | | | 23.0-45.9 | 101 | 0.94 (0.72–1.24) | | | |
| | | | | | | | 46.0-68.9 | 95 | 1.34 (1.01–1.77) | | | |
| | | | | | | | 69.0 | 37 | 1.39 (0.95–2.04) | | | ↑ |
| | | | | | | | Alcohol Consumption Category | | | | | |
| | | | | | | | Nondrinkers | 116 | 1.00 (Reference) | | | |
| | | | | | | | Ex-drinkers | 56 | 1.35 (0.97–1.86) | | | |
| | | | | | | | Ethanol intake, g/day | | | | | |
| | | | | | | | 0.1-22.9 | 71 | 0.96 (0.71–1.30) | | | |
| | | | | | | | 23.0-45.9 | 90 | 0.82 (0.62–1.09) | | | |
| | | | | | | | 46.0-68.9 | 65 | 0.76 (0.55–1.04) | | | |
| | | | | | | | 69.0 | 33 | 0.95 (0.64–1.41) | | | |
| | | | | | | | | | | | age, smoking status, body | |

| | | | | | | | | |
|---------------------------------------|-------|-------------------------------------|-----|-----|------------------|---|------------------|------------------|
| Ischemic cardiovascular disease death | 938 | Alcohol Consumption Category | | 242 | 1.00 (Reference) | mass index, history of hypertension, history of diabetes, frequency of exercise, perceived mental stress, education level, intake of vegetables, fish and fruit | | |
| | | Nondrinkers | 144 | | | | 1.71 (1.39–2.12) | |
| | | Ex-drinkers | 131 | | | | 0.89 (0.72–1.11) | |
| | | Ethanol intake, g/day | 191 | | | | 0.88 (0.73–1.08) | |
| | | 0.1–22.9 | 160 | | | | 1.03 (0.84–1.27) | |
| | | 23.0–45.9 | 70 | | | | 1.16 (0.88–1.53) | |
| Cardiovascular disease death | 1,921 | Alcohol Consumption Category | | 487 | 1.00 (Reference) | ↑ | | |
| | | Nondrinkers | 282 | | | | 1.66 (1.43–1.93) | |
| | | Ex-drinkers | 269 | | | | 0.90 (0.77–1.05) | |
| | | Ethanol intake, g/day | 379 | | | | 0.87 (0.76–1.00) | |
| | | 0.1–22.9 | 342 | | | | 1.07 (0.92–1.23) | |
| | | 23.0–45.9 | 162 | | | | 1.28 (1.07–1.55) | |
| Total stroke death | 764 | Women | | 684 | 1.00 (Reference) | ↑ | | |
| | | Alcohol Consumption Category | | | | | 14 | 0.87 (0.51–1.48) |
| | | Ex-Drinkers | 53 | | | | 0.87 (0.65–1.15) | |
| | | Ethanol Intake (g/day) | 7 | | | | 0.59 (0.28–1.24) | |
| | | 0.1–22.9 | 6 | | | | 1.92 (0.85–4.35) | |
| | | 23.0–45.9 | | | | | | |
| Hemorrhagic stroke death | 308 | Alcohol Consumption Category | | 272 | 1.00 (Reference) | ↑ | | |
| | | Nondrinkers | 6 | | | | 0.95 (0.42–2.17) | |
| | | Ex-Drinkers | 24 | | | | 0.84 (0.55–1.29) | |
| | | Ethanol Intake (g/day) | 3 | | | | 0.52 (0.17–1.64) | |
| | | 0.1–22.9 | 3 | | | | 1.61 (0.50–5.19) | |
| | | 23.0–45.9 | | | | | | |
| Ischemic stroke death | 388 | Alcohol Consumption Category | | 353 | 1.00 (Reference) | ↑ ↑ | | |
| | | Nondrinkers | 8 | | | | 0.87 (0.42–1.78) | |
| | | Ex-Drinkers | 22 | | | | 0.78 (0.51–1.21) | |
| | | Ethanol Intake (g/day) | 2 | | | | 0.36 (0.09–1.44) | |
| | | 0.1–22.9 | 3 | | | | 2.43 (0.77–7.69) | |
| | | 23.0–45.9 | | | | | | |
| Coronary heart disease death | 305 | Alcohol Consumption Category | | 267 | 1.00 (Reference) | ↑ ↑ ↑ | | |
| | | Nondrinkers | 6 | | | | 0.85 (0.38–1.94) | |
| | | Ex-Drinkers | 20 | | | | 0.83 (0.53–1.33) | |
| | | Ethanol Intake (g/day) | 7 | | | | 1.45 (0.68–3.11) | |
| | | 0.1–22.9 | 5 | | | | 4.10 (1.63–10.3) | |
| | | 23.0–45.9 | | | | | | |
| Ischemic cardiovascular disease death | 693 | Alcohol Consumption Category | | 620 | 1.00 (Reference) | ↑ ↑ ↑ | | |
| | | Nondrinkers | 14 | | | | 0.86 (0.50–1.48) | |
| | | Ex-Drinkers | 42 | | | | 0.81 (0.59–1.11) | |
| | | Ethanol Intake (g/day) | 9 | | | | 0.87 (0.45–1.68) | |
| | | 0.1–22.9 | 8 | | | | 3.29 (1.61–6.73) | |
| | | 23.0–45.9 | | | | | | |
| | | 46.0 | | | | | | |

