

**Table S1.** Mean values of different subclasses of polyphenols by sex-specific tertiles of total polyphenols, and cut-points for polyphenol tertiles.

|                                            | Sex-specific tertiles of total polyphenol |                  |                  |                   | Cut-off values of tertiles |                 |                   |
|--------------------------------------------|-------------------------------------------|------------------|------------------|-------------------|----------------------------|-----------------|-------------------|
|                                            | All                                       | T1               | T2               | T3                | Men                        | Women           | P <sup>2</sup>    |
| N                                          | 84 158                                    | 28052            | 28053            | 28053             |                            |                 |                   |
| <b>Sum of total individual polyphenols</b> | <b>999 (484)</b>                          | <b>613 (165)</b> | <b>997 (116)</b> | <b>1388 (402)</b> | <b>850/1239</b>            | <b>745/1114</b> | <b>&lt;0.0001</b> |
| (Total polyphenols intake. Folin assay)    | 2084 (990)                                | 1196 (1428)      | 1939 (236)       | 3117 (943)        | 1836/2601                  | 1546/2212       | <0.0001           |
| Anthocyanins                               | 41.8 (51.9)                               | 27.5 (30.3)      | 43.10 (42.0)     | 55.0 (69.7)       | 22.8/56.3                  | 14.1/39.3       | <0.0001           |
| Dihydrochalcones                           | 2.70 (3.41)                               | 1.72 (2.55)      | 2.62 (3.13)      | 3.77 (4.20)       | 0.92/3.50                  | 0.77/2.68       | <0.0001           |
| Dihydroflavonols                           | 2.05 (3.67)                               | 1.03 (1.94)      | 2.10 (3.21)      | 3.02 (4.88)       | 0.00/0.76                  | 0.00/0.83       | <0.0001           |
| Catechins                                  | 128 (145)                                 | 75.4 (64.9)      | 131 (114)        | 178 (196)         | 32.5/87.7                  | 37.1/155.7      | <0.0001           |
| Theaflavins                                | 17.8 (27.8)                               | 10.3 (12.7)      | 18.5 (22.1)      | 24.5 (38.4)       | 0.00/15.6                  | 0.00/20.7       | <0.0001           |
| Proanthocyanidinins                        | 52.9 (39.5)                               | 33.7 (21.9)      | 53.2 (31.8)      | 71.7 (49.7)       | 37.0/72.1                  | 29.1/57.5       | <0.0001           |
| Flavanons                                  | 30.3 (31.6)                               | 30.1 (33.1)      | 30.1 (30.9)      | 30.7 (30.9)       | 11.8/42.0                  | 10.0/33.0       | 0.04              |
| Flavones                                   | 25.6 (13.5)                               | 23.3 (11.6)      | 26.0 (13.2)      | 27.6 (15.2)       | 23.7/38.4                  | 18.2/26.8       | <0.0001           |
| Flavonols                                  | 66.6 (40.3)                               | 46.5 (26.6)      | 67.0 (33.1)      | 86.3 (48.3)       | 47.0/75.8                  | 44.0/75.6       | <0.0001           |
| Isoflavonoids                              | 7.60 (26.3)                               | 4.50 (20.9)      | 6.70 (25.4)      | 11.5 (31.3)       | 0.00/0.03                  | 0.00/0.12       | <0.0001           |
| Proanthocyanidinins                        | 261 (218)                                 | 185 (207)        | 252 (210)        | 347 (234)         | 152/271                    | 178/318         | <0.0001           |
| Hydroxybenzoic acids                       | 55.8 (75.1)                               | 32.9 (27.3)      | 54.5 (46.7)      | 79.9 (110)        | 17.0/51.2                  | 18.9/63.5       | <0.0001           |
| Hydroxycinnamics acids                     | 534 (418)                                 | 301 (141)        | 528 (232)        | 773 (482)         | 367/738                    | 246/614         | <0.0001           |
| Stilbenes                                  | 1.46 (2.37)                               | 0.77 (1.27)      | 1.50 (2.08)      | 2.12 (3.13)       | 0.60/2.97                  | 0.15/0.93       | <0.0001           |
| Lignans                                    | 1.77 (3.02)                               | 1.18 (1.97)      | 1.75 (2.78)      | 2.39 (3.90)       | 0.82/1.36                  | 0.69/1.22       | <0.0001           |

<sup>1</sup> Values are mean  $\pm$  Standard deviation. Means values and standard deviations are all expressed in Mg/day. <sup>2</sup> P-value for the comparison between tertiles of total polyphenols (sum of individual polyphenols), Kruskal–Wallis rank sum test for continuous variables.

