APPENDIX

S1 table. Odds ratios (OR) from logistic regression for the association between age at menarche and chronic pain for Tromsø 6, Tromsø 7, and combined sample of Tromsø 6 and Tromsø 7.

	Univariable analysis OR (95% CI)	Multivariable analysis OR (95% CI)
Tromsø 6 (N=6,449)		
Menarche	0.92 [0.89 to 0.96]	0.95 [0.91 to 0.98]
BMI	-	1.05 [1.03 to 1.06]
ES childhood	-	1.63 [1.46 to 1.83]
Age	-	1.00 [1.00 to 1.01]
Tromsø 7 (N=5,681)		
Menarche	0.93 [0.89 to 0.96]	0.96 [0.92 to 0.99]
BMI	-	1.05 [1.04 to 1.06]
ES childhood	-	1.72 [1.51 to 1.94]
Age	-	1.00 [1.00 to 1.01]
Combined sample (N=12,130)		
Menarche	0.92 [0.90 to 0.95]	0.95 [0.93 to 0.98]
BMI	-	1.05 [1.04 to 1.06]
ES childhood	-	1.65 [1.51 to 1.79]
Age	-	1.00 [1.00 to 1.01]

Age at menarche as continuous variable in univariable and multivariable logistic regression analyses.
Multivariable analyses adjusted for BMI, body mass index; $ES_{childhood}$, economic status of the household in childhood, and age.

S2 table. Post-hoc analyses. Odds ratios (OR) for the association between age at menarche and ten body regions. The Graphical Index of Pain (GRIP), Tromsø 7, N=10,367.

Body regions	Univariable analysis OR (95% CI)	Multivariable analysis OR (95% CI)
Head	0.92 [0.88 to 0.96]	0.97 [0.93 to 1.02]
Neck	0.93 [0.89 to 0.96]	0.96 [0.93 to 0.99]
Back	0.95 [0.92 to 0.98]	0.98 [0.95 to 1.01]
Chest	0.91 [0.86 to 0.97]	0.95 [0.90 to 1.01]
Abdomen	0.91 [0.87 to 0.95]	0.95 [0.90 to 0.99]
Genitals	0.98 [0.90 to 1.07]	1.03 [0.94 to 1.12]
Left arm	0.92 [0.89 to 0.96]	0.95 [0.91 to 0.98]
Right arm	0.92 [0.89 to 0.95]	0.95 [0.92 to 0.99]
Left leg	0.94 [0.90 to 0.97]	0.98 [0.95 to 1.02]
Right leg	0.93 [0.89 to 0.96]	0.98 [0.94 to 1.01]

Age at menarche as continuous variable in univariable and multivariable logistic regression analyses.
Multivariable analyses adjusted for BMI, body mass index; $ES_{childhood}$, economic status of the household in childhood, and age.

S3 table. Odds ratios (OR) for associations between age at menarche and pain characteristics. The Graphical Index of Pain (GRIP),GRIP characteristics sample (N=5,354).		
Pain characteristics	**Univariable analysis** OR (95% CI)	**Multivariable analysis** OR (95% CI)
Pain duration ≥ 5 years[1]	0.95 [0.91 to 0.99]	0.95 [0.92 to 0.99]
Daily pain[2]	0.99 [0.95 to 1.03]	1.02 [0.98 to 1.06]
Constant pain without pause[3]	0.99 [0.95 to 1.04]	1.00 [0.96 to 1.05]
	Beta coefficient	Beta coefficient
Pain intensity[4]	-0.001 [-0.04 to 0.04]	0.03 [-0.01 to 0.07]

1) Pain duration is a dichotomous variable, 3 months to 5 years and ≥5 years.

2) Episode frequency is a dichotomous variable, daily pain and non-daily pain.

3) Episode duration is a dichotomous variable, intermittent pain and constant pain without a pause.

4) Pain intensity analysed with linear regression (beta coefficients presented).

Age at menarche as continuous variable in univariable and multivariable logistic regression analyses.

Multivariable analyses adjusted for BMI, body mass index; $ES_{childhood}$,economic status of the household in childhood, and age.

S4 table. Odds ratios (OR) from logistic regression for the association between age at menarche and chronic widespread pain.		
	Univariable analysis OR (95% CI)	**Multivariable analysis** OR (95% CI)
Tromsø 6 (N=6,449)		
Menarche	0.85 [0.80 to 0.90]	0.91 [0.86 to 0.96]
BMI	-	1.07 [1.05 to 1.08]
$ES_{childhood}$	-	0.52 [0.44 to 0.62]
Age	-	0.98 [0.97 to 0.99]