| | | | | | | Alcohol Consumption Category | | | | | |
|-----------------|--|------|-----------|--------------|--|------------------------------|------------------------|-------------------------------------|-------|------------------|-------|
| | | | | | | Cardiovascular disease death | 1,657 | Nondrinkers | 1,494 | 1.00 (Reference) | |
| | | | | | | | | Ex-Drinkers | 30 | 0.82 (0.57–1.18) | |
| | | | | | | | | Ethanol Intake (g/day) | | | |
| | | | | | | | | 0.1–22.9 | 99 | 0.74 (0.60–0.91) | |
| | | | | | | | | 23.0–45.9 | 22 | 0.81 (0.53–1.24) | |
| | | | | | | | | ≥46.0 | 12 | 1.73 (0.97–3.08) | ↑ |
| Iso H et al | Alcohol intake and the risk of cardiovascular disease in middle-aged Japanese men | 1995 | 1975-1992 | 2890 men | two northeast rural Japanese communities | Japanese | Drinking status | | | | |
| | | | | | | All stroke | 178 | Ex-drinkers | | 1.2 (0.6-2.4) | |
| | | | | | | | | Average ethanol intake, g/d | | | |
| | | | | | | | | 1-20 | | 0.7 (0.4-1.4) | |
| | | | | | | | | 21-42 | | 0.8 (0.5-1.4) | |
| | | | | | | | | 42-69 | | 1.1 (0.7-1.8) | |
| | | | | | | | | ≥70 | | 1.9 (1.2-3.1) | ↑ ↑ |
| | | | | | | Hemorrhagic stroke | 58 | Drinking status | | | |
| | | | | | | | | Ex-drinkers | | 1.7 (0.4-7.2) | |
| | | | | | | | | Average ethanol intake, g/d | | | |
| | | | | | | | | 1-20 | | 1.3 (0.4-4.6) | |
| | | | | | | | | 21-42 | | 1.4 (0.5-4.1) | |
| | | | | | | | | 42-69 | | 1.2 (0.4-3.4) | |
| | | | | | | | | ≥70 | | 3.4 (1.2-9.2) | ↑ ↑ ↑ |
| | | | | | | Nonhemorrhagic stroke | 104 | Drinking status | | | |
| | | | | | | | | Ex-drinkers | | 0.7 (0.3–1.9) | |
| | | | | | | | | Average ethanol intake, g/d | | | |
| | | | | | | | | 1-20 | | 0.6 (0.3–1.5) | |
| | | | | | | | | 21-42 | | 0.8 (0.4–1.5) | |
| | | | | | | | | 42-69 | | 1.3 (0.7–2.3) | |
| | | | | | | | | ≥70 | | 1.7 (0.9–3.1) | ↑ |
| | | | | | | Coronary heart disease | 34 | Drinking status | | | |
| | | | | | | | | Ex-drinkers | | 1.2 (0.3–4.6) | |
| | | | | | | | | Average ethanol intake, g/d | | | |
| | | | | | | | | 1-20 | | 0.9 (0.3–3.1) | |
| | | | | | | | | 21-42 | | 0.7 (0.2–2.1) | |
| | | | | | | | | 42-69 | | 0.9 (0.4–2.5) | |
| | | | | | | | | ≥70 | | 0.8 (0.2–2.8) | - |
| | | | | | | Total cardiovascular disease | 225 | Drinking status | | | |
| | | | | | | | | Ex-drinkers | | 1.3 (0.7–2.4) | |
| | | | | | | | | Average ethanol intake, g/d | | | |
| | | | | | | | | 1-20 | | 0.8 (0.5–1.5) | |
| | | | | | | | | 21-42 | | 0.9 (0.6–1.5) | |
| | | | | | | | | 42-69 | | 1.2 (0.8–1.8) | |
| | | | | | | | | ≥70 | | 2.0 (1.3–3.1) | ↑ ↑ ↑ |
| Ikehara S et al | Alcohol consumption and risk of stroke and coronary heart disease among Japanese women: the Japan Public Health Center-based prospective study | 2013 | 1990-1997 | women; 47100 | Japan Public Health Center-based prospective study | Japanese | Drinking status | | | | |
| | | | | | | Total stroke | 1846 | Nondrinkers | 1535 | 1.18 (0.98–1.43) | |
| | | | | | | | | Occasional drinkers | 121 | 1.00 (Reference) | |
| | | | | | | | | Alcohol consumption, g ethanol/week | | | |
| | | | | | | | | 1-74 | 82 | 1.24 (0.94–1.43) | 0.04 |
| | | | | | | | | 75-149 | 53 | 1.69 (1.22–2.33) | |
| | | | | | | | | 150-299 | 26 | 1.32 (0.86–2.03) | |
| | | | | | | | | 300 | 29 | 2.19 (1.45–3.30) | ↑ ↑ ↑ |

