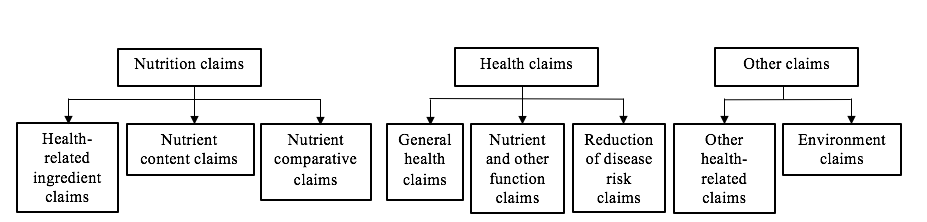
**Appendix 1**

Claim types



**Figure 1** Categories and sub-categories of each claim type as per the taxonomy of the International Network for Food and Obesity/NCDs Research, Monitoring and Action Support (INFORMAS)(7)

Claim hierarchy

Reduction of disease risk claim

Other claim

Health-related ingredient claim

Nutrient content/comparative claim

Nutrient + other function claim

-

**Figure 2**: Hierarchy of claims (in order of descending priority) as per the INFORMAS taxonomy (7)

Claim Content

*Health-related ingredient claims*

* Wholegrain
* Fruits/nuts/honey
* Grains/seeds
* Vegetables/plants
* Bacteria/culture/probiotics/prebiotics
* Milk/cream
* Edible oils/oil emulsions
* Cocoa/cacao
* Water

*Nutrient content claims*

* Fibre
* Energy/calories
* Antioxidants/vitamins/minerals/hormones
* Carbohydrates
* Fats
* Sugar
* Protein
* Salt

*Nutrient comparative claims*

* Reduced fat
* More calcium
* Less salt
* Reduced sugar
* Reduced calories
* More fibre
* Reduced carbohydrates
* More protein
* More vitamins/minerals/hormones/antioxidants

*General health claims*

* General e.g. super, healthy
* Low GI/energy density/lower GI
* Digestive health
* Bone health
* Oral health
* Immune health

*Nutrient and other function claims*

* Nutrient + muscle
* Nutrient + bone
* Nutrient + growth
* Nutrient + vision
* Nutrient + energy
* Nutrient + strength
* Nutrient + brain
* Nutrient + nutrient absorption/production
* Nutrient + digestion/bowel
* Nutrient + immunity
* Nutrient + overall health
* Nutrient + blood-related
* Nutrient + oral health

*Reduction of disease claims*

* Heart-related
* Heart Foundation Tick
* Cholesterol absorption
* Glycaemic impact
* Osteoporosis
* Digestive health
* Nutrient absorption

*Other claims*

* Environmental
* Other health-related

Glossary

(Adapted from: Rayner M, Wood A, Lawrence M, Mhurchu CN, Albert J, Barquera S, et al. Monitoring the health- related labelling of foods and non-alcoholic beverages in retail settings. Obes Rev. 2013;14(Suppl. 1):70-81)

*Nutrition claim:* any representation which states, suggests or implies that a food has particular nutritional properties including but not limited to the energy value and to the content of protein, fat and carbohydrates, as well as the content of vitamins and minerals.

*Health-related ingredient claim* – any representation which states, suggests or implies that a food has particular nutritional properties not related to its energy value or to the content of protein, fat and carbohydrates, vitamins and minerals but related to the content of an ingredient’

*Nutrient content claim:* ‘a nutrition claim that describes the level of a nutrient contained in a food [or its energy value; includes ‘non-addition claims’ - ‘any claim that a [nutrient] has not been added to a food, either directly or indirectly. The [nutrient] is one whose presence or addition is permitted in the food and which consumers would normally expect to find in the food’

*Nutrient comparative claim:* ‘a [nutrition] claim that compares the nutrient levels and/or energy value of two or more foods.’

*Health claim:* ‘any representation that states, suggests, or implies that a relationship exists between a food or a constituent of that food and health.’

