Table S1
Table of p values for t-tests conducted between cases with osteoarthritis, rheumatoid arthritis, or other arthritis, to determine whether there were any significant differences between them. P values were adjusted using Benjamini and Hochberg's false discovery rate adjustment.

Wave	Measure	Contrast	p	P adjusted
1	Pain	OST-RHU	.362	.819
1	Pain	OST-OTH	.987	.987
1	Pain	RHU-OTH	.496	.819
1	Health	OST-RHU	.033 *	.210
1	Health	OST-OTH	.045 *	.210
1	Health	RHU-OTH	.836	.948
7	Pain	OST-RHU	.531	.819
7	Pain	OST-OTH	.869	.948
7	Pain	RHU-OTH	.708	.944
7	Health	OST-RHU	.053	.210
7	Health	OST-OTH	.546	.819
7	Health	RHU-OTH	.380	.819

Note: OST = Osteoarthritis, OTH = Other form of arthritis, RHU = Rheumatoid Arthritis

Table S2

Self reported pain at Wave 1

	0	1	2	3
Low or no chronic pain	293	88	0	0
Increasing chronic pain	73	68	0	0
Decreasing chronic pain	0	0	112	35
Severe regressing chronic pain	0	1	131	83

Note - 0 = not troubled by pain, 1 = mildly troubled by pain, 2 = moderately troubled by pain,

3 = severely troubled by pain

Table S3

Self reported pain at Wave 7

	0	1	2	3
Low or no chronic pain	122	16	22	2
Increasing chronic pain	13	17	42	12
Decreasing chronic pain	29	8	21	1
Severe regressing chronic pain	3	6	41	25

Note - 0 = not troubled by pain, 1 = mildly troubled by pain, 2 = moderately troubled by pain,

3 = severely troubled by pain

Table S4

Moderated linear regressions of the relationship between pain at Wave, trajectory (limited to no/low chronic pain and increasing chronic pain) and conscientiousness and neuroticism, for cases with data at all time points (listwise deleted).

Effect	b	$S.E.$	p
Conscientiousness ($R^2 = 0.365$, $F(7,216) = 19.21$, $p < .001$			
Intercept	0.363	0.074	<.001 ***
Trajectory	1.305	0.148	<.001 ***
W1 Pain	0.062	0.146	.669
Conscientiousness	0.186	0.159	.245
Trajectory * W1 Pain	-0.288	0.234	.220
Trajectory * Conc.	0.809	0.393	.041 *
W1 Pain * Conc.	0.192	0.298	.519
Trajectory * W1 Pain * Conc.	-1.283	0.586	.030 *
Neuroticism ($R^2 = .0415$, $F(7,214) = 23.37$, $p < .001$			
Intercept	0.345	0.072	<.001 ***
Trajectory	1.382	0.140	<.001 ***
W1 Pain	0.072	0.141	.608
Neuroticism	-0.004	0.133	.979
Trajectory * W1 Pain	-0.483	0.224	.032 *
Trajectory * Neur.	-0.593	0.298	.048 *
W1 Pain * Neur.	0.051	0.254	.842
Trajectory * W1 Pain * Neur.	1.457	0.423	<.001 ***

Note. – Conc. = Conscientiousness, Neur. = Neuroticism.

*** = $p < .001$, * = $p < .05$

Table S5

Moderated linear regressions of the relationship between health at Wave, trajectory and extraversion (low or no chronic pain vs. decreasing chronic pain) or agreeableness (low or no chronic pain vs. severe regressing chronic pain), for cases with data at all time points (listwise deleted).

Effect	b	$S.E.$	p
Extraversion ($R^2 = 0.251$, $F(7,194) = 10.63$, $p <.001$			
Intercept	1.953	0.192	<.001 ***
Trajectory	-0.241	0.425	.571
W1 SRH	0.295	0.076	<.001 ***
Extraversion	-0.756	0.346	.030 *
Trajectory * W1 SRH	0.104	0.139	.456
Trajectory * Extraversion	1.682	0.825	.043 *
W1 SRH * Extraversion	0.206	0.126	.104
Traj. * W1 SRH * Extra.	-0.687	0.250	.007 **
Agreeableness ($R^2 = 0.420$, $F(7,209) = 23.31$, $p <.001$			
Intercept	1.807	0.181	<.001 ***
Trajectory	0.614	0.426	.151
W1 SRH	0.348	0.072	<.001 ***
Agreeableness	-0.249	0.325	.445
Trajectory * W1 SRH	0.053	0.125	.671
Trajectory * Agreeableness	2.005	0.877	.023 *
W1 SRH * Agreeableness	0.016	0.126	.902
Traj. * W1 SRH * Agree.	-0.375	0.240	.120

Note: Agree. = Agreeableness, Extra. = Extraversion, Traj. = Trajectory, W1 SRH = Wave 1 self reported (poor) health

*** = $p < .001$, ** = $p < .01$, * = $p < .05$

Table S6

Descriptive statistics for the personality traits from the MDI at Wave 5 in the ELSA.

Trait	M	SD	Skew	Kurtosis	α
Full W5 sample					
Agreeableness	3.511	0.480	-0.934	0.426	0.81
Conscientiousness	3.290	0.499	-0.710	0.317	0.68
Extraversion	3.147	0.562	-0.492	-0.171	0.76
Neuroticism	2.105	0.597	0.275	-0.122	0.67
Openness to Experience	2.877	0.559	-0.231	-0.299	0.79
Arthritis cohort					
Agreeableness	3.556	0.483	-1.095	0.736	0.82
Conscientiousness	3.271	0.505	-0.720	0.780	0.67
Extraversion	3.128	0.589	-0.474	-0.304	0.78
Neuroticism	2.146	0.586	0.227	-0.073	0.62
Openness to Experience	2.824	0.581	-0.193	-0.410	0.80

Table S7

Correlations between pain and domains of personality in the arthritis subsample. Figures in italics denote a significant correlation ($p < .05$, uncorrected), for cases with pairs of data on both measures (listwise deleted)

	W1P	W1H	A	C	E	N	O	W7P	W7H
W1P	-								
W1H	*0.36*	-							
A	0.04	-0.09	-						
C	*-0.17*	*-0.22*	0.50	-					
E	*-0.12*	*-0.24*	0.57	0.53	-				
N	*0.11*	*0.12*	0.00	-0.15	-0.22	-			
O	-0.08	*-0.17*	0.45	0.53	0.68	-0.18	-		
W7P	*0.36*	*0.27*	0.05	-0.06	0.05	*0.12*	-0.07	-	
W7H	*0.34*	*0.45*	-0.11	-0.25	-0.35	0.15	-0.27	*0.38*	-

Note: Once adjusting for multiple comparisons using Holm's method, the correlations between initial pain, and Extraversion and Neuroticism respectively, disappear. The sample applies for Wave 7 pain and Neuroticism. For the self-reported health measure, the correlations with Neuroticism at W1 and Agreeableness at W7 are non-significant when corrected for multiple comparisons. All trait correlations remain significant after correcting for multiple comparisons. n = Wave 1 pain/health and A (448), C (444), E (445), N (443), O (444); Wave 7 pain and A (347), C (345), E (345), N (342), O (345); Wave 7 health and A (346), C (344), E (344), N (341) and O (344).