| | | | | | | | |
|--|--|--|-------------------------------------|-----|------------------|-------|-------|
| | | | Drinking status | | | | |
| | | | Nondrinkers | 709 | 1.25 (0.95–1.63) | | |
| | | | Occasional drinkers | 60 | 1.00 (Reference) | | |
| | | | Alcohol consumption, g ethanol/week | | | | |
| | | | 1-74 | 47 | 1.45 (0.99–2.13) | 0.67 | |
| | | | 75-149 | 25 | 1.64 (1.03–2.62) | | |
| | | | 150-299 | 12 | 1.19 (0.64–2.22) | | |
| | | | 300 | 17 | 2.25 (1.29–3.91) | | ↑ ↑ ↑ |
| | | | Drinking status | | | | |
| | | | Nondrinkers | 446 | 1.29 (0.90–1.84) | | |
| | | | Occasional drinkers | 34 | 1.00 (Reference) | | |
| | | | Alcohol consumption, g ethanol/week | | | | |
| | | | 1-74 | 21 | 1.18 (0.69–2.04) | 0.4 | |
| | | | 75-149 | 14 | 1.73 (0.92–3.23) | | |
| | | | 150-299 | 8 | 1.54 (0.71–3.36) | | |
| | | | 300 | 9 | 2.24 (1.05–4.76) | | ↑ ↑ ↑ |
| | | | Drinking status | | | | |
| | | | Nondrinkers | 263 | 1.19 (0.79–1.80) | | |
| | | | Occasional drinkers | 26 | 1.00 (Reference) | | |
| | | | Alcohol consumption, g ethanol/week | | | | |
| | | | 1-74 | 26 | 1.77 (1.03–3.05) | 0.84 | |
| | | | 75-149 | 11 | 1.52 (0.75–3.09) | | |
| | | | 150-299 | 4 | 0.80 (0.28–2.31) | | |
| | | | 300 | 8 | 2.26 (1.01–5.09) | | ↑ ↑ ↑ |
| | | | Drinking status | | | | |
| | | | Nondrinkers | 815 | 1.13 (0.86–1.47) | | |
| | | | Occasional drinkers | 60 | 1.00 (Reference) | | |
| | | | Alcohol consumption, g ethanol/week | | | | |
| | | | 1-74 | 35 | 1.06 (0.70–1.62) | <0.01 | |
| | | | 75-149 | 28 | 1.76 (1.12–2.76) | | |
| | | | 150-299 | 14 | 1.50 (0.84–2.70) | | |
| | | | 300 | 12 | 2.04 (1.09–3.82) | | ↑ ↑ ↑ |
| | | | Drinking status | | | | |
| | | | Nondrinkers | 258 | 1.24 (0.75–2.05) | | |
| | | | Occasional drinkers | 17 | 1.00 (Reference) | | |
| | | | Alcohol consumption, g ethanol/week | | | | |
| | | | 1-74 | 9 | 0.94 (0.42–2.12) | 0.92 | |
| | | | 75-149 | | | | |
| | | | 150-299 | 8 | 0.84 (0.36–1.97) | | |
| | | | 300 | | | | ↑ ↑ ↑ |