*Nutrient function claim* – ‘a [health] claim that describes the physiological role of the nutrient in growth, development and functions of the body.’ (CAC/GL 23-1997) [Although Codex classifies nutrient function claims as nutrition claims it seems more logical to classify them as health claims]

*Other function claim* – health ‘claims concerning specific beneficial effects of the consumption of foods or their constituents, in the context of the total diet on normal functions or biological activities of the body. Such claims relate to a positive contribution to health or to the improvement of a function or to modifying or preserving health.’

*Reduction of disease risk claim* – health ‘claims relating the consumption of a food or food constituent, in the context of the total diet, to the reduced risk of developing a disease or health-related condition.’

*General health claim* – a health claim concerning the general beneficial effects of the consumption of foods or their constituents on health.

**Appendix 2** Number and percentage of New Zealand packaged food products with different types of nutrition and health claims displayed on the front-of-pack for selected food categories.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FOOD CATEGORIES** | | Total N of products (%) | N of products with claims (%) | **Products with nutrition claims** | | | | **Products with health claims** | | | |
| **Total N (%)** | Health-related ingredient claims N (%) | Nutrient content claims N (%) | Nutrient compara-tive claims N (%) | **Total N (%)** | General health claims N (%) | Nutrient and other function claims N (%) | Reduction of disease risk claims N (%) |
| **All packaged foods** | | **7526**  **(100.0)** | **2972**  **(39.5)** | **2644**  **(35.1)** | 840  (31.8) | 1913  (72.4) | 586  (22.2) | **1094**  **(14.5)** | 872  (79.7) | 45  (4.1) | 303  (27.7) |
| **Healthy foods** | | **3557**  **(47.3)** | **1845**  **(51.9)** | **1596**  **(44.9)** | 530  (33.2) | 1250  (78.3) | 312  (19.5) | **807**  **(22.7)** | 601  (74.5) | 37  (4.6) | 286  (35.4) |
| **Less Healthy foods** | | **3969**  **(52.7)** | **1127**  **(28.4)** | **1048**  **(26.4)** | 310  (29.6) | 663  (63.3) | 274  (26.1) | **287**  **(7.2)** | 271  (94.4) | 8  (2.8) | 17  (5.9) |
| Bakery | **Total** | **1565 (100)** | **450 (28.8)** | **392 (25.0)** | **116 (29.6)** | **249 (63.5)** | **121 (30.9)** | **125 (8.0)** | **113 (90.4)** | **6 (4.8)** | **8 (6.4)** |
| Healthy | 445 (28.4) | 208 (46.7) | **178 (40.0)** | 71 (39.9) | 135 (75.8) | 11 (6.18) | **74 (16.6)** | 62 (83.8) | 6 (8.1) | 8 (10.8) |
| Less healthy | 1120 (71.6) | 242 (21.6) | **214 (19.1)** | 45 (21.0) | 114 (53.3) | 110 (51.4) | **51 (4.6)** | 51 (100) | 0 (0.0) | 0 (0.0) |
| Cereals | **Total** | **564 (100)** | **458 (81.2)** | **410 (72.7)** | **218 (53.2)** | **333 (81.2)** | **35 (8.5)** | **248 (44.0)** | **196 (79.0)** | **13 (5.2)** | **83 (33.5)** |
| Healthy | 291 (51.6) | 259 (89.0) | **232 (79.7)** | 140 (60.3) | 192 (82.8) | 24 (10.3) | **166 (57.0)** | 121 (72.9) | 11 (6.6) | 75 (45.2) |