Note – A = Agreeableness, C = Conscientiousness, E = Extraversion, O = Openness to Experience, N = Neuroticism, W1/W7 = Wave 1/7, P = Pain, H = Health

Table S8
Moderated linear regression models of the effects of personality traits (and initial pain) on pain at wave 7 of the ELSA, with imputed data for Agreeableness, Conscientiousness, Extraversion, and Openness to Experience

Effect	b	S.E.	p	95% C. I.
Agreeableness				
Intercept	0.390	0.075	<.001	0.244 – 0.537
W1	0.045	0.161	.780	-0.272 – 0.362
Class B	1.195	0.159	<.001	0.881 – 1.509
Class C	0.191	0.630	.762	-1.049 – 1.430
Class D	1.107	0.493	.025	0.137 – 2.077
Agreeableness	0.062	0.164	.706	-0.260 – 0.384
W1*Class B	-0.177	0.255	.487	-0.680 – 0.325
W1*Class C	0.134	0.313	.668	-0.482 – 0.751
W1*Class D	0.216	0.264	.414	-0.304 – 0.736
W1*Agree.	-0.111	0.296	.708	-0.693 – 0.472
Class B*Agree.	-0.051	0.339	.880	-0.720 – 0.618
Class C*Agree.	-0.165	1.173	.888	-2.472 – 2.143
Class D*Agree.	-0.883	0.718	.220	-2.296 – 0.530
W1*Class B*Agre.	0.138	0.533	.796	-0.911 – 1.187
W1*Class C*Agre.	0.178	0.563	.752	-0.929 – 1.285
W1*Class D*Agre.	0.582	0.432	.179	-0.268 – 1.433
Conscientiousness				
Intercept	0.378	0.076	<.001	0.228 – 0.527
W1	0.057	0.160	.724	-0.259 – 0.373
Class B	1.182	0.165	<.001	0.857 – 1.507
Class C	0.275	0.617	.656	-0.940 – 1.490
Class D	1.019	0.524	.052	-0.011 – 2.050
Conscientiousness	0.135	0.169	.425	-0.197 – 0.467
W1*Class B	-0.163	0.257	.526	-0.669 – 0.343
W1*Class C	0.097	0.307	.753	-0.508 – 0.701
W1*Class D	0.257	0.272	.345	-0.278 – 0.793

W1*Conc.	0.115	0.305	.707	-0.485 – 0.715
Class B*Conc.	0.631	0.409	.124	-0.176 – 1.438
Class C*Conc.	-0.538	1.170	.646	-2.842 – 1.766
Class D*Conc.	-0.494	0.574	.390	-1.624 – 0.635
W1*Class B*Conc.	-0.885	0.589	.134	-2.045 – 0.275
W1*Class C*Conc.	-0.107	0.565	.850	-1.221 – 1.007
W1*Class D*Conc.	0.063	0.383	.869	-0.691 – 0.816
Extraversion				
Intercept	0.378	0.077	<.001	0.226 – 0.530
W1	0.059	0.161	.715	-0.259 – 0.377
Class B	1.239	0.161	<.001	0.921 – 1.556
Class C	0.146	0.615	.813	-1.065 – 1.357
Class D	1.155	0.532	.031	0.108 – 2.203
Extraversion	0.087	0.143	.547	-0.196 – 0.369
W1*Class B	-0.215	0.255	.400	-0.716 – 0.287
W1*Class C	0.138	0.308	.655	-0.469 – 0.745
W1*Class D	0.198	0.273	.468	-0.339 – 0.736
W1*Extr.	-0.042	0.250	.868	-0.533 – 0.450
Class B*Extr.	-0.020	0.288	.945	-0.587 – 0.547
Class C*Extr.	-1.765	0.949	.064	-3.632 – 0.102
Class D*Extr.	-0.242	0.664	.716	-1.548 – 1.064
W1*Class B*Extr.	-0.327	0.440	.458	-1.192 – 0.539
W1*Class C*Extr.	0.631	0.461	.173	-0.277 – 1.539
W1*Class D*Extr.	0.154	0.362	.670	-0.557 – 0.866
Openness				
Intercept	0.389	0.075	<.001	0.242 – 0.537
W1	0.043	0.162	.791	-0.276 – 0.361
Class B	1.214	0.161	<.001	0.897 – 1.531
Class C	0.064	0.611	.917	-1.139 – 1.267
Class D	1.127	0.503	.026	0.137 – 2.116
Openness	0.009	0.135	.949	-0.257 – 0.274

W1*Class B	-0.190	0.254	.455	-0.691 – 0.311
W1*Class C	0.188	0.307	.539	-0.416 – 0.793
W1*Class D	0.217	0.265	.413	-0.305 – 0.740
W1*Open.	0.072	0.269	.790	-0.458 – 0.601
Class B*Open.	0.197	0.293	.502	-0.380 – 0.774
Class C*Open.	-0.992	0.982	.313	-2.924 – 0.939
Class D*Open.	-0.405	0.620	.514	-1.625 – 0.815
W1*Class B*Open.	-0.647	0.445	.147	-1.522 – 0.229
W1*Class C*Open.	0.158	0.511	.757	-0.847 – 1.164
W1*Class D*Open.	0.157	0.367	.669	-0.565 – 0.880

Table S9

Moderated linear regression models of the effects of personality traits (and initial self-reported health) on self-reported health at wave 7 of the ELSA, with imputed data for Conscientiousness, Neuroticism, and Openness to Experience

Effect	b	S.E.	p	95% C. I.
Conscientiousness				
Intercept	1.854	0.182	<.001	1.496 – 2.212
W1	0.357	0.069	<.001	0.221 – 0.493
Class B	0.988	0.346	.005	0.308 – 1.669
Class C	-0.044	0.429	.919	-0.888 – 0.800
Class D	0.780	0.427	.069	-0.060 – 1.621
Conscientiousness	-0.345	0.371	.354	-1.075 – 0.386
W1*Class B	-0.148	0.119	.213	-0.382 – 0.086
W1*Class C	0.036	0.138	.796	-0.236 – 0.307
W1*Class D	-0.008	0.125	.950	-0.254 – 0.238
W1*Conc.	0.003	0.133	.984	-0.258 – 0.263
Class B*Conc.	-1.163	0.798	.146	-2.733 – 0.407
Class C*Conc.	0.505	0.987	.609	-1.438 – 2.447
Class D*Conc.	0.122	0.813	.881	-1.477 – 1.720
W1*Class B*Conc.	0.481	0.270	.075	-0.050 – 1.012
W1*Class C*Conc.	-0.208	0.283	.462	-0.765 – 0.349
W1*Class D*Conc.	0.029	0.218	.894	-0.399 – 0.457
Neuroticism				
Intercept	1.756	0.192	<.001	1.377 – 2.134
W1	0.388	0.073	<.001	0.244 – 0.533
Class B	0.905	0.336	.007	0.245 – 1.565
Class C	-0.198	0.419	.637	-1.021 – 0.626
Class D	0.932	0.421	.027	0.103 – 1.761
Neuroticism	-0.248	0.308	.422	-0.855 – 0.359
W1*Class B	-0.133	0.119	.264	-0.367 – 0.101
W1*Class C	0.100	0.137	.464	-0.169 – 0.370
W1*Class D	-0.063	0.124	.613	-0.306 – 0.181
W1*Neur.	0.105	0.114	.357	-0.119 – 0.328

