**Appendix**

|  |
| --- |
| *Table A1. Individual classification according to the WHO guidelines*  |
|  | Intensity |
|  | Moderate | Vigorous |
| Non-active | *t* = 0 | *t* = 0 |
| Below-healthy | 0 < *t* < 150 | 0 < *t* < 75 |
| Healthy | 150 ≤ *t* < 300 | 75 ≤ *t* < 150 |
| Extra-healthy | *t* ≥ 300 | *t* ≥ 150 |
| Note: *t* = minutes per week.  |

*Table A2. Regional classification according to PA rates*

|  |  |  |
| --- | --- | --- |
| **C1 Extra-healthy group** |  |  |
| AT11 Burgenland | DED Sachsen | HR03 Jadranska Hrvatska | SE11 Stockholm |
| AT12 Niederoesterreich | DEE Sachsen-Anhalt | HU21 Central/North Transdanubia | SE21 Smaland med Oearna |
| AT32 Salzburg | DEF Schleswig-Holstein | HU22 West Transdanubia | SE22 Sydsverige |
| AT34 Vorarlberg | DK01 Hovedstaden | HU32 North Great Plain | SE31 Norra Mellansverige |
| BE21 Antwerpen | DK02 Sjaelland | HU33 South Great Plain | SE32 Mellersta Norrland |
| BE22 Limburg | DK03 Syddanmark | LU LUXEMBOURG | SE33 Oevre Norrland |
| BE34 Luxembourg | DK05 Nordjylland | LV LATVIA | SI04 Zahodna Slovenija |
| BG31 Severozapaden | EE ESTONIA | NL12 Friesland | SK01 Bratislavsky kraj |
| CZ05 Severovychod | ES11 Galicia | NL13 Drenthe | SK03 Stredne Slovensko |
| DE1 Baden-Wuerttemberg | ES22 Navarra | NL21 Overijssel | UKE Yorkshire and The humber |
| DE2 Bayern | ES70 Canarias | NL22 Gelderland | UKF East midlands |
| DE3 Berlin | FI1B Helsinki-Uusimaa | NL23 Flevoland | UKH East of England |
| DE4 Brandenburg | FI1C Etela-Suomi | NL31 Utrecht | UKJ South East |
| DE5 Bremen | FI1D Pohjois- ja Ita-Suomi | NL32 Noord-Holland | UKK South West |
| DE6 Hamburg | FRF2 Champagne-Ardenne | NL33 Zuid-Holland | UKL Wales |
| DE7 Hessen | FRB0 Centre | NL41 Noord-Brabant | UKM Scotland |
| DE9 Niedersachsen | FRC1 Bourgogne | NL42 Limburg |  |
| DEA Nordrhein-Westfalen | FRE1 Nord - Pas de Calais | PL51 Dolnoslaskie |  |
| DEC Saarland | FRH0 Bretagne | PL52 Opolskie |  |

|  |  |  |
| --- | --- | --- |
| **C2 Healthy group** |   |   |
| AT33 Tirol | DK04 Midtjylland | ES53 Baleares | NL11 Groningen |
| BE23 Oost-Vlaanderen | EL13 Ditiki Makedonia | ES61 Andalucia | NL34 Zeeland |
| BE31 Brabant Wallon | EL14 Thessalia | FRF3 Lorraine | PL72 Swietokrzyskie |
| CZ03 Jihozapad | ES12 Asturias | FRI3 Poitou-Charentes | PL43 Lubuskie |
| CZ06 Jihovychod | ES13 Cantabria | FRI1 Aquitaine | SE12 Oestra Mellansverige |
| CZ07 Stredni Morava | ES21 Pais Vasco | FRJ2 Midi-Pyrenees | SE23 Vaestsverige |
| DE8 Mecklenburg-Vorpommern | ES51 Cataluna | FRL0 Provence-Alpes-Cote d-Azur | UKD North West |
| DEB Rheinland-Pfalz | ES52 Valencia | LT01 Sostines regionas |   |

|  |  |  |
| --- | --- | --- |
| **C3 Below-healthy group** |   |   |
| AT13 Wien | CZ08 Moravskoslezsko | FRC2 Franche-Comte | PL62 Warminsko-mazurskie |
| AT21 Kaernten | DEG Thueringen | FRG0 Pays de la Loire | PL63 Pomorskie |
| BE10 Brussels hoofdstedelijk gewest | EL11 Anatoliki Makedonia, Thraki | FRK2 Rhone Alpes | PT15 Algarve |
| BE24 Vlaams Brabant | EL12 Kentriki Makedonia | FRK1 Auvergne | RO11 North-West |
| BE25 West-Vlaanderen | EL23 Ditiki Ellada | FRJ1 Languedoc-Roussillon | RO22 South-East |
| BE32 Hainaut | EL24 Sterea Ellada Evia | HR04 Kontinentalna Hrvatska | RO32 Bucharest |
| BE33 Liege | EL30 Attiki | HU11 & HU12 Budapest + Pest | RO42 West |
| BE35 Namur | EL43 Kriti | HU31 North Hungary | SI03 Vzhodna Slovenija |
| BG33 Severoiztochen | ES24 Aragon | IE04 Northern and Western | UKC North East |
| BG34 Yugoiztochen | ES30 Madrid | IE06 Eastern and Midland | UKG West Midlands |
| BG41 Yugozapaden | ES41 Castilla/Leon | IE05 Southern | UKI London |
| BG42 Yuzhen tsentralen | ES42 Castilla/La Mancha | ITF Sud | UKN Northern Ireland |
| CZ01 Praha | FR10 Ile de France | PL71 Lodzkie |   |
| CZ02 Stredni Cechy | FRD2 Haute Normandie | PL82 Podkarpackie |   |
| CZ04 Severozapad | FRD1 Basse Normandie | PL61 Kujawsko-pomorskie |   |

