**Supplementary material**

**Table S1. Median energy content in kJ per 100g, by product category before and after implementation of menu labelling**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Category** | **Timing** | **n** | **Median** | **Quartile 1** | **Quartile 3** | **Mean** | **Wilcoxon p** |
| Breakfast | Pre | 88 | 1015 | 942 | 1110 | 1033 | *0.98* |
|  | Post | 141 | 1013 | 940 | 1140 | 1042 |
| Burgers | Pre | 198 | 999 | 910 | 1080 | 991 | *<0.0001* |
|  | Post | 336 | 1040 | 960 | 1115 | 1044 |
| Dessert | Pre | 95 | 886 | 790 | 1300 | 1078 | *0.37* |
|  | Post | 139 | 890 | 764 | 1280 | 1022 |
| Chicken & seafood | Pre | 87 | 1020 | 890 | 1186 | 1039 | *0.43* |
| Post | 121 | 1080 | 902 | 1180 | 1074 |
| Salads | Pre | 49 | 430 | 298 | 583 | 410 | *0.11* |
|  | Post | 58 | 378 | 197 | 485 | 365 |
| Sides | Pre | 92 | 970 | 299 | 1355 | 867 | *0.93* |
|  | Post | 150 | 955 | 299 | 1350 | 884 |
| Sandwiches & wraps | Pre | 85 | 855 | 720 | 996 | 866 | *0.036* |
| Post | 139 | 920 | 795 | 1050 | 912 |

**Table S2. Median energy content in kJ per 100g, by chain before and after implementation of menu labelling**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Chain** | **Timing** | **n** | **Median** | **Quartile 1** | **Quartile 3** | **Mean** | **Wilcoxon p** |
| Hungry Jack’s | Pre | 144 | 1047 | 892 | 1173 | 1023 | *0.60* |
|  | Post | 266 | 1055 | 902 | 1191 | 1056 |
| KFC | Pre | 92 | 979 | 861 | 1090 | 918 | *0.57* |
|  | Post | 155 | 963 | 868 | 1171 | 947 |
| McDonald’s | Pre | 220 | 960 | 788 | 1115 | 976 | *0.74* |
|  | Post | 276 | 976 | 839 | 1100 | 958 |
| Oporto | Pre | 114 | 950 | 865 | 1000 | 896 | *<0.0001* |
|  | Post | 186 | 1013 | 908 | 1100 | 983 |
| Red Rooster | Pre | 124 | 880 | 632 | 1130 | 845 | *0.44* |
|  | Post | 201 | 940 | 659 | 1180 | 870 |

**Table S3. Median energy content in kJ per serve, by product category before and after implementation of menu labelling**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Category** | **Timing** | **n** | **Median** | **Quartile 1** | **Quartile 3** | **Mean** | **Wilcoxon p** |
| Breakfast | Pre | 88 | 1527 | 1173 | 2028 | 1603 | *0.88* |
|  | Post | 141 | 1580 | 1180 | 1938 | 1587 |
| Burgers | Pre | 198 | 2133 | 1634 | 2674 | 2203 | *0.61* |
|  | Post | 336 | 2080 | 1710 | 2700 | 2244 |
| Dessert | Pre | 95 | 1305 | 1030 | 1706 | 1382 | *0.50* |
|  | Post | 139 | 1254 | 957 | 1720 | 1321 |
| Chicken & seafood | Pre | 81 | 1228 | 696 | 1836 | 1478 | *0.61* |
| Post | 114 | 1260 | 812 | 1940 | 1517 |
| Salads | Pre | 49 | 913 | 473 | 1327 | 936 | *0.41* |
|  | Post | 58 | 699 | 394 | 1274 | 837 |
| Sides | Pre | 92 | 1199 | 514 | 1649 | 1304 | *0.88* |
|  | Post | 150 | 1173 | 500 | 1892 | 1345 |
| Sandwiches & wraps | Pre | 85 | 1903 | 1617 | 2352 | 1982 | *0.17* |
| Post | 139 | 2120 | 1650 | 2550 | 2105 |