Class B*Neur.	0.519	0.513	.312	-0.490 – 1.529
Class C*Neur.	0.186	0.843	.825	-1.474 – 1.847
Class D*Neur.	0.264	0.643	.682	-1.002 – 1.529
W1*Class B*Neur.	-0.098	0.192	.609	-0.477 – 0.280
W1*Class C*Neur.	-0.020	0.272	.940	-0.556 – 0.515
W1*Class D*Neur.	-0.002	0.193	.991	-0.382 – 0.377
Openness				
Intercept	1.835	0.178	<.001	1.484 – 2.185
W1	0.360	0.068	<.001	0.225 – 0.494
Class B	1.004	0.345	.004	0.325 – 1.683
Class C	-0.068	0.415	.871	-0.884 – 0.749
Class D	0.819	0.425	.055	-0.018 – 1.656
Openness	-0.214	0.303	.481	-0.811 – 0.383
W1*Class B	-0.151	0.119	.203	-0.385 – 0.082
W1*Class C	0.039	0.134	.774	-0.226 – 0.303
W1*Class D	-0.016	0.124	.895	-0.260 – 0.227
W1*Open.	-0.015	0.108	.887	-0.228 – 0.197
Class B*Open.	-0.604	0.633	.341	-1.849 – 0.642
Class C*Open.	0.533	0.731	.466	-0.905 – 1.972
Class D*Open.	0.046	0.575	.937	-1.084 – 1.176
W1*Class B*Open.	0.168	0.217	.438	-0.258 – 0.595
W1*Class C*Open.	-0.254	0.223	.259	-0.692 – 0.187
W1*Class D*Open.	0.016	0.172	.926	-0.323 – 0.355

Table S10

Moderated linear regression models of the effects of each personality trait (and initial pain) on pain at wave 7 of the ELSA, with complete case data

Variable	*b*	*SE*	*p*	*95% CI*
Agreeableness ($R^2 = 0.140$, $F(3,341) = 19.59$, $p < .001$), $n = 345$				
Intercept	0.673	0.075	<.001 ***	0.526 – 0.819
Pain at W1	0.388	0.051	<.001 ***	0.286 – 0.489
Agreeableness	0.046	0.158	.772	-0.264 – 0.356
W1 Pain * Agree.	0.016	0.107	.878	-0.195 – 0.228
Conscientiousness ($R^2 = 0.152$, $F(3,339) = 21.44$, $p < .001$), $n = 343$				
Intercept	0.660	0.076	<.001 ***	0.511 – 0.809
Pain at W1	0.385	0.051	<.001 ***	0.283 – 0.486
Conscientiousness	0.302	0.163	.065	-0.019 – 0.622
W1 Pain * Conc.	-0.240	0.095	.012 *	-0.426 - -0.054
Simple slopes – at Mean C - 1 *SD*				
Intercept	0.508	0.121	<.001 ***	0.270 – 0.746
Slope	0.506	0.069	<.001 ***	0.370 – 0.642
At Mean Conc				
Intercept	0.660	0.076	<.001 ***	0.511 – 0.809
Slope	0.384	0.051	<.001 ***	0.284 – 0.484
At Mean Conc + 1 SD				
Intercept	0.812	0.102	<.001 ***	0.611 – 1.013
Slope	0.264	0.071	<.001 ***	0.124 – 0.404
Extraversion ($R^2 = 0.1428$, $F(3,339) = 20.00$, $p < .001$), $n = 343$				
Intercept	0.677	0.076	<.001 ***	0.527 – 0.827
Pain at W1	0.385	0.052	<.001 ***	0.283 – 0.486
Extraversion	0.013	0.136	.926	-0.255 – 0.280
W1 Pain * Extra.	-0.103	0.086	.228	-0.272 – 0.065
Neuroticism ($R^2 = 0.149$, $F(3,336) = 20.78$, $p < .001$), $n = 340$				

Intercept	0.682	0.076	<.001 ***	0.533 – 0.832
Pain at W1	0.385	0.051	<.001 ***	0.284 – 0.486
Neuroticism	0.122	0.142	.389	-0.156 – 0.401
W1 Pain * Neur.	0.017	0.090	.850	-0.161 – 0.195

Openness to Experience ($R^2 = 0.1415$, $F(3,339) = 19.79$, $p < .001$), $n = 343$

Intercept	0.678	0.076	<.001 ***	0.529 – 0.827
Pain at W1	0.386	0.051	<.001 ***	0.285 – 0.487
Openness	0.018	0.135	.898	-0.248 – 0.283
W1 Pain * Open.	-0.093	0.084	.271	-0.258 – 0.073

Note: Agree = Agreeableness, Conc. = Conscientiousness, Extra. = Extraversion, Neur. = Neuroticism, Open. = Openness to Experience. W1 = wave one

Table S11
Moderated linear regression models of the effects of each personality trait (and initial SRH) on SRH at wave 7 of the ELSA, with complete case data

Variable	b	SE	p	95% CI
Agreeableness (R^2 = 0.226, F(3,340) = 34.35, p < .001), n = 344				
Intercept	1.804	0.138	<.001 ***	1.533-2.075
SRH at W1	0.452	0.046	<.001 ***	0.362-0.542
Agreeableness	0.037	0.275	.893	-0.505-0.579
W1 SRH * Agree.	-0.065	0.086	.453	-0.235-0.105
Conscientiousness (R^2 = 0.255, F (3,338) = 21.44, p < .001), n = 342				
Intercept	1.850	0.139	<.001 ***	1.576-2.124
SRH at W1	0.443	0.046	<.001 ***	0.352-0.535
Conscientiousness	-0.480	0.278	.085	-1.027-0.066
W1 SRH * Conc.	0.061	0.080	.444	-0.096-0.219
Extraversion (R^2 = 0.1428, F (3,339) = 20.00, p < .001), n = 342				
Intercept	1.929	0.138	<.001 ***	1.657-2.200
SRH at W1	0.415	0.046	<.001 ***	0.325-0.504
Extraversion	-0.361	0.239	.132	-0.831-0.109
W1 SRH * Extra.	-0.024	0.075	.748	-0.171-0.123
Neuroticism (R^2 = 0.149, F(3,336) = 20.78, p < .001), n = 339				
Intercept	1.761	0.139	<.001 ***	1.488-2.033
SRH at W1	0.470	0.046	<.001 ***	0.380-0.561
Neuroticism	-0.173	0.234	0.461	-0.633-0.288
W1 SRH * Neur.	0.113	0.078	0.148	-0.040-0.269
Openness to Experience (R^2 = 0.1415, F(3,339) = 19.79, p < .001), n = 342				
Intercept	1.849	0.136	<.001 ***	1.582-2.116
SRH at W1	0.442	0.045	<.001 ***	0.353-0.531
Openness	-0.267	0.228	.242	-0.714-0.181
W1 SRH * Open.	-0.024	0.073	.742	-0.167-0.119

Note: SRH = Self reported (worse) health, Agree = Agreeableness, Conc. = Conscientiousness, Extra. = Extraversion, Neur. = Neuroticism, Open. = Openness to Experience. W1 = wave one

Table S12

Moderated linear regressions of the relationship between pain, trajectory and personality in all five personality traits, for cases with data at all time points (listwise deleted)

Effect	b	S.E.	p	95% C. I.
Agreeableness ($R^2 = 0.421$, $F(15,329) = 17.67$, $p < .001$)				
Intercept	0.364	0.077	<.001 ***	0.212 – 0.516
W1	0.057	0.154	.709	-0.245 – 0.360
Class B	1.356	0.155	<.001 ***	1.063 – 1.661
Class C	0.091	0.602	.880	-1.093 – 1.275
Class D	1.179	0.498	.019 *	0.199 – 2.159
Agreeableness	0.071	0.163	.664	-0.250 – 0.392
W1*Class B	-0.335	0.246	.174	-0.819 – 0.149
W1*Class C	0.141	0.298	.636	-0.446 – 0.728
W1*Class D	0.198	0.257	.442	-0.308 – 0.704
W1*Agree.	-0.093	0.301	.757	-0.686 – 0.499
Class B*Agree.	-0.366	0.342	.287	-1.039 – 0.308
Class C*Agree.	0.033	1.130	.977	-2.190 – 2.255
Class D*Agree.	-0.805	0.709	.257	-2.199 – 0.590
W1*Class B*Agree.	0.474	0.534	.376	-0.577 – 1.525
W1*Class C*Agree.	0.106	0.549	.847	-0.975 – 1.187
W1*Class D*Agree.	0.523	0.440	.236	-0.343 – 1.390
Extraversion ($R^2 = 0.432$, $F(15,327) = 18.33$, $p < .001$)				
Intercept	0.345	0.080	<.001 ***	0.189 – 0.502
W1	0.074	0.154	.632	-0.229 – 0.377
Class B	1.389	0.156	<.001 ***	1.083 – 1.696
Class C	0.171	0.590	.773	-0.989 – 1.330
Class D	1.223	0.531	.022 *	0.178 – 2.268
Extraversion	0.138	0.143	.334	-0.143 – 0.419
W1*Class B	-0.356	0.245	.148	-0.838 – 0.126
W1*Class C	0.108	0.294	.714	-0.471 – 0.687
W1*Class D	0.185	0.265	.487	-0.337 – 0.706
W1*Extra.	-0.027	0.261	.917	-0.542 – 0.487
Class B*Extra.	-0.118	0.288	.682	-0.685 – 0.448
Class C*Extra.	-1.764	0.923	.057	-3.579 – 0.051
Class D*Extra.	-0.196	0.659	.766	-1.492 – 1.100