|  |  |  |
| --- | --- | --- |
| **C4 Unhealthy group** |   |   |
| AT22 Steiermark | FRE2 Picardie | MT MALTA | PT17 Lisboa |
| AT31 Oberoesterreich | FRF1 Alsace | PL92 Mazowieckie | PT18 Alentejo |
| BG32 Severen tsentralen | FRI2 Limousin | PL21 Malopolskie | RO12 Central |
| CY REPUBLIC OF CYPRUS | HU23 South Transdanubia | PL22 Slaskie | RO21 North-East |
| EL21 Ipiros | ITC Nord-Ovest | PL81 Lubelskie | RO31 South |
| EL25 Peloponnissos | ITG Isole | PL84 Podlaskie | RO41 South-West |
| ES43 Extremadura | ITH Nord-Est | PL41 Wielkopolskie | SK02 Zapadne Slovensko |
| ES62 Murcia | ITI Centro | PT11 Norte | SK04 Vychodne Slovensko |
| FI19 Lansi-Suomi | LT02 Vidurio ir vakaru Lietuvos regionas | PT16 Centro |   |

|  |
| --- |
| *Table A3. Cluster membership by country: number and % of regions in each cluster* |
| Country | C1 extra-healthy | C2 healthy | C3 below-healthy | C4 unhealthy | Num. of regions |
| Num. | % | Num. | % | Num. | % | Num. | % |
| Austria | 4 | 44.4% | 1 | 11.1% | 2 | 22.2% | 2 | 22.2% | 9 |
| Belgium | 3 | 27.3% | 2 | 18.2% | 6 | 54.5% | 0 | 0.0% | 11 |
| Bulgaria | 1 | 16.7% | 0 | 0.0% | 4 | 66.7% | 1 | 16.7% | 6 |
| Czech Rep. | 1 | 12.5% | 3 | 37.5% | 4 | 50.0% | 0 | 0.0% | 8 |
| Germany | 13 | 81.3% | 2 | 12.5% | 1 | 6.3% | 0 | 0.0% | 16 |
| Denmark | 4 | 80.0% | 1 | 20.0% | 0 | 0.0% | 0 | 0.0% | 5 |
| Greece | 0 | 0.0% | 2 | 20.0% | 6 | 60.0% | 2 | 20.0% | 10 |
| Spain | 3 | 18.8% | 7 | 43.8% | 4 | 25.0% | 2 | 12.5% | 16 |
| Finland | 3 | 75.0% | 0 | 0.0% | 0 | 0.0% | 1 | 25.0% | 4 |
| France | 5 | 23.8% | 5 | 23.8% | 8 | 38.1% | 3 | 14.3% | 21 |
| Croatia | 1 | 50.0% | 0 | 0.0% | 1 | 50.0% | 0 | 0.0% | 2 |
| Hungary | 4 | 57.1% | 0 | 0.0% | 2 | 28.6% | 1 | 14.3% | 7 |
| Ireland | 0 | 0.0% | 0 | 0.0% | 3 | 100% | 0 | 0.0% | 3 |
| Italy | 0 | 0.0% | 0 | 0.0% | 1 | 20.0% | 4 | 80.0% | 5 |
| Lithuania | 0 | 0.0% | 1 | 50.0% | 0 | 0.0% | 1 | 50.0% | 2 |
| Netherlands | 10 | 83.3% | 2 | 16.7% | 0 | 0.0% | 0 | 0.0% | 12 |
| Poland | 2 | 13.3% | 2 | 13.3% | 5 | 33.3% | 6 | 40.0% | 15 |
| Portugal | 0 | 0.0% | 0 | 0.0% | 1 | 20.0% | 4 | 80.0% | 5 |
| Romania | 0 | 0.0% | 0 | 0.0% | 4 | 50.0% | 4 | 50.0% | 8 |
| Sweden | 6 | 75.0% | 2 | 25.0% | 0 | 0.0% | 0 | 0.0% | 8 |
| Slovenia | 1 | 50.0% | 0 | 0.0% | 1 | 50.0% | 0 | 0.0% | 2 |
| Slovakia | 2 | 50.0% | 0 | 0.0% | 0 | 0.0% | 2 | 50.0% | 4 |
| United Kingdom | 7 | 58.3% | 1 | 8.3% | 4 | 33.3% | 0 | 0.0% | 12 |
| *Single-region countries* |
| Cyprus | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 1 | 100% | 1 |
| Estonia | 1 | 100% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 1 |
| Luxembourg | 1 | 100% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 1 |
| Latvia | 1 | 100% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 1 |
| Malta | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 1 | 100% | 1 |
| *Totals* | 73 | 37.2% | 31 | 15.8% | 57 | 29.1% | 35 | 17.9% | 196 |
| *Note*: NUTs2 for all countries except Italy, UK and DE (NUTs1) |

|  |
| --- |
| *Table A4. Hausman-McFadden Independence of Irrelevant Alternatives tests* |
| Omitted  | *χ2* | df | *P* > *χ2* | evidence |
| C1 | -51.83 | 11 | 1.000 | for Ho |
| C2 | 67.28 | 12 | 0.000 | against Ho |
| C3 | -34.26 | 11 | 1.000 | for Ho |
| C4 | -52.1 | 21 | 1.000 | for Ho |
| *Note:* *χ*2 < 0 denotes that the estimated model does not meet asymptotic assumptions of the test |