Original article. Scand J Work Environ Health – online first. doi:10.5271/sjweh.3728

Night work and hypertensive disorders of pregnancy: a national register-based cohort study [1]

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1 *Supplementary material*

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Table S1. Odds ratios of hypertensive disorders of pregnancy by number of night shifts during the first 20 pregnancy weeks stratified [a] by body mass index (BMI) among workers in public administration and hospitals in Denmark, 2007–2013. [OR = odds ratio; CI = confidence interval]

Number of night shifts	Women		Cases		Model1 [b]		Model2 [c]	
	N	%	N	%	OR	95% CI	OR	95% CI
BMI < 25 kg/m^2, N=12,815								
Day work	5119	40.0	201	3.9	1.00	Referent	1.00	Referent
1-19	6698	52.2	266	4.0	1.01	0.84-1.22	0.89	0.73-1.09
≥ 20	998	7.8	40	4.0	1.02	0.72-1.44	0.93	0.65-1.34
BMI 25-29 kg/m^2, N=3,501								
Day work	1419	40.5	52	3.7	1.00	Referent	1.00	Referent
1-19	1719	49.1	63	3.7	1.00	0.69-1.45	0.89	0.60-1.32
≥ 20	363	10.4	17	4.7	1.29	0.74-2.26	1.25	0.70-2.21
BMI ≥ 30 kg/m^2, N=1,588								
Day work	671	42.2	7	1.0	1.00	Referent	1.00	Referent
1-19	713	44.9	24	3.4	3.30	1.41-7.72	2.87	1.14-7.22
≥ 20	204	12.9	7	3.4	3.37	1.17-9.72	3.71	1.22-11.23

[a] P-value for multiplicative interaction 0.1065.

[b] Crude analysis.

[c] Adjusted for categories of age, smoking, socioeconomic status, parity and sickness absence three months prior to pregnancy.

Table S2. Odds ratios of hypertensive disorders of pregnancy by duration of night shifts during the first 20 pregnancy weeks stratified [a] by body mass index (BMI) among workers in public administration and hospitals in Denmark, 2007–2013. [OR = odds ratio; CI = confidence interval]

Duration of night shifts	Women		Cases		Model1 [b]		Model2 [c]	
	N	%	N	%	OR	95% CI	OR	95% CI
BMI < 25 kg/m^2, N=12,815								
Day work	5119	40.0	201	3.9	1.00	Referent	1.00	Referent
< 12 hours	3749	29.2	150	4.0	1.02	0.82-1.26	0.89	0.70-1.12
≥ 12 hours	3947	30.8	156	4.0	1.01	0.81-1.25	0.91	0.72-1.15
BMI 25-29 kg/m^2, N=3,501								
Day work	1419	40.5	52	3.7	1.00	Referent	1.00	Referent
< 12 hours	1141	32.6	43	3.8	1.03	0.68-1.55	0.91	0.59-1.40
≥ 12 hours	941	26.9	37	3.9	1.08	0.70-1.65	1.00	0.64-1.57
BMI ≥ 30 kg/m^2, N=1,588								
Day work	671	42.3	7	1.0	1.00	Referent	1.00	Referent
< 12 hours	580	36.5	14	2.4	2.35	0.94-5.85	2.25	0.85-5.99
≥ 12 hours	337	21.2	17	5.0	5.04	2.07-12.27	4.55	1.72-12.04

[a] P-value for multiplicative interaction 0. 0369.

[b] Crude analysis.

[c] Adjusted for categories of age, smoking, socioeconomic status, parity and sickness absence three months prior to pregnancy.

Table S3. Odds ratios of hypertensive disorders of pregnancy by number of quick returns [a] during the first 20 pregnancy weeks stratified [b] by body mass index (BMI) among workers in public administration and hospitals in Denmark, 2007–2013. [OR = odds ratio; CI = confidence interval]

Quick returns	Women		Cases		Model1 [c]		Model2 [d]	
	N	%	N	%	OR	95% CI	OR	95% CI
BMI < 25 kg/m^2, N=12,815								
Day work	5119	40.0	201	3.9	1.00	Referent	1.00	Referent
0	2661	20.8	86	3.2	0.82	0.63-1.06	0.79	0.59-1.04
1-4	3468	27.0	150	4.3	1.11	0.89-1.37	0.97	0.77-1.23
≥ 5	1567	12.2	70	4.5	1.14	0.86-1.51	0.89	0.66-1.20
BMI 25-29 kg/m^2, N=3,501								
Day work	1419	40.5	52	3.7	1.00	Referent	1.00	Referent
0	691	19.7	29	4.2	1.15	0.72-1.83	1.09	0.67-1.78
1-4	980	28.0	34	3.5	0.94	0.61-1.47	0.86	0.54-1.35
≥ 5	411	11.7	17	4.1	1.13	0.65-1.98	0.96	0.54-1.71
BMI ≥ 30 kg/m^2, N=1,588								
Day work	671	42.3	7	1.0	1.00	Referent	1.00	Referent
0	308	19.4	11	3.6	3.51	1.35-9.15	3.51	1.26-9.80
1-4	440	27.7	14	3.2	3.12	1.25-7.79	3.06	1.15-8.16
≥ 5	169	10.6	6	3.6	3.49	1.16-10.53	2.29	0.64-8.26

[a] Less than 11 hours between two consecutive shifts.

[b] P-value for multiplicative 0. 1309.

[c] Crude analysis.

[d] Adjusted for categories of age, smoking, socioeconomic status, parity and sickness absence three months prior to pregnancy.

Table S4. Odds ratios of hypertensive disorders of pregnancy by number of quick returns after a night shift [a] during the first 20 pregnancy weeks stratified [b] by body mass index (BMI) among workers in public administration and hospitals in Denmark, 2007–2013. [OR = odds ratio; CI = confidence interval]

Quick returns after a night shift	Women		Cases		Model1 [c]		Model2 [d]	
	N	%	N	%	OR	95% CI	OR	95% CI
BMI < 25 kg/m^2, N=12,815								
Day work	5119	40.0	201	3.9	1.00	Referent	1.00	Referent
0	704	5.5	30	4.3	1.09	0.74-1.61	0.86	0.55-1.35
1-4	3204	25.0	116	3.6	0.92	0.73-1.16	0.79	0.61-1.02
≥ 5	3788	29.5	160	4.2	1.08	0.87-1.33	0.99	0.79-1.25
BMI 25-29 kg/m^2, N=3,501								
Day work	1419	40.5	52	3.7	1.00	Referent	1.00	Referent
0	192	5.5	5	2.6	0.70	0.28-1.78	0.55	0.19-1.55
1-4	816	23.3	37	4.5	1.25	0.81-1.92	1.10	0.70-1.74
≥ 5	1074	30.7	38	3.5	0.96	0.63-1.48	0.91	0.58-1.41
BMI ≥ 30 kg/m^2, N=1,588								
Day work	671	42.3	7	1.0	1.00	Referent	1.00	Referent
0	82	5.2	3	3.7	3.60	0.91-14.21	2.84	0.56-14.42
1-4	336	21.1	5	1.5	1.43	0.45-4.55	1.13	0.32-4.06
≥ 5	499	31.4	23	4.6	4.58	1.95-10.77	4.55	1.81-11.42

[a] Less than 28 hours between a night shift and the consecutive shift.

[b] P-value for multiplicative 0. 0117.

[c] Crude analysis.

[d] Adjusted for categories of age, smoking, socioeconomic status, parity and sickness absence three months prior to pregnancy.