Additional File 1

High Consumption of Ultra-Processed Food Doubles the Risk of Subclinical Coronary Atherosclerosis: The Aragon Workers Health Study (AWHS)

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Additional File 1: Table S1.
Food-items in the AWHS food frequency questionnaire classified as ultra-processed foods according to degree of processing (NOVA group 4)

Petit Suisse; custard; flan; pudding; ice cream; ham; lard and derivatives, processed meat (chorizo, salami, mortadella, sausage, hamburger, morcilla (blood pudding); pate; snack; foie-grass; spicy sausage/meatballs; commercial potato chips; breakfast cereals; pizza, including pre-prepared pies; margarine; cookies; whole meal cookies; chocolate cookies; muffins; jam; doughnuts; croissant or other non-handmade pastries; cakes; churros; chocolates and candies; nougat; marzipan; carbonated drinks; artificially sugared beverages; fruit drinks; milkshakes; instant soups and creams; croquettes; mayonnaise; mustard, and alcoholic drinks produced by fermentation followed by distillation such as whisky, gin, and rum
**Additional File 1: Table S2.**
Association of Coronary Artery Calcium and quartiles of ultra-processed food consumption, in the AWHS cohort study (N=1,876)

| Energy-adjusted UPF consumption (g/day) | CACS > 0 | | | | | CACS ≥ 100 | | | |
|---|---|---|---|---|---|---|---|---|
| | Cases/N | 747/1,876 | | | 191/1,876 | | | |
| Q1 | Q2 | Q3 | Q4 | P trend | Q1 | Q2 | Q3 | Q4 | P trend |
| Model 1, OR (95%CI) | 1 (ref.) | 1.10 (0.84, 1.44) | 1.18 (0.90, 1.54) | 1.15 (0.88, 1.51) | .317 | 1 (ref.) | 1.33 (0.84, 2.09) | 1.41 (0.90, 2.23) | 1.93 (1.24, 2.99) | .003 |
| Model 2, OR (95%CI) | 1 (ref.) | 1.10 (0.83, 1.45) | 1.18 (0.89, 1.56) | 1.14 (0.86, 1.51) | .363 | 1 (ref.) | 1.31 (0.82, 2.10) | 1.45 (0.91, 2.32) | 1.93 (1.22, 3.03) | .004 |
| Model 3, OR (95%CI) | 1 (ref.) | 1.11 (0.84, 1.47) | 1.18 (0.89, 1.56) | 1.15 (0.86, 1.53) | .368 | 1 (ref.) | 1.38 (0.86, 2.23) | 1.43 (0.88, 2.30) | 1.98 (1.25, 3.15) | .004 |

Logistic regression was used to estimate the Odds Ratios (95% CI) for CACS>0 (compared with CAC score ≤ 0) and for CAC score ≥100 (compared to CAC score <100).

**Model 1:** Logistic regression model adjusted for age

**Model 2:** as in Model 1 and marital status, education, smoking, physical activity, sleep duration during weekdays and during weekend, alcohol consumption, total fiber intake, cholesterol intake, and total energy intake.

**Model 3:** as in Model 2 and additionally adjusted for total serum cholesterol, HDL serum cholesterol, systolic and diastolic blood pressure, body mass index, and diabetes.

**AWHS:** Aragon Workers’ Health Study, **CACS:** Coronary Calcium Score; **UPF:** Ultra-processed Food; **OR:** Odds Ratio; **CI:** Confidence Interval.