| Less healthy | 273 (48.3) | 199 (72.9) | **178 (65.2)** | 78 (43.8) | 141 (79.2) | 11 (6.2) | **82 (30.0)** | 75 (91.5) | 2 (2.4) | 8 (9.8) |
| Confec-tionery | **Total** | **784 (100)** | **231 (29.5)** | **229 (29.2)** | **77 (33.6)** | **153 (66.8)** | **28 (12.2)** | **37 (4.7)** | **37 (100)** | **0 (0.0)** | **0 (0.0)** |
| Healthy | 100 (12.8) | 70 (70.0) | **69 (69.0)** | 3 (4.3) | 68 (98.6) | 13 (18.8) | **24 (24.0)** | 24 (100) | 0 (0.0) | 0 (0.0) |
| Less | 684 (87.2) | 161 (23.5) | **160 (23.4)** | 74 (46.3) | 85 (53.1) | 15 (9.4) | **13 (1.9)** | 13 (100) | 0 (0.0) | 0 (0.0) |
| Convenience foods | **Total** | **378 (100)** | **121 (32.0)** | **93 (24.6)** | **42 (45.2)** | **67 (72.0)** | **6 (6.5)** | **74 (19.6)** | **58 (78.4)** | **0 (0.0)** | **23 (31.1)** |
| Healthy | 252 (66.7) | 96 (38.1) | **75 (29.8)** | 32 (42.7) | 57 (76) | 5 (6.7) | **60 (23.8)** | 47 (78.3) | 0 (0.0) | 19 (31.7) |
| Less healthy | 126 (33.3) | 25 (19.8) | **18 (14.3)** | 10 (55.6) | 10 (55.6) | 1 (5.6) | **14 (11.1)** | 11 (78.6) | 0 (0.0) | 4 (28.6) |
| Dairy | **Total** | **1677 (100)** | **638 (38.0)** | **594 (35.4)** | **190 (32.0)** | **400 (67.3)** | **241 (40.6)** | **241 (14.4)** | **150 (62.2)** | **7 (2.9)** | **104 (43.2)** |
| Healthy | 1027 (61.2) | 509 (49.6) | **459 (44.7)** | 145 (31.6) | 337 (73.4) | 183 (39.9) | **208 (20.3)** | 121 (58.2) | 7 (3.4) | 99 (47.6) |
| Less healthy | 650 (38.8) | 129 (19.8) | **135 (20.8)** | 45 (33.3) | 63 (46.7) | 58 (43.0) | **33 (5.1)** | 29 (87.9) | 0 (0.0) | 5 (15.2) |
| Fruit and vegetable products | **Total** | **1155 (100)** | **433 (37.5)** | **339 (29.4)** | **94 (27.7)** | **263 (77.6)** | **34 (10.0)** | **199 (17.2)** | **152 (76.4)** | **3 (1.5)** | **81 (40.7)** |
| Healthy | 926 (80.2) | 390 (42.1) | **302 (32.6)** | 81 (26.8) | 236 (78.1) | 32 (10.6) | **180 (19.4)** | 134 (74.4) | 2 (1.1) | 81 (45) |
| Less healthy | 229 (19.8) | 43 (18.8) | **37 (16.2)** | 13 (35.1) | 27 (73.0) | 2 (5.4) | **19 (8.3)** | 18 (94.7) | 1 (5.3) | 0 (0.0) |
| Non-alcoholic beverages | **Total** | **1040 (100)** | **520 (50.0)** | **472 (45.4)** | **68 (14.4)** | **394 (83.5)** | **62 (13.1)** | **133 (12.8)** | **129 (97.0)** | **16 (12.0)** | **4 (3.0)** |
| Healthy | 491 (47.2) | 297 (60.5) | **268 (54.6)** | 53 (19.8) | 217 (81.0) | 40 (14.9) | **87 (17.7)** | 84 (96.6) | 11 (12.6) | 4 (4.6) |
| Less healthy | 549 (52.8) | 223 (40.6) | **204 (37.2)** | 15 (7.4) | 177 (86.8) | 22 (10.8) | **46 (8.4)** | 45 (97.8) | 5 (10.9) | 0 (0) |
| Snack foods | **Total** | **363 (100)** | **121 (33.3)** | **115 (31.6)** | **35 (30.4)** | **54 (47.0)** | **59 (51.3)** | **37 (10.2)** | **37 (100)** | **0 (0.0)** | **0 (0.0)** |
| Healthy | 25 (6.9) | 16 (64.0) | **13 (52.0)** | 5 (38.5) | 8 (61.5) | 4 (30.8) | **8 (32.0)** | 8 (100) | 0 (0.0) | 0 (0.0) |
| Less healthy | 338 (93.1) | 105 (31.1) | **102 (30.2)** | 30 (29.4) | 46 (45.1) | 55 (53.9) | **29 (8.6)** | 29 (100) | 0 (0.0) | 0 (0.0) |

