

Supplementary Materials: The following are available online at www.mdpi.com/xxx/s1, **Table A1.** Un-processed and Processed vs. Ultra-processed Food groups, Figure S1. The proportional caloric intake of UPFs in the total diet and within food groups; **Table A2.** The association between high UPF intake ($\geq 44.8\%$ of total kcal) and lifestyle characteristics; **Table A3.** The adjusted association between high UPF intake from food groups, and colorectal adenoma as compared to controls, stratified by smoking status

Table 1. Un-processed and Processed vs. Ultra-processed Food groups.

Unprocessed and processed	Ultra-processed
Bread, pastries and starch	
White bread	Diet bread with fiber
Black bread	Diet white bread
Whole wheat bread	Crackers
Pitta bread	Cornflakes
Rice pasta	Pizza
Semolina	Burekas
Baked or boiled potato	Malawach
Snacks	
	Chocolate roll cake
	Busquets and bought cookies
	Waffle
	Cookies
Home-made cake	Milk chocolate
Jam	Chocolate bar
Dried fruit	Chocolate spread
	Cream ice cream
	Non-dairy ice cream
	Energy bar
	Diet energy bar
	Salty snacks
	Potato chips
Beverages	
Fresh fruit juice	Sugar sweetened beverages
Fresh carrot juice	Diet sugar sweetened beverages
Soda water	Processed fruit juice
Green tea	Root beer
Black tea	Iced tea
Water	Flavored water
	Iced coffee
	Diet iced tea
Oils and spreads	
Olives	
Olive oil	Margarine
Canola oil	Bought Humus paste
Soy oil	Bought tachina paste
Corn oil	Bought cabbage carrot mayonnaise salad
Sunflower oil	
Nuts	
Dairy	
Milk 1-3% fat	Milk beverages
Yogurt unsweetened	Sweetened yogurt and dairy products
Cream cheese	Diet sweetened yogurt
Sour cream	Chadder and yellow cheese
Butter	
Meat poultry fish	
Beef steak, roast, ground meat products	Processed fried chicken
Internal organs of beef and chicken	Beef hamburger

Unprocessed and processed	Ultra-processed
Chicken breast or leg cooked or fried	Sausage, cold cuts, pastrami, salami
Lamb	Preserved meat
Pork	Meat substitutes
Duck	
Fresh fish	
Salted fish	
Canned tuna or sardines	

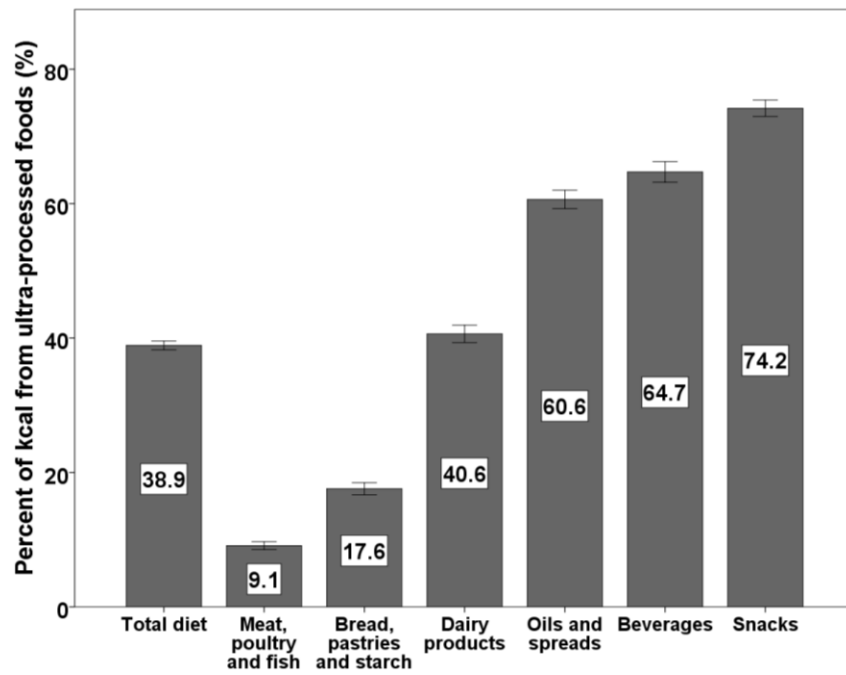


Figure 1. The proportional caloric intake of UPFs in the total diet and within food groups within the total study population.

Table 2. The association between high UPF intake ($\geq 44.8\%$ of total kcal) and lifestyle characteristics.

	UPF intake $\leq 30.41\%$ of total kcal (n=214)	UPF intake 30.42-44.88 of total kcal (n=225)	UPF intake $\geq 44.89\%$ of total kcal (n=213)	P
Age (years) (mean \pm std)	58.8 \pm 6.8	57.8 \pm 6.4	58.9 \pm 6.7	0.167
Gender (% male)	49.4	45.2	57.7	0.023
Smoking ^a (%)	50.2	51.3	58.1	0.180
Obesity ^b (%)	27.3	27.9	33.9	0.228
Physical inactivity ^c (%)	43.4	44.5	44.6	0.958
Healthy diet index ^d (%)	53.7	45.2	46.2	0.136
Caloric intake (Kcal/day)	1883\pm628	2032\pm680	2218\pm735	<0.001
Protein (% of total kcal)	20.0\pm4.6	18.2\pm3.9	16.3\pm4.1	<0.001
Fat (% of total kcal)	36.6 \pm 6.6	35.8 \pm 6.0	36.3 \pm 7.0	0.427
SFA (% of total kcal)	12.1\pm3.5	12.7\pm4.1	12.3\pm3.6	0.046
Carbohydrates (% of total kcal)	39.4\pm8.4	42.3\pm7.8	44.1\pm9.2	<0.001
Fiber (gr/day)	22.4 \pm 10.6	24.2 \pm 13.0	23.4 \pm 11.9	0.260
Sodium (mg/day)	2745 \pm 1027	2750 \pm 979	2842 \pm 1053	0.516
Aspirin use (%)	23.8	27.0	31.2	0.200