**Table S4. Median energy content in kJ per serve, by chain before and after implementation of menu labelling**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Chain** | **Timing** | **n** | **Median** | **Quartile 1** | **Quartile 3** | **Mean** | **Wilcoxon p** |
| Hungry Jack’s | Pre | 144 | 1843 | 1294 | 2786 | 2024 | *0.44* |
|  | Post | 266 | 1833 | 1354 | 2351 | 1932 |
| KFC | Pre | 92 | 1871 | 1137 | 2251 | 1763 | *0.14* |
|  | Post | 155 | 1657 | 929 | 2142 | 1598 |
| McDonald’s | Pre | 220 | 1486 | 1061 | 1917 | 1502 | *0.07* |
|  | Post | 276 | 1580 | 1120 | 2100 | 1614 |
| Oporto | Pre | 111 | 1590 | 1296 | 2470 | 1749 | *0.001* |
|  | Post | 182 | 1870 | 1490 | 2690 | 2048 |
| Red Rooster | Pre | 121 | 1508 | 634 | 2091 | 1523 | *0.78* |
|  | Post | 198 | 1480 | 730 | 2070 | 1502 |

**Table S5: Mean energy in kJ per 100g and number of standard menu items in each category from each chain**

| **Category** | **Chain** | **Mean energy per serve and number of items available** | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2009** | **n items** | **2010** | **n items** | **2011** | **n items** | **2012** | **n items** | **2013** | **n items** | **2014** | **n items** | **2015** | **n items** |
| Breakfast | Hungry Jack's | 1054 | 6 | 1093 | 6 | 1069 | 5 | 1105 | 6 | 1053 | 7 | 1054 | 5 | 1010 | 5 |
| KFC | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 |
| McDonald's | 1035 | 10 | 1018 | 10 | 1034 | 14 | 1069 | 13 | 1083 | 12 | 1077 | 9 | 1077 | 9 |
| Oporto | 975 | 7 | 981 | 7 | 981 | 7 | 1091 | 7 | 1062 | 6 | 1017 | 7 | 1005 | 7 |
| Red Rooster | - | 0 | - | 0 | 875 | 4 | 1176 | 4 | 1176 | 5 | 984 | 5 | 992 | 5 |
| Burgers | Hungry Jack's | 1071 | 14 | 1038 | 22 | 1046 | 21 | 1097 | 19 | 1082 | 30 | 1071 | 28 | 1076 | 25 |
| KFC | 957 | 8 | 957 | 8 | 962 | 10 | 962 | 10 | 989 | 9 | 994 | 7 | 962 | 5 |
| McDonald's | 967 | 15 | 999 | 16 | 977 | 18 | 990 | 16 | 986 | 16 | 1047 | 10 | 1056 | 11 |
| Oporto | 1006 | 10 | 971 | 10 | 953 | 12 | 1020 | 12 | 1047 | 15 | 1036 | 16 | 1025 | 16 |
| Red Rooster | 1123 | 3 | 1080 | 3 | 884 | 6 | 884 | 6 | 926 | 7 | 1131 | 8 | 1103 | 6 |