W1*Class B*Extra.	-0.309	0.446	.488	-1.185 – 0.567
W1*Class C*Extra.	0.585	0.456	.201	-0.313 – 1.483
W1*Class D*Extra.	0.077	0.370	.836	-0.652 – 0.805

Openness to Experience ($R^2 = 0.443$, $F(15,327) = 19.13$, $p < .001$)

Intercept	0.363	0.077	<.001 ***	0.212 – 0.514
W1	0.043	0.154	.781	-0.259 – 0.345
Class B	1.341	0.154	<.001 ***	1.038 – 1.643
Class C	0.063	0.580	.913	-1.079 – 1.205
Class D	1.173	0.503	.020 *	0.184 – 2.162
Openness	0.042	0.136	.757	-0.225 – 0.309
W1*Class B	-0.290	0.244	.235	-0.770 – 0.189
W1*Class C	0.175	0.291	.548	-0.397 – 0.747
W1*Class D	0.226	0.257	.379	-0.280 – 0.732
W1*Open.	0.099	0.281	.725	-0.453 – 0.651
Class B*Open.	0.263	0.289	.363	-0.305 – 0.832
Class C*Open.	-1.177	0.927	.295	-3.002 – 0.647
Class D*Open.	-0.368	0.611	.547	-1.570 – 0.834
W1*Class B*Open.	-0.878	0.459	.057	-1.781 – 0.024
W1*Class C*Open.	0.193	0.487	.692	-0.765 – 1.152
W1*Class D*Open.	0.091	0.372	.808	-0.640 – 0.822

Conscientiousness ($R^2 = 0.446$, $F(15,327) = 19.34$, $p <.001$), $n = 343$

Intercept	0.351	0.077	<.001 ***	0.199 – 0.502
W1	0.050	0.152	.743	-0.249 – 0.349
Class B	1.252	0.159	<.001 ***	0.933 – 1.566
Class C	0.298	0.584	.610	-0.851 – 1.448
Class D	1.072	0.518	.039 *	0.054 – 2.090
Conscientiousness	0.186	0.164	.259	-0.137 – 0.508
W1*Class B	-0.204	0.246	.408	-0.689 – 0.280
W1*Class C	0.072	0.291	.805	-0.501 – 0.645
W1*Class D	0.264	0.262	.314	-0.251 – 0.780
W1*Conc.	0.192	0.307	.532	-0.412 – 0.797
Class B*Conc.	0.809	0.406	.047 *	0.011 – 1.607

Class C*Conc.	-0.823	1.132	.468	-3.050 – 1.404
Class D*Conc.	-0.519	0.557	.353	-1.614 – 0.577
W1*Class B*Conc.	-1.283	0.604	.035 *	-2.472 - -0.094
W1*Class C*Conc.	-0.135	0.539	.802	-1.195 – 0.925
W1*Class D*Conc.	-0.065	0.380	.865	-0.812 – 0.683

Neuroticism ($R^2 = 0.473$, $F(15,324) = 21.3$, $p < .001$), $n = 340$

Intercept	0.345	0.077	<.001 ***	0.193 – 0.496
W1	0.074	0.149	.619	-0.218 – 0.367
Class B	1.360	0.149	<.001 ***	1.066 – 1.653
Class C	0.193	0.596	.746	-0.979 – 1.366
Class D	1.243	0.464	.008 **	0.331 – 2.155
Neuroticism	-0.004	0.140	.980	-0.279 – 0.272
W1*Class B	-0.429	0.236	.070	-0.894 – 0.035
W1*Class C	0.115	0.296	.699	-0.469 – 0.698
W1*Class D	0.179	0.242	.461	-0.298 – 0.656
W1*Neur.	0.051	0.268	.850	-0.476 – 0.577
Class B*Neur.	-0.593	0.315	.060	-1.212 – 0.026
Class C*Neur.	1.371	1.101	.214	-0.794 – 3.537
Class D*Neur.	-0.786	0.757	.300	-2.275 – 0.704
W1*Class B*Neur.	1.457	0.446	.001 **	0.578 – 2.335
W1*Class C*Neur.	-0.569	0.556	.307	-1.662 – 0.525
W1*Class D*Neur.	0.269	0.414	.517	-0.545 – 1.082

Note on classes: Reference = low or no chronic pain, B = increasing chronic pain, C = decreasing chronic pain, D = severe regressing chronic pain.

Table S13

Simple slopes for the three way interactions between conscientiousness/neuroticism, Wave 1 pain and trajectory that were statistically significant in Table S11.

Effect	*b*	*S.E.*	*p*	*95% C. I.*
Conscientiousness (*n* = 343)				
Low/no chronic pain, low C				
Intercept	0.278	0.105	.009 **	0.071 – 0.485
Slope	-0.025	0.199	.900	-0.417 – 0.367
Low/no chronic pain, high C				
Intercept	0.447	0.101	<.001 ***	0.248 – 0.646
Slope	0.150	0.200	.454	-0.244 – 0.544
Increasing chronic pain, low C				
Intercept	1.215	.227	<.001 ***	0.768 – 1.662
Slope	0.272	0.303	.372	-0.325 – 0.869
Increasing chronic pain, high C				
Intercept	2.121	0.187	<.001 ***	1.752 – 2.490
Slope	-0.722	0.283	.011 *	-1.280 – -0.164
Neuroticism (*n* = 340)				
Low/no chronic pain, low N				
Intercept	0.347	0.093	<.001 ***	0.164 – 0.530
Slope	0.044	0.206	.833	-0.362 – 0.450
Low/no chronic pain, high N				
Intercept	0.343	0.114	.003 **	0.118 – 0.568
Slope	0.101	0.197	.608	-0.287 – 0.489
Increasing chronic pain, low N				
Intercept	2.065	0.190	<.001 ***	1.690 – 2.440
Slope	-1.267	0.270	<.001 ***	-1.799 – -0.735
Increasing chronic pain, high N				

Intercept	1.388	0.197	<.001 ***	1.000 – 1.776
Slope	0.446	0.249	.075	-0.045 – 0.937

Note: Low and high conscientiousness and neuroticism are defined as 1 standard deviation above and below the mean respectively. Simple slopes comparisons are between being not troubled by pain or being mildly troubled by pain at Wave 1.

