

Supplementary Materials

Table S1 Physical activity questions used in the Welsh Health Survey.

EXERCISE																						
<p>43a During the 7 days ending yesterday, on which days did you do LIGHT exercise or physical activity for at least 30 minutes? <i>Blocks of activity lasting at least 10 minutes, which were done on the same day, can be counted towards the full 30 minutes.</i> Include physical activity which is part of your job</p>																						
<p>exltnum...exltmon, exlttue, exltwed, exltthu, exltfri, exltsat, exltsun</p>																						
<p>Tick all days that apply</p>																						
<p>Light exercise / activity</p> <p><i>For example</i> Housework (eg Hoovering, dusting), walking at an average pace, golf, light gardening (eg weeding)</p>	<table border="1"> <thead> <tr> <th>Mon</th> <th>Tue</th> <th>Wed</th> <th>Thu</th> <th>Fri</th> <th>Sat</th> <th>Sun</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>01</td> <td>02</td> <td>03</td> <td>04</td> <td>05</td> <td>06</td> <td>07</td> </tr> </tbody> </table> <p>2451-64</p>	Mon	Tue	Wed	Thu	Fri	Sat	Sun	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	01	02	03	04	05	06	07
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<p>If no light exercise in the last 7 days, please tick</p>	<p><input type="checkbox"/> 08 exltno</p>																					
<p>43b During the 7 days ending yesterday, on which days did you do MODERATE exercise or physical activity for at least 30 minutes? <i>Blocks of activity lasting at least 10 minutes, which were done on the same day, can be counted towards the full 30 minutes.</i> Include physical activity which is part of your job</p>																						
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<p>Tick all days that apply</p>																						
<p>Moderate exercise / activity</p> <p><i>For example</i> Heavy housework (eg spring cleaning, walking with heavy shopping), fast walking, dancing, gentle swimming, heavy gardening (eg digging)</p>	<table border="1"> <thead> <tr> <th>Mon</th> <th>Tue</th> <th>Wed</th> <th>Thu</th> <th>Fri</th> <th>Sat</th> <th>Sun</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>01</td> <td>02</td> <td>03</td> <td>04</td> <td>05</td> <td>06</td> <td>07</td> </tr> </tbody> </table> <p>2465-78</p>	Mon	Tue	Wed	Thu	Fri	Sat	Sun	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	01	02	03	04	05	06	07
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<p>If no moderate exercise in the last 7 days, please tick</p>	<p><input type="checkbox"/> 08 exmodno</p>																					
<p>43c During the 7 days ending yesterday, on which days did you do VIGOROUS exercise or physical activity for at least 30 minutes? <i>Blocks of activity lasting at least 10 minutes, which were done on the same day, can be counted towards the full 30 minutes.</i> Include physical activity which is part of your job</p>																						
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<p>Tick all days that apply</p>																						
<p>Vigorous exercise / activity</p> <p><i>For example</i> Running, jogging, squash, swimming lengths, aerobics, fast cycling, football</p>	<table border="1"> <thead> <tr> <th>Mon</th> <th>Tue</th> <th>Wed</th> <th>Thu</th> <th>Fri</th> <th>Sat</th> <th>Sun</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>01</td> <td>02</td> <td>03</td> <td>04</td> <td>05</td> <td>06</td> <td>07</td> </tr> </tbody> </table> <p>2479-92</p>	Mon	Tue	Wed	Thu	Fri	Sat	Sun	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	01	02	03	04	05	06	07
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<p>If no vigorous exercise in the last 7 days, please tick</p>	<p><input type="checkbox"/> 08 exvigno</p>																					

Table S2. Missing data in the demographic variables.

Characteristics	Total No. (%)	Missing data No. (%)
Age (years)	74,578 (100)	0 (0)
Gender	74,578 (100)	0 (0)
BMI, kg/m ²	68,538 (91.9)	6040 (8.1)
Smoking status	73,527 (98.6)	1051 (1.4)
Highest level of education	69,264 (92.9)	5314 (7.1)
Employment status	71,303 (95.6)	3275 (4.4)
Prevalent chronic illness	73,218 (98.2)	1360 (1.8)
Prevalent mental illness	71,532 (95.9)	3046 (4.1)
Prevalent musculoskeletal disorder	71,254 (95.5)	3324 (4.5)
Abbreviations: BMI, body mass index.		

Table S3. Multivariable-adjusted means of HRQoL by MVPA volume, stratified by sex and age.

	Predicted marginal mean of HRQoL (95% CI) ^a	Coefficient (95% CI) ^a
Sex		
Male		
None	73.81 (73.47-74.16)	Referent
Very low	78.85 (78.16-79.54)	5.04 (4.27-5.80)
Low	80.08 (79.49-80.67)	6.27 (5.58-6.95)
Sufficient	80.67 (80.20-81.13)	6.85 (6.25-7.45)
High	80.23 (79.62-80.84)	6.42 (5.68-7.15)
Very high	81.16 (80.74-81.58)	7.35 (6.74-7.95)
Trend p value		<0.001
Female		
None	69.73 (69.40-70.06)	Referent
Very low	75.58 (74.96-76.19)	5.85 (5.14-6.55)
Low	76.21 (75.66-76.75)	6.48 (5.82-7.13)
Sufficient	77.36 (76.91-77.81)	7.63 (7.04-8.22)
High	77.36 (76.64-78.09)	7.63 (6.81-8.46)
Very high	78.11 (77.58-78.63)	8.38 (7.70-9.05)
Trend p value		<0.001
Age (years)		
20-39		
None	77.68 (77.22-78.13)	Referent
Very low	80.24 (79.53-80.95)	2.56 (1.74-3.39)
Low	81.31 (80.70-81.93)	3.63 (2.87-4.40)
Sufficient	82.29 (81.82-82.77)	4.62 (3.94-5.30)
High	81.89 (81.19-82.59)	4.21 (3.34-5.08)
Very high	83.52 (83.01-84.04)	5.84 (5.08-6.60)
Trend p value		<0.001
40-59		
None	71.86 (71.45-72.26)	Referent
Very low	77.20 (76.47-77.94)	5.35 (4.51-6.18)
Low	78.25 (77.62-78.88)	6.39 (5.63-7.15)

Sufficient	79.20 (78.68-79.72)	7.35 (6.66-8.03)
High	78.69 (77.96-79.42)	6.84 (5.97-7.71)
Very high	79.60 (79.08-80.12)	7.74 (7.02-8.47)
Trend p value		<0.001

≥ 60		
None	65.27 (64.87-65.68)	Referent
Very low	73.12 (72.14-74.11)	7.85 (6.78-8.93)
Low	73.61 (72.75-74.48)	8.34 (7.36-9.32)
Sufficient	75.01 (74.28-75.74)	9.74 (8.87-10.60)
High	75.86 (74.72-77.01)	10.59 (9.35-11.84)
Very high	75.50 (74.75-76.25)	10.23 (9.32-11.14)
Trend p value		<0.001

Abbreviations: CIs, confidence intervals; HRQoL, health-related quality of life; MVPA, moderate- to vigorous-intensity physical activity.

Scale range for HRQoL and each SF-36 domain: 0-100, higher scores indicative of better status or health.

None: not reporting any MVPA; Very low: reporting > 0 – <90 min/week; Low: reporting ≥ 90 – <150 min/week; Sufficient: reporting 150 - <300 min/week; High: reporting ≥300 - <390; Very high: reporting ≥390).

^a The model was adjusted for age, sex, body mass index, education, employment, smoking status, mental illness, musculoskeletal disorder, chronic illness (including any heart and respiratory conditions, diabetes and cancer) and light-intensity physical activity.