^a Smoking is defined as ever (past/present) smoking; ^b Obesity is defined as BMI >30 kg/m²; ^c Physical inactivity – Reported no intentional exercise or less than 20 min/ week of exercise which leads to increased heart rate and/or sweating; ^d A healthy dietary index was defined if participants reported consuming at least five of the American Heart Association (AHA) healthy diet components.

Table 3. The adjusted association between high UPF intake from food groups, and colorectal adenoma as compared to controls, stratified by smoking status.

	Total study population		Never smokers		Smokers	
	Cases (n=294)/ Controls (n=358)	OR (95%CI) P	Cases (n=121)/ Controls (n=194)	OR (95%CI) P	Cases (n=173)/ Controls (n=164)	OR (95%CI) P
Bread, pastries and starch						
1 st tertile ($\leq 2.03\%$ UPF kcal/group kcal)	98/117	Ref.	36/59	Ref.	62/58	Ref.
2 nd tertile (2.04-19.73% UPF kcal/group kcal)	102/121	1.00 (0.66-1.52) 0.976	47/72	1.21 (0.66-2.21) 0.522	55/49	0.85 (0.46-1.55) 0.604
3 rd tertile ($\geq 19.74\%$ UPF kcal/group kcal)	94/120	1.05 (0.69-1.60) 0.799	38/63	1.13 (0.61-2.11) 0.687	56/57	0.99 (0.55-1.78) 0.978
Snacks						
1 st tertile ($\leq 71.37\%$ UPF kcal/group kcal)	86/120	Ref.	38/60	Ref.	48/60	Ref.
2 nd tertile (71.38-94.90% UPF kcal/group kcal)	98/142	0.99 (0.65-1.52) 0.998	42/85	0.86 (0.47-1.55) 0.626	56/57	1.19 (0.64-2.23) 0.575
3 rd tertile ($\geq 94.91\%$ UPF kcal/group kcal)	110/96	1.63 (1.06-2.49) 0.023	41/49	1.29 (0.68-2.42) 0.425	69/47	2.08 (1.15-3.77) 0.015
Beverages						
1 st tertile	84/131	Ref.	35/77	Ref.	49/54	Ref.

	Total study population		Never smokers		Smokers	
	Cases (n=294)/ Controls (n=358)	OR (95%CI) P	Cases (n=121)/ Controls (n=194)	OR (95%CI) P	Cases (n=173)/ Controls (n=164)	OR (95%CI) P
(≤50.0% UPF kcal/group kcal)						
2 nd tertile (50.01-95.83% UPF kcal/group kcal)	111/124	1.26 (0.82-1.94) 0.274	48/69	1.26 (0.68-2.31) 0.454	63/55	1.33 (0.71-2.52) 0.366
3 rd tertile (≥95.84% UPF kcal/group kcal)	99/103	1.34 (0.88-2.05) 0.164	38/48	1.54 (0.82-2.89) 0.172	61/55	1.14 (0.64-2.05) 0.638
Oils and spreads						
1 st tertile (≤49.51% UPF kcal/group kcal)	81/142	Ref.	36/82	Ref.	45/60	Ref.
2 nd tertile (49.52-85.22% UPF kcal/group kcal)	104/126	1.40 (0.92-2.13) 0.108	38/66	1.25 (0.68-2.30) 0.468	66/60	1.52 (0.84-2.74) 0.161
3 rd tertile (≥85.23% UPF kcal/group kcal)	109/90	2.20 (1.42-3.40) <0.001	47/46	2.49 (1.33-4.64) 0.004	62/44	2.99 (1.07-3.71) 0.029
Dairy						
1 st tertile (≤17.94% UPF kcal/group kcal)	79/133	Ref.	35/66	Ref.	44/67	Ref.
2 nd tertile (17.95-53.23% UPF kcal/group kcal)	107/127	1.61 (1.06-2.46) 0.025	47/75	1.48 (0.81-2.70) 0.195	60/52	1.79 (0.98-3.27) 0.056
3 rd tertile (≥53.24% UPF kcal/group kcal)	108/98	1.92 (1.26-2.93) 0.002	39/53	1.47 (0.79-2.75) 0.219	69/45	2.44 (1.36-4.36) 0.003
Meat, poultry and fish						
1 st tertile (≤0.78% UPF kcal/group kcal)	95/137	Ref.	47/75	Ref.	48/62	Ref.
2 nd tertile (0.79-8.45% UPF kcal/group kcal)	102/117	1.19 (0.79-1.79) 0.390	38/63	0.90 (0.50-1.61) 0.726	64/54	1.53 (0.86-2.73) 0.147
3 rd tertile (≥8.46% UPF kcal/group kcal)	97/104	1.23 (0.80-1.87) 0.332	36/56	1.05 (0.57-1.95) 0.864	61/48	1.39 (0.77-2.52) 0.270

UPF intake was categorized as tertiles of the proportional caloric intake of UPFs from total caloric intake within each food group. The 3rd and 2nd tertiles were compared to the 1st tertile. ORs are adjusted for age, gender, BMI, total kcal, aspirin, use, and indication for colonoscopy.