Hemorrhagic stroke 870

Intraparenchymal hemorrhage 532

Subarachnoid hemorrhage 338

Ischemic stroke 964

CHD 292

age, smoking status, body mass index, history of diabetes, sports at leisure time, flushing after drinking alcohol, mental stress, menopausal status, area, history of hypertension

| Author | Study Title | Year | Period | Participants | Country | Study Design | Outcome | n | Alcohol Consumption Categories | HR | 95% CI | Other | Notes | | |
|---------------------------|---|---|-----------|-------------------|---------|--|-------------------------|------------------|---|----|-------------------|-------|---|----|------------------|
| Shirakawa T | Alcohol consumption and mortality from aortic disease among Japanese men: The Japan Collaborative Cohort study. Atherosclerosis | 2017 | 1988-2009 | men; 34,720 | Japan | Collaborative Cohort study | Total aortic disease | 117 | Alcohol consumption categories | | | 0.36 | age, body mass index, history of hypertension, history of diabetes mellitus, smoking status | ↓ | |
| | | | | | | | | | Never-drinkers | 39 | 1.00 (Reference) | | | | |
| | | | | | | | | | Ex-drinkers | 15 | 1.22 (0.66-2.23) | | | | |
| | | | | | | | | | Ethanol intake, g per day | | | | | | |
| | | | | | | | | | ≤30 | 26 | 0.46 (0.28-0.76) | | | | |
| | | | | | | | | | >30 | 37 | 0.65 (0.41-1.04) | | | | |
| | | | | | | | Aortic disease | 45 | Alcohol consumption categories | | | 0.84 | | | |
| | | | | | | | | | Never-drinkers | 14 | 1.00 (Reference) | | | | |
| | | | | | | | | | Ex-drinkers | 8 | 1.62 (0.67-3.91) | | | | |
| | | | | | | | | | Ethanol intake, g per day | | | | | | |
| | | | | | | | | | ≤30 | 4 | 0.16a (0.05-0.50) | | | | |
| | | | | | | | | | >30 | 19 | 0.70 (0.34-1.44) | | | | |
| Abdominal aortic aneurysm | 41 | Alcohol consumption categories | | | 0.1 | | | | | | | | | | |
| | | Never-drinkers | 17 | 1.00 (Reference) | | | | | | | | | | | |
| | | Ex-drinkers | 2 | 0.45 (0.10-1.96) | | | | | | | | | | | |
| | | Ethanol intake, g per day | | | | | | | | | | | | | |
| | | ≤30 | 14 | 0.63 (0.31, 1.30) | | | | | | | | | | | |
| | | >30 | 8 | 0.42 (0.18, 1.00) | | | | | | | | | | | |
| Higashiyama A et al | Alcohol consumption and cardiovascular disease incidence in men with and without hypertension: the Suita study | 2013 | 1989-2007 | men; 2336 | Japan | Suita study | Cardiovascular disease | 222 | Hypertension (-) | | | - | | | |
| | | | | | | | | | Never-drinkers | | | | | 34 | 1.00 (Reference) |
| | | | | | | | | | Current drinkers | | | | | | |
| | | | | | | | | | Light (≤2.0 drinkers per day) | 42 | 0.80 (0.51-1.26) | | | | |