**Table S2.** Multivariable<sup>1</sup> associations (hazard ratios (HR) and 95% confidence intervals (95% CI)) between continuous or sex-specific tertiles <sup>2</sup> of polyphenol intakes and cardiovascular disease risk (total, CHD and stroke), NutriNet-Santé Cohort, France, 2009-2017 with additional adjustments.

|                  | Categories of polyphenols |      | Total CVD   |          |                 |      | CHD         |          |                 |      | Strokes     |          |
|------------------|---------------------------|------|-------------|----------|-----------------|------|-------------|----------|-----------------|------|-------------|----------|
| Tertile          | cases/non cases           | HR   | CI 95%      | P-Value* | cases/non cases | HR   | CI 95%      | P-Value* | cases/non cases | HR   | CI 95%      | P-Value* |
|                  |                           |      |             | P-trend  |                 |      |             | P-trend  |                 |      |             | P-trend  |
| Anthocyanins     |                           | 0.98 | (0.96–0.99) | 0.04     |                 | 0.98 | (0.95–0.99) | 0.08     |                 | 0.99 | (0.96–1.01) | 0.31     |
| T1               | 150/27902                 |      |             | 0.0007   | 75/27977        |      |             | 0.07     | 75/27977        |      |             | 0.007    |
| T2               | 215/27838                 | 0.83 | (0.67–1.04) |          | 110/27943       | 0.87 | (0.64–1.18) |          | 105/27948       | 0.80 | (0.59–1.09) |          |
| T3               | 237/27816                 | 0.67 | (0.53–0.85) |          | 124/27929       | 0.74 | (0.53–1.03) |          | 113/27940       | 0.61 | (0.43–0.85) |          |
| Dihydrochalcones |                           | 0.87 | (0.66–1.13) | 0.29     |                 | 0.83 | (0.57–1.21) | 0.34     |                 | 0.91 | (0.62–1.33) | 0.63     |
| T1               | 180/27872                 |      |             | 0.06     | 96/27956        |      |             | 0.20     | 84/27968        |      |             | 0.26     |
| T2               | 224/27829                 | 0.98 | (0.80–1.20) |          | 116/27937       | 0.99 | (0.75–1.32) |          | 108/27945       | 0.96 | (0.71–1.29) |          |
| T3               | 198/27855                 | 0.82 | (0.66–1.03) |          | 97/27956        | 0.82 | (0.60–1.12) |          | 101/27952       | 0.84 | (0.61–1.15) |          |
| Dihydroflavonols |                           | 0.87 | (0.66–1.13) | 0.29     |                 | 0.83 | (0.57–1.21) | 0.34     |                 | 0.91 | (0.62–1.33) | 0.63     |
| T1               | 136/27917                 |      |             | 0.07     | 67/27986        |      |             | 0.22     | 69/27984        |      |             | 0.09     |
| T2               | 200/27852                 | 0.97 | (0.74–1.27) |          | 99/27953        | 0.81 | (0.59–1.12) |          | 101/27951       | 0.88 | (0.64–1.21) |          |
| T3               | 266/27787                 | 0.83 | (0.62–1.10) |          | 143/27910       | 0.79 | (0.55–1.13) |          | 123/27930       | 0.73 | (0.51–1.05) |          |

