

Table S1 Descriptive statistics of potential risk factors for LBP at baseline in HUNT2, by follow-up status

	Died during follow-up ^a	Left the county during follow-up ^a	Non-participants at end of follow-up ^a	Participants at end of follow-up ^a
Number of women included	354	974	4296	9113
Age in HUNT2 ^b (year)	56.3	31.3	39.1	43.0
BMI ^b (kg/m ²)	26.8	24.2	25.9	25.5
Hard physical activity per week (hour) (% ^c)				
< 1	86	57	74	72
1-2	9	28	19	21
≥ 3	5	16	7	7
Education (year) (% ^c)				
≤ 9	55	8	25	24
10-12	31	45	51	47
≥ 13	14	47	24	28
Age at menarche ^b (year)	13.5	13.1	13.2	13.3
Age at first childbirth ^{b,d} (year)	23.3	23.4	22.8	23.3
Nulliparity (% ^c)	9	56	19	12
Use of systemic MHT ^e (% ^c)				
Never	77	73	81	77
Former	10	7	5	6
Current	13	20	14	17
Use of OC (% ^c)				
Never	73	30	36	39
Former	25	41	49	51
Current	2	28	16	10

HUNT Trøndelag Health Study, *BMI* body mass index, *MHT* menopausal hormone therapy, *OC* oral contraceptives, *LBP* low back pain

^aAmong women aged 20-69 years included in follow-up with baseline information about BMI, physical activity, education, smoking, age at menarche, nulliparity, age at first childbirth, use of MHT and OC

^bMean value within category of follow-up status

^cPercentages of risk factor categories within category of follow-up status

^dAmong women with at least 1 child

^eAmong nonpregnant women aged 40-69 years

Table S2 Associations between use of systemic MHT and prevalence or risk of chronic LBP in cross-sectional and cohort analysis, among nonpregnant women aged 40-69 years, with and without adjustment for HADS^a

	With standard comprehensive adjustment ^b	With additional adjustment for HADS score
	PR ^c or RR ^d (95% CI)	PR ^c or RR ^d (95% CI)
Cross-sectional analysis		
Use of systemic MHT		
Number of women included	9537	9537
Never	1.00 (reference)	1.00 (reference)
Former	1.47 (1.33-1.61)	1.34 (1.23-1.47)
Current	1.26 (1.17-1.36)	1.20 (1.11-1.29)
P for categorical effect	< 0.001	< 0.001
Cohort analysis		
Use of systemic MHT		
Number of women included	4695	4695
Never	1.00 (reference)	1.00 (reference)
Former	1.03 (0.81-1.30)	1.00 (0.79-1.26)
Current	1.27 (1.09-1.47)	1.24 (1.07-1.44)
P for categorical effect	0.009	0.015

MHT menopausal hormone therapy, *LBP* low back pain, *HADS* Hospital Anxiety and Depression Scale, *PR* prevalence ratio, *RR* relative risk, *CI* confidence interval, *BMI* body mass index, *OC* oral contraceptives

^aAmong women with known HADS score

^bAdjustment for age, BMI, physical activity, education, smoking, age at menarche, nulliparity, age at first childbirth, use of OC

^cIn cross-sectional analysis

^dIn cohort analysis

Table S3 Associations between use of systemic MHT and prevalence or risk of chronic LBP in cross-sectional and cohort analysis, among nonpregnant women aged 40-69 years, in broad intervals of age in HUNT2

	Age 40-49 years	Age 50-59 years	Age 60-69 years
	PR ^a or RR ^b (95% CI) ^c	PR ^a or RR ^b (95% CI) ^c	PR ^a or RR ^b (95% CI) ^c
Cross-sectional analysis			
Use of systemic MHT			
Number of women included	5323	3715	2034
Never	1.00 (reference)	1.00 (reference)	1.00 (reference)
Former	1.55 (1.35-1.78)	1.53 (1.37-1.72)	1.19 (0.97-1.46)
Current	1.15 (1.01-1.31)	1.28 (1.17-1.40)	1.53 (1.34-1.74)
P for categorical effect	< 0.001	< 0.001	< 0.001
Cohort analysis			
Use of systemic MHT			
Number of women included	2739	1767	824
Never	1.00 (reference)	1.00 (reference)	1.00 (reference)
Former	1.09 (0.75-1.59)	0.89 (0.62-1.28)	1.19 (0.79-1.78)
Current	1.25 (1.00-1.57)	1.34 (1.13-1.59)	1.23 (0.88-1.71)
P for categorical effect	0.17	0.003	0.42