**Appendix 3** Number and percentage of nutrition and health claims displayed on the front-of-pack of New Zealand packaged food products for selected food categories

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FOOD CATEGORIES** | | Total N of products (%) | N of claims (%) | **Nutrition claims on food products** | | | | **Health claims on food products** | | | |
| **Total N (%)** | Health-related ingredient claims N (%) | Nutrient content claims N (%) | Nutrient compara-tive claims N (%) | **Total N (%)** | General health claims N (%) | Nutrient and other function claims N (%) | Reduction of disease risk claims N (%) |
| **All packaged foods** | | **7526**  **(100.0)** | **7058**  **(100.0)** | **5454**  **(77.3)** | 1166  (21.4) | 3485  (63.9) | 803  (14.7) | **1604**  **(22.7)** | 1197  (74.6) | 76  (4.7) | 331  (20.6) |
| **Healthy foods** | | **3557**  **(47.3)** | **4875**  **(69.1)** | **3650**  **(74.9)** | 760  (20.8) | 2457  (67.3) | 433  (11.9) | **1225**  **(25.1)** | 844  (68.9) | 67  (5.5) | 314  (25.6) |
| **Less Healthy foods** | | **3969**  **(52.7)** | **2183**  **(30.9)** | **1804**  **(82.6)** | 406  (22.5) | 1028  (57.0) | 370  (20.5) | **379**  **(17.4)** | 353  (93.1) | 9  (2.4) | 17  (4.5) |
| Bakery | **Total** | **1565 (100)** | **882 (100)** | **736 (83.4)** | **165 (22.4)** | **414 (56.3)** | **157 (21.3)** | **146 (16.6)** | **132 (90.4)** | **6 (4.1)** | **8 (5.5)** |
| Healthy | 445 (28.4) | 447 (50.7) | **354 (79.2)** | 102 (28.8) | 233 (65.8) | 19 (5.4) | **93 (20.8)** | 79 (84.9) | 6 (6.5) | 8 (8.6) |
| Less healthy | 1120 (71.6) | 435 (49.3) | **382 (87.8)** | 63 (16.4) | 181 (47.3) | 138 (36.1) | **53 (12.2)** | 53 (100) | 0 (0.0) | 0 (0.0) |
| Cereals | **Total** | **564 (100)** | **1503 (100)** | **1070 (71.2)** | **297 (27.8)** | **730 (68.2)** | **43 (4.0)** | **433 (28.8)** | **301 (69.5)** | **28 (6.5)** | **104 (24.0)** |
| Healthy | 291 (51.6) | 995 (66.2) | **680 (68.3)** | 189 (27.8) | 462 (67.9) | 29 (4.3) | **315 (31.7)** | 193 (61.3) | 26 (8.3) | 96 (30.5) |
| Less healthy | 273 (48.3) | 508 (33.8) | **390 (76.8)** | 108 (27.7) | 268 (68.7) | 14 (3.6) | **118 (23.2)** | 108 (91.5) | 2 (1.7) | 8 (6.8) |
| Confec- tionery | **Total** | **784 (100)** | **384 (100)** | **317 (82.6)** | **81 (25.6)** | **205 (64.7)** | **31 (9.8)** | **67 (17.4)** | **67 (100)** | **0 (0.0)** | **0 (0.0)** |
| Healthy | 100 (12.8) | 166 (43.2) | **120 (72.3)** | 3 (2.5) | 101 (84.2) | 16 (13.3) | **46 (27.7)** | 46 (100) | 0 (0.0) | 0 (0.0) |