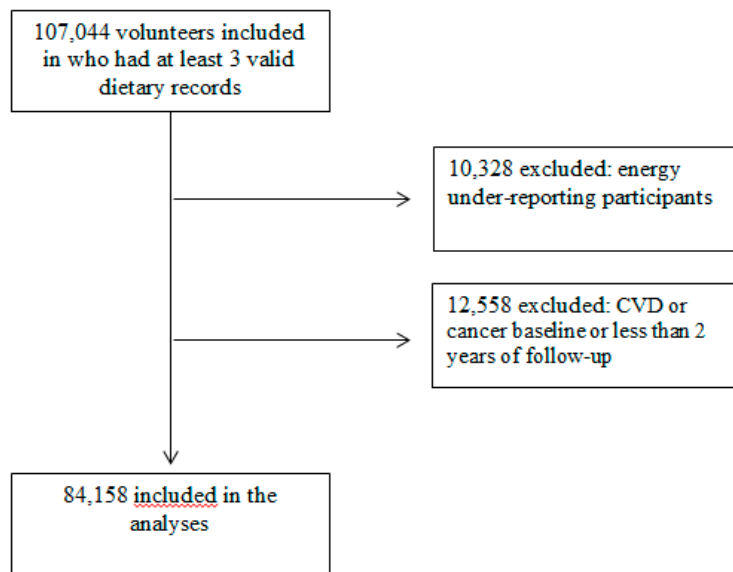
|                   |           |      |             |      |           |             |             |           |             |             |
|-------------------|-----------|------|-------------|------|-----------|-------------|-------------|-----------|-------------|-------------|
| Catechins         |           | 0.99 | (0.99–0.99) | 0.03 | 0.99      | (0.98–0.99) | 0.02        | 0.99      | (0.99–1.01) | 0.23        |
| T1                | 192/27860 |      |             | 0.01 | 99/27953  |             | 0.26        | 93/27959  |             | 0.01        |
| T2                | 217/27836 | 0.93 | (0.76–1.14) |      | 108/27945 | 0.93        | (0.70–1.25) | 109/27944 | 0.93        | (0.70–1.24) |
| T3                | 193/27860 | 0.76 | (0.62–0.94) |      | 102/27951 | 0.85        | (0.63–1.14) | 91/27962  | 0.69        | (0.51–0.93) |
| Theaflavins       |           | 0.99 | (0.95–1.03) | 0.64 | 0.97      | (0.92–1.02) | 0.19        | 0.99      | (0.95–1.03) | 0.59        |
| T1                | 258/32924 |      |             | 0.41 | 143/33039 |             | 0.44        | 115/33067 |             | 0.44        |
| T2                | 141/22774 | 0.90 | (0.68–1.20) |      | 63/22852  | 0.90        | (0.66–1.23) | 78/22837  | 0.95        | (0.71–1.29) |
| T3                | 203/27858 | 0.89 | (0.67–1.18) |      | 103/27958 | 0.90        | (0.70–1.17) | 100/27961 | 0.90        | (0.68–1.18) |
| Proanthocyanidins |           | 0.98 | (0.96–0.99) | 0.14 | 0.97      | (0.94–0.99) | 0.09        | 0.98      | (0.95–1.02) | 0.32        |
| T1                | 166/27886 |      |             | 0.05 | 84/27968  |             | 0.26        | 82/27970  |             | 0.32        |
| T2                | 211/27842 | 1.06 | (0.86–1.30) |      | 112/27941 | 1.12        | (0.83–1.49) | 99/27954  | 0.99        | (0.74–1.35) |
| T3                | 225/27828 | 0.85 | (0.68–1.01) |      | 113/27940 | 0.84        | (0.61–1.17) | 112/27941 | 0.86        | (0.62–1.18) |
| Flavanones        |           | 0.99 | (0.97–1.03) | 0.79 | 1.01      | (0.97–1.05) | 0.68        | 0.98      | (0.94–1.03) | 0.40        |
| T1                | 206/27846 |      |             | 0.93 | 101/27951 |             | 0.21        | 105/27947 |             | 0.25        |
| T2                | 228/27825 | 1.08 | (0.89–1.30) |      | 113/27940 | 1.12        | (0.86–1.48) | 115/27938 | 1.02        | (0.78–1.34) |
| T3                | 168/27885 | 0.99 | (0.81–1.24) |      | 95/27958  | 1.20        | (0.90–1.62) | 73/27980  | 0.82        | (0.60–1.12) |