Table S14
Moderated linear regressions of the relationship between SRH, trajectory and personality for all five personality traits, for the cases with data at all measurements (listwise deleted)

Effect	b	S.E.	p	95% C. I.
Conscientiousness ($R^2 = 0.340$, $F(15,326) = 12.69$, $p < .001$)				
Intercept	1.889	0.196	<.001 ***	1.502 – 2.275
W1	0.322	0.078	<.001 ***	0.169 – 0.474
Class B	0.818	0.363	.025 *	0.105 – 1.532
Class C	0.019	0.458	.967	-0.883 – 0.920
Class D	0.713	0.457	.119	-0.185 – 1.611
Conscientiousness	-0.503	0.400	.209	-1.290 – 0.283
W1*Class B	-0.090	0.126	.478	-0.339 – 0.159
W1*Class C	0.025	0.149	.866	-0.268 – 0.318
W1*Class D	0.039	0.137	.773	-0.229 – 0.308
W1*Conc.	0.092	0.148	.534	-0.199 – 0.383
Class B*Conc.	-1.148	0.861	.183	-2.841 – 0.545
Class C*Conc.	0.665	1.037	.522	-1.376 – 2.706
Class D*Conc.	0.338	0.843	.688	-1.319 – 1.996
W1*Class B*Conc.	0.436	0.290	.134	-0.135 – 1.006
W1*Class C*Conc.	-0.346	0.300	.250	-0.937 – 0.245
W1*Class D*Conc.	-0.056	0.229	.808	-0.596 – 0.394
Neuroticism ($R^2 = 0.432$, $F(15,327) = 18.33$, $p < .001$)				
Intercept	1.825	0.211	<.001 ***	1.409 – 2.241
W1	0.338	0.084	<.001 ***	0.173 – 0.503
Class B	0.747	0.365	.041 *	0.030 – 1.465
Class C	-0.329	0.444	.459	-1.203 – 0.544
Class D	0.922	0.464	.048 *	0.010 – 1.834
Neuroticism	-0.012	0.352	.973	-0.705 – 0.681
W1*Class B	-0.077	0.131	.557	-0.334 – 0.180
W1*Class C	0.168	0.147	.256	-0.122 – 0.458
W1*Class D	-0.024	0.140	.861	-0.299 – 0.250
W1*Neur.	-0.019	0.136	.886	-0.287 – 0.248
Class B*Neur.	0.312	0.600	.604	-0.869 – 1.493
Class C*Neur.	-0.291	0.867	.738	-1.997 – 1.415
Class D*Neur.	0.231	0.696	.740	-1.139 – 1.601

W1*Class B*Neur.	-0.015	0.233	.950	-0.474 – 0.444
W1*Class C*Neur.	0.156	0.285	.584	-0.404 – 0.716
W1*Class D*Neur.	0.056	0.215	.796	-0.367 – 0.479
Openness to Experience ($R^2 = 0.443$, $F(15,327) = 19.13$, $p < .001$)				
Intercept	1.880	0.194	<.001 ***	1.498 – 2.263
W1	0.322	0.077	<.001 ***	0.170 – 0.474
Class B	0.911	0.361	.012 *	0.201 – 1.621
Class C	-0.090	0.434	.837	-0.944 – 0.765
Class D	0.769	0.463	.097	-0.141 – 1.680
Openness	-0.480	0.344	.163	-1.156 – 0.196
W1*Class B	-0.119	0.126	.346	-0.368 – 0.129
W1*Class C	0.064	0.143	.655	-0.217 – 0.345
W1*Class D	0.021	0.138	.881	-0.251 – 0.292
W1*Open.	0.123	0.130	.347	-0.133 – 0.379
Class B*Open.	-0.514	0.658	.436	-1.809 – 0.781
Class C*Open.	0.850	0.744	.254	-0.614 – 2.315
Class D*Open.	0.118	0.604	.846	-1.070 – 1.306
W1*Class B*Open.	0.050	0.230	.828	-0.403 – 0.503
W1*Class C*Open.	-0.421	0.233	.072	-0.880 – 0.037
W1*Class D*Open.	-0.088	0.189	.643	-0.460 – 0.284
Agreeableness ($R^2 = 0.329$, $F(15,328) = 12.2$, $p <.001$), $n = 344$				
Intercept	1.803	0.193	<.001 ***	1.424 – 2.182
W1	0.348	0.077	<.001 ***	0.196 – 0.499
Class B	1.106	0.376	.003 **	0.367 – 1.846
Class C	-0.150	0.496	.762	-1.126 – 0.825
Class D	0.649	0.451	.152	-0.239 – 1.537
Agreeableness	-0.249	0.346	.473	-0.931 – 0.432
W1*Class B	-0.204	0.130	.117	-0.459 – 0.051
W1*Class C	0.082	0.154	.596	-0.221 – 0.384
W1*Class D	0.047	0.133	.726	-0.215 – 0.309
W1*Agre.	0.016	0.134	.907	-0.248 – 0.279

Class B*Agre.	-0.869	0.908	.339	-2.656 – 0.918
Class C*Agre.	1.210	1.056	.263	-0.868 – 3.287
Class D*Agre.	2.005	0.933	.032 *	0.170 – 3.841
W1*Class B*Agre.	0.209	0.300	.487	-0.382 – 0.800
W1*Class C*Agre.	-0.437	0.296	.141	-1.020 – 0.146
W1*Class D*Agre.	-0.375	0.256	.143	-0.878 – 0.128

Extraversion ($R^2 = 0.380$, $F(15,326) = 4.95$, $p < .001$), $n = 342$

Intercept	2.006	0.203	<.001 ***	1.607 – 2.405
W1	0.280	0.079	<.001 ***	0.124 – 0.436
Class B	0.866	0.370	.020 *	0.139 – 1.594
Class C	-0.359	0.445	.421	-1.235 – 0.517
Class D	0.724	0.473	.127	-0.207 – 1.654
Extraversion	-0.756	0.349	.031 *	-1.443 – 0.070
W1*Class B	-0.104	0.128	.420	-0.356 – 0.149
W1*Class C	0.152	0.144	.290	-0.130 – 0.435
W1*Class D	0.036	0.144	.805	-0.248 – 0.319
W1*Extr.	0.206	0.127	.106	-0.044 – 0.457
Class B*Extr.	-0.469	0.700	.503	-1.847 – 0.908
Class C*Extr.	1.682	0.832	.044 *	0.045 – 3.319
Class D*Extr.	0.416	0.683	.543	-0.927 – 1.759
W1*Class B*Extr.	-0.022	0.237	.925	-0.491 – 0.447
W1*Class C*Extr.	-0.687	0.253	.007 **	-1.184 – -0.190
W1*Class D*Extr.	-0.181	0.203	.373	-0.582 – 0.219

Note on classes: Reference = low or no chronic pain, B = increasing chronic pain, C = decreasing chronic pain, D = severe regressing chronic pain.

Table S15

Simple slopes for the three way interactions between agreeableness/extraversion, Wave 1 self reported health and trajectory for the comparisons significant in Table S13.

Effect	*b*	*S.E.*	*p*	*95% C. I.*
Agreeableness (*n* = 344)				
Low/no chronic pain, low A				
Intercept	1.923	0.241	<.001 ***	1.449 – 2.397
Slope	0.340	0.095	<.001 ***	0.153 – 0.527
Low/no chronic pain, high A				
Intercept	1.686	0.242	<.001 ***	1.210 – 2.162
Slope	0.356	0.093	<.001 ***	0.173 – 0.539
Increasing chronic pain, low A				
Intercept	1.564	0.596	.009 **	0.392 – 2.736
Slope	0.576	0.150	<.001 ***	0.281 – 0.871
Increasing chronic pain, high A				
Intercept	3.278	0.508	<.001 ***	2.279 – 4.277
Slope	0.226	0.137	.101	-0.044 – 0.496
Extraversion (*n* = 342)				
Low/no chronic pain, low E				
Intercept	2.403	0.322	<.001 ***	1.770 – 3.036
Slope	0.172	0.120	.151	-0.064 – 0.408
Low/no chronic pain, high E				
Intercept	1.503	0.235	<.001 ***	1.041 – 1.965
Slope	0.417	0.095	<.001 ***	0.230 – 0.604
Increasing chronic pain, low E				
Intercept	1.161	0.640	.071	-0.098 – 2.420
Slope	0.685	0.180	<.001 ***	0.331 – 1.039
Increasing chronic pain, high E				

Intercept	2.263	0.524	<.001 ***	1.232 – 3.294
Slope	0.113	0.167	.501	-0.216 – 0.442

Note: Low and high traits are defined as 1 standard deviation above and below the mean respectively. Simple slopes comparisons are between better (-1 SD from mean) and worse (+1 SD from mean) self reported health.

