Study details	Patients	Prognostic factors	Outcome measures	Effect size	Comments
Author & Year: Chang et al, 1999[143] **Study design:** Hospital based case-control study **Setting:** Hospital based case control study. Eight cities from five European centres (UK, Germany, Hungary, Slovenia, Yugoslavia) **Duration of follow-up:** 3 years	**Patient group:** Women aged 20-44 who had had a stroke. **Inclusion criteria:** Female; Aged 20-44 years; admitted to a participating hospital between June 1990 and January 1993; had a discharge diagnosis of stroke (cases); Controls had to have been admitted to the same hospital as the case, with one of the 27 diagnoses considered to have no association with use of oral contraceptives. **Exclusion criteria:** Had a transient ischaemic attack; died within 24 hours of admission; had a history of stroke, deep vein thrombosis, pulmonary embolism, acute myocardial infarction, or natural or surgical menopause; recent history (within 6 weeks) of pregnancy; had a major illness causing prolonged bed rest or surgery. **Cases** **N:** 291 (had a stroke and completed supplementary questionnaire); 86 (ischaemic stroke), 187 (haemorrhagic stroke), 18 (unclassified). **Cases with migraine** **N (History of migraine):** 74/291 **Age in years (mean ± SD):** 36.1±5.6 **Current oral contraceptive use:** 18 (24.3%) **Controls**	**Group 1** Women with migraine who took oral contraceptives **Group 2** Women with migraine who did not take oral contraceptives **Group 3** Women with no migraine who did not take oral contraceptives **Cases (as defined by study)** Stroke cases which were classified into seven types: Intracerebral (including intraventricular, intraparenchymal, and intracerebellar), subarachnoid haemorrhage, undifferentiated haemorrhage, ischaemic stroke with or without possible cardiac source of embolus, unclassified and venous. **Controls (as defined by study)** Up to three hospital based controls were recruited for each case matched by 5 year age bands and time of admission.	**Adjusted* odds ratio of ischaemic stroke** (OR, 95% CI)	**Group 1/ Group 3:** 16.9 (2.72 to 106) No. of cases/controls: 10/3 **Group 2/ Group 3:** 2.27 (0.69 to 7.47) No. of cases/controls: 16**/**23	**Funding:** United Nations Development Programme/ United Nations Population Fund/WHO /World Bank/National institutes of health **Limitations:** Information on use of oral contraceptives and past history is primarily based on interview and may be subject to recall bias. Validation of information on exposure is difficult, and may be incomplete. **Notes:** Study calculated odds ratios of stroke for Groups 1 and 2 in comparison to women who did not have a history of migraine and did not use oral contraceptives. †Stroke was fitted as the dependent variable, and known risk factors and migraine status were independent variables.
			Adjusted* odds ratio of haemorrhagic stroke (OR, 95% CI)	**Group 1/ Group 3:** 1.10 (0.40 to 2.97**)** No. of cases/controls: 8/16 **Group 2/ Group 3:** 1.13 (0.60 to 2.12**)** No. of cases/controls: 30**/**45	

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	N:736 (matched controls); 220 (matched for ischaemic stroke), 471 (matched for haemorrhagic stroke), 44(matched for unclassified stroke) **Controls with migraine** **N(History of migraine):** 96/736 **Age in years (mean ± SD):** 35.7±6.2 **Current oral contraceptive use:** 20 (20.8%)				*Adjusted for high blood pressure, education, smoking, family history of migraine, alcohol consumption, and social class.

Abbreviations: NR=not reported, NA=not applicable, M/F=male/female, N=total number of patients in group, SD=Standard deviation, SE=Standard error, ITT=Intention to treat analysis, WHO=World Health Organisation

Study details	Patients	Prognostic factors	Outcome measures	Effect size	Comments
Author & Year: Lidegaard & Kreiner, 2002[496] **Study design:** Prospective case-control study **Setting:** Danish National Patient Register **Duration of follow-up:** Five years starting in 1994	**Patient group:** Women with cerebral thrombo-embolic attacks (CTA) **Inclusion criteria:** **Cases -** Women aged 15-44 years who had a CTA; registered diagnosis in the Danish National Patient Register. **Controls -** For the period 1994-1995, control group of 600 women, age matched to CTA patients. For the period 1996-1998, 1200 randomly selected women from the Central Person Register (CPR) aged 15-44 years. **Exclusion criteria:** Women with CTA or other thrombotic diseases before 1994 were identified in the register and excluded to include only first-ever events. **All patients** **Cases** **N:** 626 **Cases with migraine** **N:** 107 (17.1%) **Controls** **N:** 4054 **Controls with migraine** **N:** 258 (6.4%)	**Group 1** Cases with migraine **Group 2** Controls with migraine	**Risk of cerebral thrombo-embolism** Crude odds ratio (Group 1 vs Group 2)	**OR:** 3.2	**Funding:** Organon International, Wyeth-Ayerst, and Schering AG. **Limitations:** Difference in responses between cases and controls due to potential recall bias. Oral contraceptive users may be more likely to be investigated for stroke which may affect effect size. Differences in prescription of oral contraceptives (third generation versus older generation pills) may affect effect size. **Notes:** Women registered more than once during the 5-year period were recorded according to their first discharge diagnosis. Both cases and controls received same questionnaire regarding use of oral contraceptive pills and other factors.
			Cerebral thrombo-embolism Adjusted odds ratio (Group 1 vs Group 2) *adjusted for oral contraceptive use	***Adjusted OR:**3.2 **95% CI:** 2.5-4.2	

Abbreviations: NR=not reported, NA=not applicable, M/F=male/female, N=total number of patients in group, SD=Standard deviation, SE=Standard error, ITT=Intention to treat analysis, NPR=National Patient Register ICD= International Classification of Diseases, CTA= Cerebral thrombo-embolic attack, CPR= Central Person Register (includes all Danish people older than 5 days).