|                      |           |      |             |      |           |             |             |           |             |             |
|----------------------|-----------|------|-------------|------|-----------|-------------|-------------|-----------|-------------|-------------|
| Flavones             |           | 1.03 | (0.97–1.10) | 0.31 | 1.04      | (0.96–1.14) | 0.34        | 1.02      | (0.93–1.12) | 0.65        |
| T1                   | 192/27860 |      |             | 0.32 | 103/27949 |             | 0.39        | 89/27963  |             | 0.61        |
| T2                   | 213/27840 | 1.11 | (0.91–1.36) |      | 104/27949 | 1.01        | (0.76–1.34) | 109/27944 | 1.22        | (0.91–1.63) |
| T3                   | 197/27856 | 1.12 | (0.90–1.40) |      | 102/27951 | 1.15        | (0.84–1.56) | 95/27958  | 1.09        | (0.79–1.50) |
| Flavonols            |           | 0.98 | (0.95–0.99) | 0.04 | 0.99      | (0.96–1.03) | 0.59        | 0.96      | (0.93–0.99) | 0.03        |
| T1                   | 165/27887 |      |             | 0.02 | 85/27967  |             | 0.65        | 80/27972  |             | 0.01        |
| T2                   | 232/27821 | 0.99 | (0.81–1.23) |      | 112/27941 | 0.98        | (0.73–1.32) | 120/27933 | 1.01        | (0.75–1.36) |
| T3                   | 205/27848 | 0.77 | (0.61–0.98) |      | 112/27941 | 0.93        | (0.68–1.28) | 93/27960  | 0.64        | (0.45–0.89) |
| Isoflavonoids        |           | 0.98 | (0.95–0.99) | 0.06 | 0.99      | (0.96–1.03) | 0.59        | 0.96      | (0.93–0.99) | 0.03        |
| T1                   | 204/33878 |      |             | 0.89 | 97/34259  |             | 0.45        | 114/34242 |             | 0.48        |
| T2                   | 195/24847 | 0.93 | (0.76–1.15) |      | 108/21641 | 1.14        | (0.86–1.52) | 71/21678  | 0.73        | (0.54–0.99) |
| T3                   | 203/24831 | 0.98 | (0.80–1.20) |      | 104/27949 | 1.12        | (0.84–1.50) | 108/27945 | 0.90        | (0.68–1.19) |
| Hydroxybenzoic acids |           | 0.99 | (0.99–1.01) | 0.76 | 0.99      | (0.98–1.02) | 0.79        | 0.99      | (0.99–1.02) | 0.88        |
| T1                   | 162/27890 |      |             | 0.04 | 84/27968  |             | 0.19        | 78/27974  |             | 0.11        |
| T2                   | 212/27841 | 0.88 | (0.71–1.09) |      | 110/27943 | 0.88        | (0.66–1.19) | 102/27951 | 0.88        | (0.64–1.19) |
| T3                   | 228/27825 | 0.79 | (0.64–0.99) |      | 115/27938 | 0.81        | (0.60–1.10) | 113/27940 | 0.77        | (0.56–1.06) |