| Desserts | Hungry Jack's | 848 | 6 | 861 | 8 | 858 | 8 | 857 | 8 | 858 | 9 | 858 | 9 | 581 | 8 |
| KFC | - | 0 | - | 0 | - | 0 | 1556 | 3 | 1556 | 3 | 1530 | 1 | 1530 | 1 |
| McDonald's | 928 | 9 | 953 | 14 | 963 | 14 | 972 | 15 | 972 | 15 | 973 | 13 | 923 | 13 |
| Oporto | 1186 | 1 | 1186 | 1 | 1186 | 1 | 1560 | 1 | 1560 | 1 | 1560 | 1 | 1560 | 1 |
| Red Rooster | 1358 | 4 | 1358 | 4 | 887 | 1 | 887 | 1 | 1274 | 4 | 1275 | 4 | 1275 | 4 |
| Chicken & fish | Hungry Jack's | 1186 | 2 | 1120 | 2 | 902 | 4 | 902 | 4 | 902 | 4 | 902 | 4 | 941 | 4 |
| KFC | 1163 | 9 | 1163 | 9 | 1163 | 9 | 1163 | 9 | 1205 | 8 | 1222 | 7 | 1226 | 7 |
| McDonald's | 1051 | 3 | 1051 | 3 | 1073 | 5 | 1128 | 5 | 1148 | 4 | 1148 | 4 | 1148 | 4 |
| Oporto | 955 | 6 | 955 | 6 | 955 | 6 | 870 | 4 | 900 | 6 | 960 | 6 | 954 | 6 |
| Red Rooster | 1069 | 8 | 1022 | 9 | 980 | 8 | 980 | 8 | 1025 | 9 | 1108 | 4 | 1545 | 2 |
| Salads | Hungry Jack's | - | 0 | 180 | 3 | 185 | 3 | - | 0 | 132 | 1 | - | 0 | - | 0 |
| KFC | 430 | 2 | 430 | 2 | 430 | 2 | 430 | 2 | 302 | 3 | 285 | 4 | 285 | 4 |
| McDonald's | 367 | 5 | 353 | 5 | 359 | 5 | 213 | 3 | 216 | 3 | 62 | 1 | 62 | 1 |
| Oporto | 493 | 4 | 493 | 4 | 493 | 4 | 490 | 1 | 490 | 1 | 275 | 2 | 345 | 3 |
| Red Rooster | 398 | 3 | 398 | 3 | - | 0 | - | 0 | - | 0 | 340 | 2 | 327 | 2 |
| Sides | Hungry Jack's | 1412 | 5 | 1412 | 5 | 1324 | 6 | 1392 | 6 | 1384 | 7 | 1463 | 9 | 1433 | 9 |
| KFC | 675 | 6 | 675 | 6 | 675 | 6 | 675 | 6 | 674 | 6 | 674 | 6 | 629 | 6 |
| McDonald's | 1174 | 4 | 1174 | 4 | 1174 | 4 | 1174 | 4 | 1174 | 4 | 1174 | 4 | 1174 | 4 |
| Oporto | 834 | 5 | 834 | 5 | 834 | 5 | 1060 | 5 | 1060 | 5 | 1060 | 5 | 844 | 5 |
| Red Rooster | 755 | 8 | 757 | 8 | 481 | 14 | 481 | 14 | 483 | 14 | 557 | 10 | 587 | 10 |
| Wraps & sandwiches | Hungry Jack's | 1350 | 1 | 1246 | 2 | 1201 | 2 | 1300 | 1 | 877 | 3 | 816 | 2 | 0 | - |
| KFC | 1022 | 2 | 1022 | 2 | 1022 | 2 | 1022 | 2 | 1074 | 3 | 1074 | 3 | 929 | 1 |
| McDonald's | 776 | 8 | 758 | 8 | 793 | 8 | 793 | 8 | 864 | 6 | 953 | 2 | 953 | 2 |
| Oporto | 857 | 3 | 857 | 3 | 857 | 3 | 962 | 3 | 962 | 3 | 879 | 3 | 926 | 2 |
| Red Rooster | 982 | 5 | 989 | 8 | 765 | 13 | 765 | 13 | 765 | 13 | 1194 | 7 | 1121 | 8 |