Table S16

Moderated regression models treating pain and self reported health as homogeneous, adjusted for type of arthritis (osteoarthritis as reference).

Variable	b	SE	p	95% CI
Agreeableness				
Health				
Intercept	1.785	0.139	<.001 ***	1.513 – 2.058
SRH at W1	0.459	0.046	<.001 ***	0.367 – 0.550
Agreeableness	0.010	0.276	.971	-0.553 – 0.553
RA	0.142	0.136	.296	-0.125 – 0.410
Other Arthritis	-0.173	0.150	.249	-0.469 – 0.122
W1 SRH * Agree.	-0.058	0.086	.503	-0.228 – 0.112
Pain				
Intercept	0.670	0.080	<.001 ***	0.512 – 0.828
W1 Pain	0.387	0.052	<.001 ***	0.285 – 0.489
Agreeableness	0.046	0.158	.772	-0.266 – 0.357
RA	0.018	0.148	.905	-0.274 – 0.309
Other Arthritis	0.004	0.162	.980	-0.315 – 0.323
W1 Pain * A	0.016	0.108	.880	-0.196 – 0.228
Conscientiousness				
Health				
Intercept	1.835	0.140	<.001 ***	1.559 – 2.110
SRH at W1	0.452	0.047	<.001 ***	0.360 – 0.545
Conscientiousness	-0.489	0.279	.081	-1.037 – 0.060
RA	0.113	0.134	.401	-0.152 – 0.378
Other Arthritis	-0.202	0.147	.170	-0.491 – 0.087
W1 SRH * Conc.	0.064	0.080	.794	-0.094 – 0.222
Pain				
Intercept	0.659	0.081	<.001 ***	0.499 – 0.818

	Estimates	Std. Error	p	CI
W1 Pain	0.384	0.052	<.001 ***	0.282 – 0.486
Conscientiousness	0.303	0.163	.065	-0.019 – 0.624
RA	0.034	0.148	.817	-0.257 – 0.326
Other Arthritis	-0.024	0.161	.883	-0.340 – 0.293
W1P * Conc.	-0.241	0.095	.012 *	-0.427 – -0.054
Extraversion				
Health				
Intercept	1.914	0.138	<.001 ***	1.641 – 2.186
SRH at W1	0.422	0.046	<.001 ***	0.332 – 0.513
Extraversion	-0.388	0.239	.106	-0.858 – 0.082
RA	0.133	0.131	.312	-0.125 – 0.390
Other Arthritis	-0.197	0.143	.169	-0.478 – 0.084
W1 SRH * Extra.	-0.016	0.075	.829	-0.163 – 0.131
Pain				
Intercept	0.674	0.082	<.001 ***	0.513 – 0.835
W1 Pain	0.384	0.052	<.001 ***	0.281 – 0.486
Extraversion	0.013	0.136	.926	-0.256 – 0.281
RA	0.036	0.149	.811	-0.258 – 0.329
Other Arthritis	-0.011	0.162	.945	-0.329 – 0.307
W1P * Extra.	-0.104	0.086	.227	-0.273 – 0.065
Neuroticism				
Health				
Intercept	1.744	0.139	<.001 ***	1.470 – 2.018
SRH at W1	0.481	0.047	<.001 ***	0.389 – 0.573
Neuroticism	-0.195	0.234	.405	-0.655 – 0.265
RA	0.107	0.135	.428	-0.158 – 0.372
Other Arthritis	-0.233	0.148	.115	-0.524 – 0.057

W1 SRH * Neur.	0.123	0.078	.116	-0.031 – 0.277

Pain

Intercept	0.682	0.081	<.001 ***	0.521 – 0.842
W1 Pain	0.385	0.052	<.001 ***	0.283 – 0.486
Neuroticism	0.122	0.142	.392	-0.158 – 0.401
RA	0.025	0.148	.868	-0.267 – 0.316
Other Arthritis	-0.020	0.161	.899	-0.337 – 0.296
W1P * Neur.	0.018	0.091	.843	-0.161 – 0.197

Openness to Experience

Health

Intercept	1.835	0.137	<.001 ***	1.566 – 2.103
SRH at W1	0.451	0.046	<.001 ***	0.361 – 0.541
Openness	-0.283	0.228	.215	-0.730 – 0.165
RA	0.113	0.133	.395	-0.148 – 0.374
Other Arthritis	-0.215	0.145	.139	-0.501 – 0.070
W1 SRH * Open.	-0.020	0.073	.784	-0.163 – 0.123

Pain

Intercept	0.677	0.081	<.001 ***	0.517 – 0.837
W1 Pain	0.386	0.052	<.001 ***	0.284 – 0.488
Openness	0.017	0.136	.903	-0.251 – 0.284
RA	0.020	0.149	.893	-0.274 – 0.314
Other Arthritis	-0.009	0.162	.954	-0.328 – 0.309
W1P & Open.	-0.092	0.084	.276	-0.258 – 0.074

Note: RA = Rheumatoid Arthritis, SRH = Self Reported Health, W1P = Wave 1 Pain

Table S17

Moderated regression models treating pain and self-reported health as heterogeneous by adjusting for trajectories of pain, also accounting for type of arthritis (osteoarthritis as reference).

Effect	b	S.E.	p	95% C. I.
Agreeableness				
Health				
Intercept	1.787	0.193	<.001 ***	1.407 – 2.167
W1	0.350	0.077	<.001 ***	0.198 – 0.502
Class B	1.104	0.380	.007 **	0.289 – 1.782
Class C	-0.122	0.496	.806	-1.098 – 0.854
Class D	0.646	0.452	.154	-0.243 – 1.535
Rheum	0.141	0.130	.278	-0.114 – 0.396
Other	-0.098	0.142	.490	-0.377 – 0.181
Agreeableness	-0.310	0.350	.377	-0.998 – 0.379
W1*Class B	-0.179	0.131	.174	-0.436 – 0.079
W1*Class C	0.073	0.154	.636	-0.230 – 0.376
W1*Class D	0.045	0.133	.736	-0.217 – 0.307
W1*Agre.	0.038	0.135	.778	-0.228 = 0.304
Class B*Agre.	-0.632	0.925	.495	-2.452 – 1.189
Class C*Agre.	1.199	1.057	.257	-0.880 – 3.278
Class D*Agre.	2.137	0.939	.023 *	0.290 – 3.983
W1*Class B*Agre.	0.132	0.306	.668	-0.470 – 0.733
W1*Class C*Agre.	-0.445	0.297	.134	-1.029 – 0.138
W1*Class D*Agre.	-0.417	0.258	.107	-0.923 – 0.090
Pain				
Intercept	0.350	0.081	<.001 ***	0.191 – 0.510
W1	0.053	0.155	.733	-0.251 – 0.357
Class B	1.355	0.156	<.001 ***	1.049 – 1.661
Class C	0.142	0.612	.816	-1.061 – 1.346
Class D	1.191	0.503	.018 *	0.202 – 2.179
Rheum	0.604	0.124	.628	-0.185 – 0.305
Other	0.047	0.135	.729	-0.220 – 0.313
Agreeableness	0.072	0.164	.659	-0.251 – 0.396