| | | | | | | | | | Moderate (>2.0 and ≤4.0 drinkers per day) | 17 | 0.74 (0.41-1.33) | | | | |
| | | | | | | | | | Heavy (>4.0 drinkers per day) | 9 | 0.79 (0.37-1.66) | | | | |
| | | | | | | | | | Hypertension (-) | | | | | | |
| | | | | | | | | | Never-drinkers | | | | | 35 | 2.14 (1.32-3.47) |
| | | | | | | | | | Current drinkers | | | | | | |
| | | | | | | | | | Light (≤2.0 drinkers per day) | 46 | 1.62 (1.03-2.54) | | | | |
| | | | | | | | | | Moderate (>2.0 and ≤4.0 drinkers per day) | 23 | 1.23 (0.72-2.10) | | | | |
| | | | | | | | | | Heavy (>4.0 drinkers per day) | 16 | 1.68 (0.92-3.09) | | | | |
| | | | | | | | Coronary artery disease | 109 | Hypertension (-) | | | - | | | |
| | | | | | | | | | Never-drinkers | | | | | 19 | 1.00 (Reference) |
| | | | | | | | | | Current drinkers | | | | | | |
| | | | | | | | | | Light (≤2.0 drinkers per day) | 17 | 0.58 (0.30-1.11) | | | | |
| | | | | | | | | | Moderate (>2.0 and ≤4.0 drinkers per day) | 8 | 0.63 (0.27-1.44) | | | | |
| | | | | | | | | | Heavy (>4.0 drinkers per day) | 6 | 0.91 (0.36-2.32) | | | | |
| | | | | | | | | | Hypertension (-) | | | | | | |
| | | | | | | | | | Never-drinkers | | | | | 24 | 2.72 (1.46-5.08) |
| | | | | | | | | | Current drinkers | | | | | | |
| | | | | | | | | | Light (≤2.0 drinkers per day) | 20 | 1.28 (0.68-2.43) | | | | |
| | | | | | | | | | Moderate (>2.0 and ≤4.0 drinkers per day) | 9 | 0.88 (0.40-1.96) | | | | |
| | | | | | | | | | Heavy (>4.0 drinkers per day) | 6 | 1.18 (0.47-2.99) | | | | |
| All stroke | 113 | Hypertension (-) | | | - | Multivariate-adjusted HR was calculated after adjustment for age, body mass index, presence of dyslipidemia and diabetes, and smoking status (current or non-current). | | | | | | | | | |
| | | Never-drinkers | | | | | 15 | 1.00 (Reference) | | | | | | | |
| | | Current drinkers | | | | | | | | | | | | | |
| | | Light (≤2.0 drinkers per day) | 25 | 1.08 (0.57-2.06) | | | | | | | | | | | |
| | | Moderate (>2.0 and ≤4.0 drinkers per day) | 9 | 0.88 (0.38-2.02) | | | | | | | | | | | |
| | | Heavy (>4.0 drinkers per day) | 3 | 0.61 (0.18-2.15) | | | | | | | | | | | |
| | | Hypertension (-) | | | | | | | | | | | | | |
| | | Never-drinkers | | | | | 11 | 1.47 (0.66-3.24) | | | | | | | |
| | | Current drinkers | | | | | | | | | | | | | |
| | | Light (≤2.0 drinkers per day) | 26 | 2.03 (1.07-3.88) | | | | | | | | | | | |
| | | Moderate (>2.0 and ≤4.0 drinkers per day) | 14 | 1.67 (0.80-3.49) | | | | | | | | | | | |
| | | Heavy (>4.0 drinkers per day) | 10 | 2.28 (1.01-5.18) | | | | | | | | | | | |