MHT menopausal hormone therapy, LBP low back pain, HUNT Trøndelag Health Study, PR prevalence ratio, RR relative risk, CI confidence interval, BMI body mass index, OC oral contraceptives

^aIn cross-sectional analysis

^bIn cohort analysis

^cAdjustment for age, BMI, physical activity, education, smoking, age at menarche, nulliparity, age at first childbirth, use of OC

Table S4 Associations between use of OC and prevalence or risk of chronic LBP in cross-sectional and cohort analysis, among women aged 20-69 years, with and without adjustment for HADS^a

	With comprehensive adjustment ^b	With additional adjustment for HADS score
	PR ^c or RR ^d (95% CI)	PR ^c or RR ^d (95% CI)
Cross-sectional analysis		
Use of OC		
Number of women included	17,804	17,804
Never	1.00 (reference)	1.00 (reference)
Former	1.18 (1.11-1.25)	1.15 (1.09-1.22)
Current	1.02 (0.90-1.16)	1.02 (0.90-1.16)
P for categorical effect	< 0.001	< 0.001
Cohort analysis		
Use of OC		
Number of women included	8230	8230
Never	1.00 (reference)	1.00 (reference)
Former	1.22 (1.09-1.36)	1.22 (1.09-1.36)
Current	1.10 (0.90-1.34)	1.09 (0.90-1.33)
P for categorical effect	0.001	0.002

OC oral contraceptives, LBP low back pain, HADS Hospital Anxiety and Depression Scale, PR prevalence ratio, RR relative risk, CI confidence interval, BMI body mass index, MHT menopausal hormone therapy

^aAmong women with known HADS score

^bAdjustment for age, BMI, physical activity, education, smoking, age at menarche, nulliparity, age at first childbirth, use of systemic MHT in the cohort analysis; no adjustment for age at menarche in the cross-sectional analysis because of non-convergence with the full model

^cIn cross-sectional analysis

^dIn cohort analysis

Table S5 Associations between use of OC and prevalence or risk of chronic LBP in cross-sectional and cohort analysis, among women aged 20-69 years, in intervals of BMI in HUNT2

	BMI <25 (kg/m ²)	BMI 25-29.9 (kg/m ²)	BMI ≥30 (kg/m ²)
	PR ^a or RR ^b (95% CI) ^c	PR ^a or RR ^b (95% CI) ^c	PR ^a or RR ^b (95% CI) ^c
Cross-sectional analysis			
Use of OC			
Number of women included	9664	7006	2967
Never	1.00 (reference)	1.00 (reference)	1.00 (reference)
Former	1.13 (1.05-1.23)	1.19 (1.10-1.29)	1.17 (1.05-1.30)
Current	0.90 (0.76-1.07)	1.01 (0.82-1.23)	1.42 (1.12-1.80)
P for categorical effect	0.001	< 0.001	0.002
Cohort analysis			
Use of OC			
Number of women included	4671	3251	1191
Never	1.00 (reference)	1.00 (reference)	1.00 (reference)
Former	1.23 (1.06-1.43)	1.12 (0.96-1.29)	1.18 (0.94-1.49)
Current	1.10 (0.86-1.40)	1.18 (0.90-1.56)	0.52 (0.24-1.13)
P for categorical effect	0.017	0.27	0.030

OC oral contraceptives, LBP low back pain, BMI body mass index, HUNT Trøndelag Health Study, PR prevalence ratio, RR relative risk, CI confidence interval, MHT menopausal hormone therapy

^aIn cross-sectional analysis

^bIn cohort analysis

^cAdjustment for age, physical activity, education, smoking, age at menarche, nulliparity, age at first childbirth, use of systemic MHT