| Less healthy | 684 (87.2) | 218 (56.8) | **197 (90.4)** | 78 (39.6) | 104 (52.8) | 15 (7.6) | **21 (9.6)** | 21 (100) | 0 (0.0) | 0 (0.0) |
| Convenience foods | **Total** | **378 (100)** | **251 (100)** | **167 (66.5)** | **42 (25.1)** | **119 (71.3)** | **6 (3.6)** | **84 (33.4)** | **61 (72.6)** | **0 (0.0)** | **23 (27.4)** |
| Healthy | 252 (66.7) | 210 (83.7) | **141 (67.1)** | 32 (22.7) | 104 (73.8) | 5 (3.5) | **69 (32.9)** | 50 (72.5) | 0 (0.0) | 19 (27.5) |
| Less healthy | 126 (33.3) | 41 (16.3) | **26 (63.4)** | 10 (38.5) | 15 (57.7) | 1 (3.8) | **15 (36.6)** | 11 (73.3) | 0 (0.0) | 4 (26.7) |
| Dairy | **Total** | **1677 (100)** | **1802 (100)** | **1462 (81.1)** | **305 (20.1)** | **822 (56.2)** | **335 (22.9)** | **340 (18.9)** | **210 (61.8)** | **21 (6.2)** | **109 (32.0)** |
| Healthy | 1027 (61.2) | 1548 (85.9) | **1243 (80.3)** | 256 (20.6) | 731 (58.8) | 256 (20.6) | **305 (19.7)** | 180 (59.0) | 21 (6.9) | 104 (34.1) |
| Less healthy | 650 (38.8) | 254 (14.1) | **219 (86.2)** | 49 (22.4) | 91 (41.6) | 79 (36.0) | **35 (13.8)** | 30 (85.7) | 0 (0.0) | 5 (14.3) |
| Fruit and vegetable products | **Total** | **1155 (100)** | **876 (100)** | **606 (69.2)** | **119 (19.6)** | **447 (73.8)** | **40 (6.6)** | **270 (30.8)** | **185 (68.5)** | **4 (1.5)** | **81 (30)** |
| Healthy | 926 (80.2) | 789 (90.1) | **544 (68.9)** | 96 (17.6) | 410 (75.4) | 38 (7.0) | **245 (31.1)** | 161 (65.7) | 3 (1.2) | 81 (33.1) |
| Less healthy | 229 (19.8) | 87 (9.9) | **62 (71.3)** | 23 (37.1) | 37 (59.7) | 2 (3.2) | **25 (28.7)** | 24 (96) | 1 (4.0) | 0 (0.0) |
| Non-alcoholic beverages | **Total** | **1040 (100)** | **1084 (100)** | **872 (80.4)** | **92 (10.6)** | **674 (77.3)** | **106 (12.1)** | **212 (19.6)** | **189 (89.2)** | **17 (8.0)** | **6 (2.8)** |
| Healthy | 491 (47.2) | 686 (63.3) | **542 (79.0)** | 77 (14.2) | 399 (73.6) | 66 (12.2) | **144 (21.0)** | 127 (88.2) | 11 (7.6) | 6 (4.2) |
| Less healthy | 549 (52.8) | 398 (36.7) | **330 (82.9)** | 15 (4.5) | 275 (83.3) | 40 (12.1) | **68 (17.1)** | 62 (91.2) | 6 (8.8) | 0 (0.0) |
| Snack foods | **Total** | **363 (100)** | **276 (100)** | **224 (81.2)** | **65 (29.0)** | **74 (33.0)** | **85 (38.0)** | **52 (18.8)** | **52 (100)** | **0 (0.0)** | **0 (0.0)** |
| Healthy | 25 (6.9) | 34 (12.3) | **26 (76.5)** | 5 (19.2) | 17 (65.4) | 4 (15.4) | **8 (23.5)** | 8 (100) | 0 (0.0) | 0 (0.0) |
| Less healthy | 338 (93.1) | 542 (87.7) | **198 (81.8)** | 60 (30.3) | 57 (28.8) | 81 (40.9) | **44 (18.2)** | 44 (100) | 0 (0.0) | 0 (0.0) |