W1*Class B	-0.331	0.247	.180	-0.817 – 0.154
W1*Class C	0.121	0.302	.689	-0.474 – 0.716
W1*Class D	0.196	0.258	.449	-0.312 – 0.704
W1*Agre.	-0.094	0.303	.757	-0.690 – 0.503
Class B*Agre.	-0.361	0.345	.296	-1.040 – 0.318
Class C*Agre.	0.064	1.134	.955	-2.168 – 2.295
Class D*Agre.	-0.825	0.712	.248	-2.226 – 0.577
W1*Class B*Agre.	0.476	0.541	.379	-0.588 – 1.541
W1*Class C*Agre.	0.092	0.552	.868	-0.994 – 1.178
W1*Class D*Agre.	0.534	0.442	.228	-0.335 – 1.404

Conscientiousness

Health

Intercept	1.884	0.197	<.001 ***	1.496 – 2.271
W1	0.327	0.078	<.001 ***	0.174 – 0.480
Class B	0.759	0.365	.039 *	0.040 – 1.478
Class C	0.040	0.459	.931	-0.863 – 0.943
Class D	0.696	0.457	.129	-0.203 – 1.596
Rheum	0.084	0.128	.515	-0.169 – 0.335
Other	-0.161	0.141	.254	-0.439 – 0.116
Conscientiousness	-0.525	0.401	.191	-1.314 – 0.264
W1*Class B	-0.068	0.127	.594	-0.319 – 0.183
W1*Class C	0.018	0.149	.905	-0.275 – 0.311
W1*Class D	0.040	0.137	.768	-0.228 – 0.309
W1*Conc.	0.100	0.148	.499	-0.191 – 0.392
Class B*Conc.	-1.049	0.864	.226	-2.748 – 0.650
Class C*Conc.	0.650	1.038	.632	-1.392 – 2.692
Class D*Conc.	0.326	0.843	.699	-1.333 – 1.985
W1*Class B*Conc.	0.409	0.291	.161	-0.164 – 0.981
W1*Class C*Conc.	-0.350	0.301	.244	-0.942 – 0.241
W1*Class D*Conc.	-0.057	0.229	.804	-0.507 – 0.394

Pain

Intercept	0.342	0.081	<.001 ***	0.184 – 0.501
W1	0.051	0.153	.740	-0.250 – 0.351

Class B	1.253	0.160	<.001 ***	0.939 – 1.567
Class C	0.360	0.595	.546	-0.810 – 1.530
Class D	1.051	0.521	.045 *	0.025 – 2.076
Rheum	0.074	0.122	.543	-0.166 – 0.314
Other	-0.025	0.132	.850	-0.285 – 0.235
Conscientiousness	0.186	0.165	.260	-0.138 – 0.510
W1*Class B	-0.203	0.247	.411	-0.689 – 0.282
W1*Class C	0.043	0.295	.883	-0.538 – 0.625
W1*Class D	0.271	0.263	.304	-0.247 – 0.788
W1*Conc.	0.197	0.308	.524	-0.410 – 0.803
Class B*Conc.	0.821	0.408	.045 *	0.018 – 1.624
Class C*Conc.	-0.808	1.135	.477	-3.041 – 1.426
Class D*Conc.	-0.532	0.559	.342	-1.632 – 0.568
W1*Class B*Conc.	-1.305	0.608	.033 *	-2.501 - -0.110
W1*Class C*Conc.	-0.148	0.540	.785	-1.211 – 0.916
W1*Class D*Conc.	-0.065	0.381	.864	-0.815 – 0.684
Extraversion				
Health				
Intercept	2.004	0.203	<.001 ***	1.604 – 2.403
W1	0.279	0.079	<.001 ***	0.122 – 0.435
Class B	0.800	0.372	.032 *	0.069 – 1.532
Class C	-0.357	0.445	.423	-1.232 – 0.518
Class D	0.712	0.473	.133	-0.218 – 1.643
Rheum	0.152	0.124	.221	-0.092 – 0.396
Other	-0.118	0.136	.385	-0.385 – 0.149
Extraversion	-0.803	0.350	.022 *	-1.492 – -0.115
W1*Class B	-0.079	0.129	.544	-0.333 – 0.176
W1*Class C	0.151	0.143	.295	-0.132 – 0.433
W1*Class D	0.036	0.144	.801	-0.247 – 0.320
W1*Extra.	0.221	0.128	.084	-0.030 – 0.472
Class B* Extra.	-0.401	0.701	.568	-1.779 - 0.978
Class C* Extra.	1.698	0.833	.042 *	0.059 – 3.338
Class D* Extra.	0.485	0.684	.478	-0.860 – 1.830

W1*Class B* Extra.	-0.042	0.239	.860	-0.512 – 0.427
W1*Class C* Extra.	-0.697	0.253	.006 **	-1.194 - -0.200
W1*Class D* Extra.	-0.202	0.204	.322	-0.603 - 0.199
Pain				
Intercept	0.329	0.083	<.001 ***	0.165 – 0.493
W1	0.069	0.155	.655	-0.235 – 0.374
Class B	1.388	0.156	<.001 ***	1.080 – 1.695
Class C	0.239	0.600	.691	-0.941 – 1.418
Class D	1.232	0.535	.022 *	0.180 – 2.284
Rheum	0.078	0.124	.533	-0.167 – 0.322
Other	0.048	0.134	.720	-0.215 – 0.311
Extraversion	0.142	0.143	.322	-0.140 – 0.424
W1*Class B	-0.351	0.246	.154	-0.835 = 0.132
W1*Class C	0.080	0.298	.788	-0.506 – 0.667
W1*Class D	0.184	0.266	.489	-0.339 – 0.707
W1*Extra.	-0.028	0.262	.914	-0.544 – 0.489
Class B* Extra.	-0.118	0.289	.684	-0.687 – 0.451
Class C* Extra.	-1.763	0.927	.058	-3.586 – 0.061
Class D* Extra.	-0.219	0.661	.741	-1.520 - 1.082
W1*Class B* Extra.	-0.320	0.447	.474	-1.200 – 0.559
W1*Class C* Extra.	0.581	0.458	.205	-0.320 – 1.482
W1*Class D* Extra.	0.089	0.372	.812	-0.643 – 0.820
Neuroticism				
Health				
Intercept	1.821	0.212	<.001 ***	1.405 – 2.238
W1	0.340	0.084	<.001 ***	0.174 – 0.505
Class B	0.684	0.367	.064	-0.039 – 1.406
Class C	-0.324	0.444	.466	-1.197 – 0.549
Class D	0.901	0.464	.053	-0.012 – 1.814
Rheum	0.120	0.131	.360	-0.676 – 0.711
Other	-0.154	0.147	.296	-0.138 – 0.377
Neuroticism	0.018	0.353	.960	-0.442 – 0.135
W1*Class B	-0.055	0.132	.678	-0.314 – 0.204