| | | | | | |
|---|-----|---|-------|------------------|---|
| Ischemic stroke | 78 | Hypertension (-) | | | |
| | | Never-drinkers | 9 | 1.00 (Reference) | |
| | | Current drinkers | | | |
| | | Light (≤ 2.0 drinkers per day) | 18 | 1.33 (0.59–2.97) | |
| | | Moderate (> 2.0 and ≤ 4.0 drinkers per day) | 6 | 0.96 (0.34–2.75) | |
| | | Heavy (> 4.0 drinkers per day) | 2 | 0.63 (0.13–2.98) | ↓ |
| | | Hypertension (-) | | | |
| | | Never-drinkers | 8 | 1.66 (0.63–4.38) | |
| | | Current drinkers | | | |
| | | Light (≤ 2.0 drinkers per day) | 21 | 2.69 (1.21–5.95) | |
| Moderate (> 2.0 and ≤ 4.0 drinkers per day) | 7 | 1.33 (0.49–3.61) | | | |
| Heavy (> 4.0 drinkers per day) | 7 | 2.43 (0.88–6.68) | ↑ ↑ | | |
| Cardiovascular disease | 165 | Hypertension (-) | | | |
| | | Never-drinkers | 28 | 1.00 (Reference) | |
| | | Current drinkers | | | |
| | | Light (≤ 2.0 drinkers per day) | 38 | 0.88 (0.54–1.44) | |
| | | Moderate (> 2.0 and ≤ 4.0 drinkers per day) | 15 | 0.80 (0.42–1.51) | |
| | | Heavy (> 4.0 drinkers per day) | 8 | 0.86 (0.39–1.92) | - |
| | | Hypertension (-) | | | |
| | | Never-drinkers | 23 | 2.10 (1.19–3.71) | |
| | | Current drinkers | | | |
| | | Light (≤ 2.0 drinkers per day) | 28 | 1.62 (0.96–2.76) | |
| Moderate (> 2.0 and ≤ 4.0 drinkers per day) | 14 | 1.26 (0.66–2.42) | | | |
| Heavy (> 4.0 drinkers per day) | 11 | 2.05 (1.01–4.15) | ↑ ↑ ↑ | | |
| Coronary artery disease | 89 | Hypertension (-) | | | |
| | | Never-drinkers | 17 | 1.00 (Reference) | |
| | | Current drinkers | | | |
| | | Light (≤ 2.0 drinkers per day) | 16 | 0.63 (0.32–1.25) | |
| | | Moderate (> 2.0 and ≤ 4.0 drinkers per day) | 7 | 0.66 (0.27–1.61) | |
| | | Heavy (> 4.0 drinkers per day) | 5 | 0.89 (0.32–2.45) | |
| | | Hypertension (-) | | | |
| | | Never-drinkers | 15 | 2.33 (1.13–4.77) | |
| | | Current drinkers | | | |
| | | Light (≤ 2.0 drinkers per day) | 14 | 1.39 (0.68–2.85) | |
| Moderate (> 2.0 and ≤ 4.0 drinkers per day) | 8 | 0.89 (0.35–2.28) | | | |
| Heavy (> 4.0 drinkers per day) | 7 | 1.25 (0.42–3.74) | | | |
| All stroke | 81 | Hypertension (-) | | | |
| | | Never-drinkers | 11 | 1.00 (Reference) | |
| | | Current drinkers | | | |
| | | Light (≤ 2.0 drinkers per day) | 22 | 1.25 (0.60–2.58) | |
| | | Moderate (> 2.0 and ≤ 4.0 drinkers per day) | 8 | 1.02 (0.40–2.56) | |
| | | Heavy (> 4.0 drinkers per day) | 3 | 0.83 (0.23–3.02) | |
| | | Hypertension (-) | | | |
| | | Never-drinkers | 8 | 1.79 (0.70–4.56) | |
| | | Current drinkers | | | |
| | | Light (≤ 2.0 drinkers per day) | 14 | 1.98 (0.89–4.41) | |
| Moderate (> 2.0 and ≤ 4.0 drinkers per day) | 8 | 1.86 (0.74–4.70) | | | |
| Heavy (> 4.0 drinkers per day) | 7 | 3.25 (1.24–8.51) | ↑ ↑ ↑ | | |
| Ischemic stroke | 53 | Hypertension (-) | | | |
| | | Never-drinkers | 6 | 1.00 (Reference) | |
| | | Current drinkers | | | |
| | | Light (≤ 2.0 drinkers per day) | 15 | 1.57 (0.60–4.06) | |
| | | Moderate (> 2.0 and ≤ 4.0 drinkers per day) | 5 | 1.09 (0.33–3.64) | |
| Heavy (> 4.0 drinkers per day) | 2 | 0.88 (0.17–4.48) | - | | |
| | | Hypertension (-) | | | |

Men without medication for hypertension at baseline. Multivariate-adjusted HR was calculated after adjustment for age, body mass index, presence of dyslipidemia and diabetes, and smoking status (current or non-current).