**Table S6: Mean energy in kJ per serve and number of standard menu items in each category from each chain**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category** | **Chain** | **Mean energy per serve and number of items available** | | | | | | | | | | | | | |
| **2009** | **n items** | **2010** | **n items** | **2011** | **n items** | **2012** | **n items** | **2013** | **n items** | **2014** | **n items** | **2015** | **n items** |
| Breakfast | Hungry Jack's | 1982 | 6 | 2015 | 6 | 1800 | 5 | 1901 | 6 | 1781 | 7 | 1705 | 5 | 1472 | 5 |
| KFC | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 |
| McDonald's | 1373 | 10 | 1466 | 10 | 1463 | 14 | 1497 | 13 | 1479 | 12 | 1339 | 9 | 1339 | 9 |
| Oporto | 1643 | 7 | 1643 | 7 | 1650 | 7 | 1746 | 7 | 1575 | 6 | 1624 | 7 | 1563 | 7 |
| Red Rooster | - | 0 | - | 0 | 1278 | 4 | 1278 | 4 | 1028 | 5 | 1028 | 5 | 1618 | 5 |
| Burgers | Hungry Jack's | 2638 | 14 | 2655 | 22 | 2593 | 21 | 2574 | 19 | 2474 | 30 | 2348 | 28 | 2412 | 25 |
| KFC | 2081 | 8 | 2081 | 8 | 2110 | 10 | 2110 | 10 | 2136 | 9 | 2162 | 7 | 1899 | 5 |
| McDonald's | 1700 | 15 | 1938 | 16 | 1986 | 18 | 2108 | 16 | 2173 | 16 | 2018 | 10 | 2121 | 11 |
| Oporto | 2184 | 10 | 2184 | 10 | 2230 | 12 | 2383 | 12 | 2394 | 15 | 2473 | 16 | 2452 | 16 |
| Red Rooster | 2125 | 3 | 1907 | 3 | 1613 | 6 | 1613 | 6 | 1639 | 7 | 1791 | 8 | 1858 | 6 |
| Desserts | Hungry Jack's | 1229 | 6 | 1454 | 8 | 1454 | 8 | 1454 | 8 | 1339 | 9 | 1339 | 9 | 810 | 8 |
| KFC | - | 0 | - | 0 | - | 0 | 676 | 3 | 676 | 3 | 1224 | 1 | 1224 | 1 |
| McDonald's | 1237 | 9 | 1451 | 14 | 1468 | 14 | 1503 | 15 | 1502 | 15 | 1407 | 13 | 1345 | 13 |
| Oporto | 1305 | 1 | 1305 | 1 | 1305 | 1 | 1870 | 1 | 1870 | 1 | 1720 | 1 | 1716 | 1 |
| Red Rooster | 1481 | 4 | 1447 | 4 | 499 | 1 | 499 | 1 | 913 | 4 | 1088 | 4 | 1028 | 4 |
| Chicken & fish | Hungry Jack's | 1241 | 2 | 857 | 2 | 1583 | 4 | 1583 | 4 | 1583 | 4 | 1583 | 4 | 1651 | 4 |
| KFC | 1954 | 9 | 1953 | 9 | 1953 | 9 | 1953 | 9 | 2183 | 8 | 1664 | 7 | 1762 | 7 |
| McDonald's | 876 | 3 | 877 | 3 | 937 | 5 | 1131 | 5 | 1086 | 4 | 1086 | 4 | 1086 | 4 |
| Oporto | 2119 | 6 | 2170 | 6 | 2170 | 6 | 2385 | 4 | 2110 | 6 | 2623 | 6 | 2915 | 6 |
| Red Rooster | 1319 | 8 | 1586 | 9 | 2054 | 8 | 1391 | 8 | 1854 | 9 | 2416 | 4 | 890 | 2 |
| Salads | Hungry Jack's | - | 0 | 687 | 3 | 687 | 3 | - | 0 | 286 | 1 | - | 0 | - | 0 |
| KFC | 1204 | 2 | 1204 | 2 | 1204 | 2 | 1204 | 2 | 870 | 3 | 779 | 4 | 779 | 4 |
| McDonald's | 1086 | 5 | 1036 | 5 | 1036 | 5 | 662 | 3 | 662 | 3 | 70 | 1 | 70 | 1 |
| Oporto | 773 | 4 | 734 | 4 | 734 | 4 | 1270 | 1 | 1270 | 1 | 665 | 2 | 622 | 3 |
| Red Rooster | 924 | 3 | 920 | 3 | - | 0 | - | 0 | - | 0 | 385 | 2 | 358 | 2 |
| Sides | Hungry Jack's | 1547 | 5 | 1386 | 5 | 1513 | 6 | 1513 | 6 | 1452 | 7 | 1546 | 9 | 1479 | 9 |
| KFC | 1018 | 6 | 1017 | 6 | 1017 | 6 | 948 | 6 | 948 | 6 | 952 | 6 | 916 | 6 |
| McDonald's | 1166 | 4 | 1167 | 4 | 1167 | 4 | 1163 | 4 | 1166 | 4 | 1166 | 4 | 1166 | 4 |
| Oporto | 1760 | 5 | 1757 | 5 | 1757 | 5 | 2440 | 5 | 2440 | 5 | 2440 | 5 | 1896 | 5 |
| Red Rooster | 1231 | 8 | 1550 | 8 | 1103 | 14 | 1096 | 14 | 1103 | 14 | 1326 | 10 | 1366 | 10 |
| Wraps & sandwiches | Hungry Jack's | 2053 | 1 | 2197 | 2 | 2134 | 2 | 1976 | 1 | 1688 | 3 | 1769 | 2 | - | 0 |
| KFC | 2348 | 2 | 2351 | 2 | 2351 | 2 | 2351 | 2 | 1850 | 3 | 1850 | 3 | 2013 | 1 |
| McDonald's | 1428 | 8 | 1458 | 8 | 1531 | 8 | 1541 | 8 | 1530 | 6 | 1055 | 2 | 1055 | 2 |
| Oporto | 2107 | 3 | 1943 | 3 | 1943 | 3 | 2150 | 3 | 2150 | 3 | 2000 | 3 | 1860 | 2 |
| Red Rooster | 2577 | 5 | 2427 | 8 | 2302 | 13 | 2302 | 13 | 2302 | 13 | 2520 | 7 | 2534 | 8 |