W1*Class C	0.166	0.147	.261	-0.124 – 0.456
W1*Class D	-0.021	0.140	.882	-0.295 – 0.254
W1*Neur.	-0.034	0.136	.804	-0.302 – 0.234
Class B* Neur.	0.153	0.512	.803	-1.051 - 1.358
Class C* Neur.	-0.426	0.872	.625	-2.142 – 1.290
Class D* Neur.	0.237	0.697	.734	1.134 – 1.607
W1*Class B* Neur.	0.055	0.239	.817	-0.416 – 0.526
W1*Class C* Neur.	0.215	0.288	.455	-0.351 – 0.781
W1*Class D* Neur.	0.059	0.215	.783	-0.364 – 0.482
Pain				
Intercept	0.337	0.081	<.001 ***	0.178 – 0.495
W1	0.076	0.149	.613	-0.218 – 0.370
Class B	1.362	0.150	<.001 ***	1.068 – 1.657
Class C	0.271	0.611	.658	-0.931 – 1.473
Class D	1.230	0.467	.009 **	0.311 – 2.149
Rheum	0.072	0.120	.549	-0.165 – 0.309
Other	-0.022	0.129	.862	-0.275 – 0.231
Neuroticism	-0.004	0.140	.980	-0.280 – 0.273
W1*Class B	-0.431	0.237	.070	-0.898 – 0.035
W1*Class C	0.077	0.303	.799	-0.518 – 0.673
W1*Class D	0.182	0.243	.455	-0.297 - 0.660
W1*Neur.	0.042	0.269	.876	-0.487 – 0.571
Class B* Neur.	-0.593	0.315	.061	-1.213 – 0.028
Class C* Neur.	1.315	1.107	.236	-0.862 – 3.493
Class D* Neur.	-0.810	0.760	.287	-2.306 – 0.685
W1*Class B* Neur.	1.468	0.448	.001 **	-0.587 – 2.349
W1*Class C* Neur.	-0.527	0.561	.348	-1.631 – 0.577
W1*Class D* Neur.	0.286	0.416	.491	-0.531 – 1.104
Openness				
Health				
Intercept	1.880	0.195	<.001 ***	1.497 – 2.263
W1	0.327	0.078	<.001 ***	0.174 – 0.479
Class B	0.846	0.365	.021 *	0.128 – 1.564

Class C	-0.085	0.434	.845	-0.940 – 0.770
Class D	0.753	0.463	.105	-0.159 – 1.665
Rheum	0.079	0.128	.537	-0.173 – 0.331
Other	-0.164	0.140	.241	-0.439 – 0.111
Openness	-0.525	0.345	.129	-1.204 – 0.154
W1*Class B	-0.095	0.128	.455	-0.347 – 0.156
W1*Class C	0.061	0.143	.672	-0.220 – 0.341
W1*Class D	0.022	0.138	.875	0.250 – 0.294
W1*Open.	0.133	0.130	.308	-0.123 – 0.390
Class B* Open.	-0.429	0.667	.521	-1.741 – 0.884
Class C* Open.	0.935	0.747	.212	-0.535 – 2.405
Class D* Open.	0.183	0.606	.762	-1.009 – 1.376
W1*Class B* Open.	0.036	0.232	.879	-0.421 – 0.492
W1*Class C* Open.	-0.447	0.234	.057	-0.907 – 0.014
W1*Class D* Open.	-0.103	0.190	.588	-0.476 – 0.270
Pain				
Intercept	0.355	0.080	<.001 ***	0.197 – 0.513
W1	0.050	0.155	.795	-0.264 – 0.345
Class B	1.340	0.154	<.001 ***	1.036 – 1.643
Class C	0.111	0.592	.852	-1.054 – 1.275
Class D	1.169	0.507	.022 *	0.172 – 2.166
Rheum	0.057	0.124	.646	-0.186 – 0.300
Other	0.003	0.133	.980	-0.257 – 0.264
Openness	0.036	0.137	.793	-0.234 – 0.306
W1*Class B	-0.287	0.245	.242	-0.769 – 0.194
W1*Class C	0.155	0.295	.599	-0.424 – 0.735
W1*Class D	0.229	0.258	.375	-0.279 – 0.737
W1*Open.	0.114	0.284	.688	-0.444 - 0.671
Class B* Open.	0.279	0.292	.340	-0.296 – 0.854
Class C* Open.	-1.173	0.930	.208	-3.003 – 0.656
Class D* Open.	-0.361	0.613	.556	-1.567 – 0.844
W1*Class B* Open.	-0.897	0.462	.053	-1.806 – 0.012
W1*Class C* Open.	0.180	0.490	.713	-0.784 – 1.144

W1*Class D* Open.	0.075	0.374	.840	-0.661 – 0.812

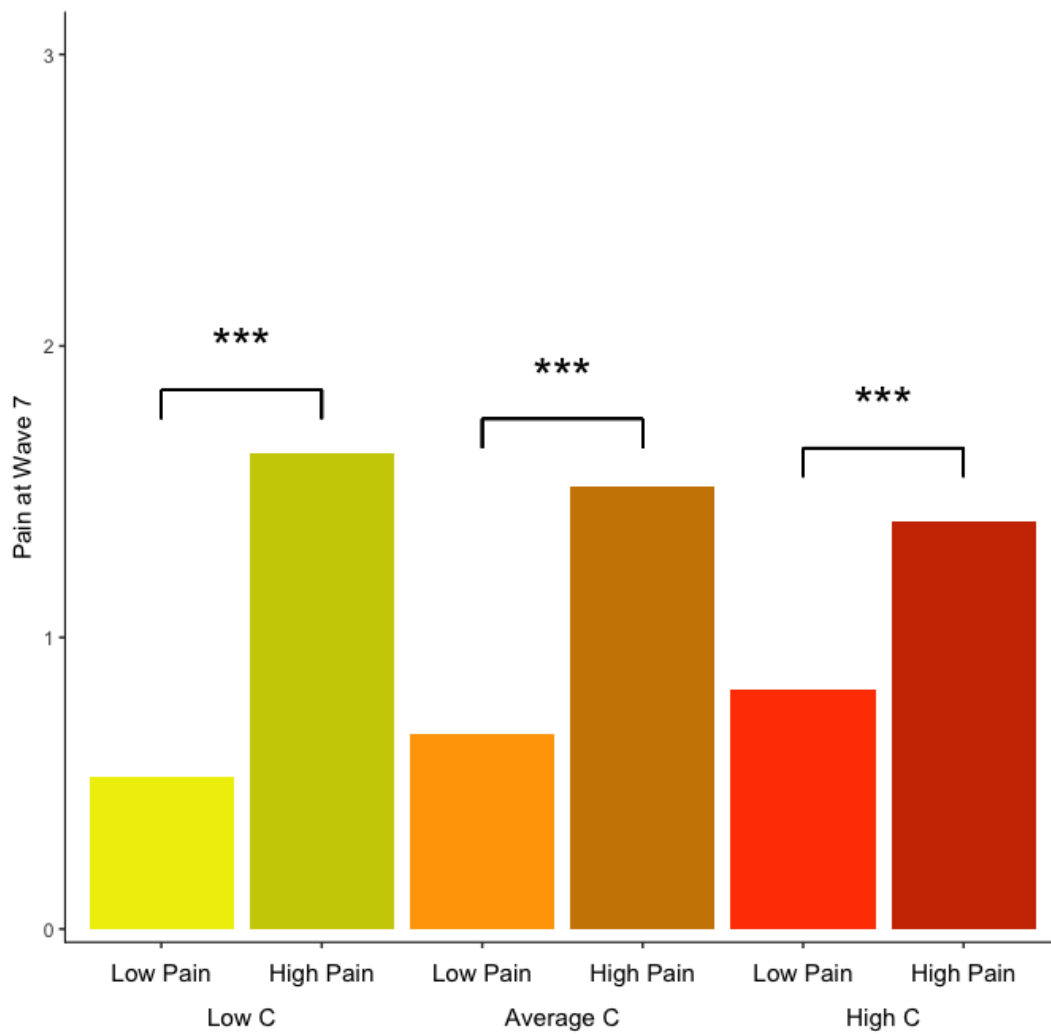Note: Rheum = Rheumatoid Arthritis, W1 = Wave 1 (health or pain).

Figure S1

Moderated relationship between wave 1 pain and Conscientiousness, treating arthritis as a heterogeneous condition. Low and high pain are +/- 1 standard deviation from the mean, average is mean conscientiousness