| Author | Title | Year | Period | Population | Source | Ethnicity | Outcome | Cases | Alcohol intake | | Covariates | | |
|-----------------------|---|-------------------|-------------------|---|---------------|-----------|-----------|-------|--|------------------|-------------------|---|-------|
| | | | | | | | | | Never-drinkers | Current drinkers | | | |
| Nakamura Y et al | Alcohol intake and 19-year mortality in diabetic men: NIPPON DATA80 | 2009 | 1980-1999 | men: 4018, nondiabetic: 3614, with impaired glucose tolerance: 195, diabetic: 209 | NIPPON DATA80 | Japanese | CVD death | 264 | Never-drinkers | 5 | 1.93 (0.57-6.53) | - | |
| | | | | | | | | | Current drinkers | | | | |
| | | | | | | | | | Light (≤ 2.0 drinkers per day) | 10 | 2.59 (0.93-7.23) | | |
| | | | | | | | | | Moderate (>2.0 and ≤ 4.0 drinkers per day) | 5 | 2.02 (0.61-6.71) | | |
| | | | | | | | | | Heavy (>4.0 drinkers per day) | 5 | 3.78 (1.13-12.61) | | ↑ ↑ ↑ |
| | | | | | | | | | Alcohol intake | | | | |
| | | | | | | | | | Never | 72 | 1.00 (Reference) | | |
| | | | | | | | | | Former | 35 | 1.19 (0.80, 1.79) | | |
| | | | | | | | | | Non-daily | 38 | 0.53 (0.36, 0.80) | | |
| | | | | | | | | | Daily | 119 | 0.90 (0.67, 1.21) | | |
| | | | | | | | | | Alcohol intake | | | | |
| | | | | | | | | | Never | 32 | 1.00 (Reference) | | |
| | | | | | | | | | Former | 14 | 1.05 (0.56, 1.98) | | |
| | | | | | | | | | Non-daily | 20 | 0.65 (0.37, 1.13) | | |
| Daily | 67 | 1.15 (0.75, 1.76) | | | | | | | | | | | |
| Alcohol intake | | | | | | | | | | | | | |
| Never | 16 | 1.00 (Reference) | | | | | | | | | | | |
| Former | 11 | 1.59 (0.73, 3.43) | | | | | | | | | | | |
| Non-daily | 12 | 0.80 (0.38, 1.69) | | | | | | | | | | | |
| Daily | 43 | 1.58 (0.89, 2.82) | ↑ | | | | | | | | | | |
| Alcohol intake | | | | | | | | | | | | | |
| Never | 7 | 1.00 (Reference) | | | | | | | | | | | |
| Former | 1 | 0.34 (0.04, 2.74) | | | | | | | | | | | |
| Non-daily | 3 | 0.45 (0.12, 1.76) | | | | | | | | | | | |
| Daily | 18 | 1.45 (0.06, 3.51) | age, bmi, smoking | | | | | | | | | | |
| Alcohol intake | | | | | | | | | | | | | |
| Never | 37 | 1.00 (Reference) | | | | | | | | | | | |
| Former | 19 | 1.29 (0.74, 2.25) | | | | | | | | | | | |
| Non-daily | 15 | 0.41 (0.22, 0.75) | | | | | | | | | | | |
| Daily | 47 | 0.69 (0.45, 1.06) | | | | | | | | | | | |
| Alcohol intake | | | | | | | | | | | | | |
| Never | 23 | 1.00 (Reference) | | | | | | | | | | | |
| Former | 13 | 1.37 (0.69, 2.72) | | | | | | | | | | | |
| Non-daily | 7 | 0.31 (0.13, 0.73) | | | | | | | | | | | |
| Daily | 28 | 0.69 (0.40, 1.21) | | | | | | | | | | | |
| Alcohol intake | | | | | | | | | | | | | |
| Never | 14 | 1.00 (Reference) | | | | | | | | | | | |
| Former | 6 | 1.14 (0.43, 2.97) | | | | | | | | | | | |
| Non-daily | 8 | 0.57 (0.24, 1.36) | | | | | | | | | | | |
| Daily | 19 | 0.69 (0.35, 1.39) | | | | | | | | | | | |