|                                     |           |      |             |      |           |             |             |           |             |             |
|-------------------------------------|-----------|------|-------------|------|-----------|-------------|-------------|-----------|-------------|-------------|
| Hydroxycinnamics acids              |           | 0.99 | (0.99–0.99) | 0.33 | 0.99      | (0.99–0.99) | 0.34        | 0.99      | (0.99–0.99) | 0.68        |
| T1                                  | 130/27922 |      |             | 0.34 | 54/27998  |             | 0.13        | 76/27976  |             | 0.87        |
| T2                                  | 223/27830 | 1.06 | (0.85–1.32) |      | 127/27926 | 1.45        | (1.04–2.01) | 96/27957  | 0.78        | (0.57–1.06) |
| T3                                  | 249/27804 | 1.11 | (0.89–1.39) |      | 128/27925 | 1.36        | (0.98–1.90) | 121/27932 | 0.93        | (0.69–1.26) |
| Stilbenes                           |           | 0.79 | (0.53–1.18) | 0.25 | 0.87      | (0.52–1.45) | 0.58        | 0.70      | (0.37–1.31) | 0.26        |
| T1                                  | 140/27912 |      |             | 0.01 | 67/27985  |             | 0.29        | 73/27979  |             | 0.01        |
| T2                                  | 200/27853 | 0.84 | (0.67–1.05) |      | 99/27954  | 0.86        | (0.62–1.19) | 101/27952 | 0.82        | (0.60–1.12) |
| T3                                  | 262/27791 | 0.72 | (0.56–0.93) |      | 143/27910 | 0.82        | (0.57–1.17) | 119/27934 | 0.64        | (0.45–0.91) |
| Lignans                             |           | 0.85 | (0.63–1.15) | 0.28 | 0.89      | (0.59–1.34) | 0.58        | 0.80      | (0.52–1.25) | 0.33        |
| T1                                  | 202/27850 |      |             | 0.29 | 111/27941 |             | 0.16        | 91/27961  |             | 0.97        |
| T2                                  | 172/27881 | 0.73 | (0.59–0.90) |      | 91/27962  | 0.72        | (0.54–0.96) | 81/27972  | 0.75        | (0.55–1.02) |
| T3                                  | 228/27825 | 0.87 | (0.71–1.07) |      | 107/27946 | 0.80        | (0.60–1.07) | 121/27932 | 0.96        | (0.71–1.29) |
| Sum of total individual polyphenols |           | 0.99 | (0.99–0.99) | 0.39 | 0.99      | (0.99–0.99) | 0.67        | 0.99      | (0.99–0.99) | 0.44        |
|                                     |           |      |             | 0.12 |           |             |             |           | 0.29        | 0.29        |
| T1                                  | 127/27925 | 0.89 | (0.71–1.10) |      | 88/27964  | 0.86        | (0.64–1.15) | 73/27979  | 0.93        | (0.68–1.27) |
| T2                                  | 234/27819 | 0.82 | (0.64–1.05) |      | 114/27939 | 0.83        | (0.59–1.17) | 111/27942 | 0.83        | (0.58–1.19) |

|                            |           |      |             |             |           |      |             |      |           |      |             |      |
|----------------------------|-----------|------|-------------|-------------|-----------|------|-------------|------|-----------|------|-------------|------|
| T3                         | 241/27812 | 0.99 | (0.99–0.99) | 0.71        | 107/27946 | 0.99 | (0.99–0.99) | 0.83 | 109/27944 | 0.99 | (0.99–0.99) | 0.74 |
| <b>(Total polyphenols)</b> |           |      |             | 0.69        |           |      |             | 0.42 |           |      |             | 0.57 |
| T1                         | 161/27891 | 1.05 | (0.84–1.31) | <b>0.04</b> | 78/27974  | 0.96 | (0.70–1.31) | 0.21 | 68/27984  | 1.15 | (0.83–1.60) | 0.23 |
| T2                         | 225/27828 | 0.97 | (0.76–0.97) |             | 123/27930 | 0.99 | (0.71–1.38) |      | 106/27947 | 0.95 | (0.67–1.35) |      |
| T3                         | 216/27837 |      |             |             | 108/27945 |      |             |      | 119/27934 |      |             |      |

<sup>1</sup> Models were adjusted for age (time-scale), BMI (kg/m<sup>2</sup>, continuous), physical activity (high, moderate, low), smoking status (never smokers, former smokers, occasional smokers, smokers), numbers of dietary records (continuous), alcohol intake (g/d, quintiles), energy intake (without alcohol, g/d, continuous), family history of cardiovascular diseases (yes/no), educational level (<high-school degree/≥ high-school degree), season of completion of 24-h dietary records (spring/summer, fall/winter), baseline hypertension, type 2 diabetes, dyslipidaemia, medical treatment for these conditions, folates (continuous) and fibers (continuous).<sup>2</sup> Sex-specific cut-offs for tertiles of total intakes of polyphenols were 744.6/1113.8 for women and 849.6/1239.2 for men. \* *p*-Value for the continuous intakes of polyphenols classes or subclasses.



**Figure S1.** Flow diagram of participants included in the analyses of intakes of polyphenols and cardiovascular diseases risk.