

March 2015 update

# Summary Guide for calculating Nutrient Profiling Score Criterion (NPSC) and Health Star Rating (HSR)

The HSR is based on the nutrient content and ingredient information used for the Nutrient Profiling Scoring Criterion (NPSC). For the HSR this information is used in a different way to the NPSC, in order to profile foods based on nutrient content to generate a HSR score that is then assigned a star rating, as described below. **Hence, the HSR score may not have the same numerical value as the NPSC score.**

## Step 1: Determine the NPSC and HSR category of the food

There are two major categories in the HSR, i.e. non-dairy food and dairy foods with three categories under each of them, where specific criteria (e.g. calcium content of the food product) is used to determine if a food product is classified as a dairy food. The category of the food product determines which steps are to be followed to determine its HSR.

The 3 categories for the NPSC are the combined categories 1, 2 and 3 from the HSR. These are split into dairy and non-dairy for the Health Star Rating score:

- Category 1 Beverages other than dairy beverages
- Category 1D Dairy beverages
- Category 2 All foods other than those included in Category 1, 1D, 2D, 3 or 3D
- Category 2D Dairy foods other than those included in Category 1D or 3D
- Category 3 Oils and spreads, defined as follows
  - edible oil as defined in Standard 2.4.1
  - edible oil spreads as defined in Standard 2.4.2
  - margarine as defined in Standard 2.4.2
  - butter as defined in Standard 2.5.5
- Category 3D Cheese and processed cheese as defined in Standard 2.5.4 (with calcium content >320 mg/100 g)

## Step 2: Determine the form of the food for the NPSC and HSR

The HSR and hence nutrient content values used to determine it should apply to the form of the food as determined in accordance with the following:

- **the food as sold** if the food can be either prepared with other foods or consumed as sold
- **the food as prepared** if the food is required to be prepared and consumed according to directions on the label
- **the food after it is reconstituted with water** and ready for consumption if the food requires reconstituting with water
- **the food after it is drained** and ready for consumption if the food requires draining before consuming.

### Step 3: Calculate HSR baseline points

Note that the HSR baseline points are **extended from the point scales used in the NPSC** for determining eligibility of a food for carrying health claims, as set out in Standard 1.2.7.

**Table 1:  
NPSC Baseline points for Category 1 & 2 Foods and HSR Baseline Points for Category 1, 1D, 2 or 2D Foods**

Baseline points	Average energy content (kJ) per 100 g or 100 mL	Average saturated fatty acids (g) per 100 g or 100 mL	Average total sugars (g) per 100 g or 100 mL	Average sodium (mg) per 100 g or 100 mL
0	≤335	≤1.0	≤5.0	≤90
1	>335	>1.0	>5.0	>90
2	>670	>2.0	>9.0	>180
3	>1005	>3.0	>13.5	>270
4	>1340	>4.0	>18.0	>360
5	>1675	>5.0	>22.5	>450
6	>2010	>6.0	>27.0	>540
7	>2345	>7.0	>31.0	>630
8	>2680	>8.0	>36.0	>720
9	>3015	>9.0	>40.0	>810
10	>3350	>10.0	>45.0	>900
<b>Nutrient Profiling Scores STOP here, with max 10 points each category</b>				
<b>Health Star Rating only score below this</b>				
11	>3685	>11.2	>49.0	>1005
12		>12.5	>54.0	>1121
13		>13.9	>58.0	>1251
14		>15.5	>63.0	>1397
15		>17.3	>67.0	>1559
16		>19.3	>72.0	>1740
17		>21.6	>76.0	>1942
18		>24.1	>81.0	>2168
19		>26.9	>85.0	>2420
20		>30.0	>90.0	>2701
21		>33.5	>94.0	>3015
22		>37.4	>99.0	>3365
23		>41.7		>3756
24		>46.6		>4192
25		>52.0		>4679
26		>58.0		>5223
27		>64.7		>5829
28		>72.3		>6506
29		>80.6		>7262
30		>90		>8106

**Table 2:**

**NPSC Baseline points for Category 3 Foods and HSR Baseline Points for Category 3 and 3D Foods (exactly the same)**

<b>Baseline points</b>	<b>Average energy content (kJ) per 100 g or 100 mL</b>	<b>Average saturated fatty acids (g) per 100 g or 100 mL</b>	<b>Average total sugars (g) per 100 g or 100 mL</b>	<b>Average sodium (mg) per 100 g or 100 mL</b>
0	≤ 335	≤1.0	≤ 5.0	≤ 90
1	>335	>1.0	>5.0	>90
2	>670	>2.0	>9.0	>180
3	>1005	>3.0	>13.5	>270
4	>1340	>4.0	>18.0	>360
5	>1675	>5.0	>22.5	>450
6	>2010	>6.0	>27.0	>540
7	>2345	>7.0	>31.0	>630
8	>2680	>8.0	>36.0	>720
9	>3015	>9.0	>40.0	>810
10	>3350	>10.0	>45.0	>900
11	>3685	>11.0		>990
12		>12.0		>1080
13		>13.0		>1170
14		>14.0		>1260
15		>15.0		>1350
16		>16.0		>1440
17		>17.0		>1530
18		>18.0		>1620
19		>19.0		>1710
20		>20.0		>1800
21		>21.0		>1890
22		>22.0		>1980
23		>23.0		>2070
24		>24.0		>2160
25		>25.0		>2250
26		>26.0		>2340
27		>27.0		>2430
28		>28.0		>2520
29		>29.0		>2610
30		>30.0		>2700

## Step 4: Calculate modifying points FVNL, P and F points

Note that the point scales for *FVNL (V points)* are expanded and those for HSR protein and dietary fibre are extended from the point scales used in the NPSC for determining eligibility of a food for carrying health claims, as set out in Standard 1.2.7.

*FVNL(V) points* can be scored (from 1 up to a maximum of 8 points) for foods that contain either non-concentrated *fvnl* sources or concentrated fruit or vegetables, or a mixture of both.

**Table 3: NPSC and HSR FVNL = Modifying V Points**

Points for NPSC scoring	Points for HSR scoring expanded	Column 1 % concentrated fruit or vegetables	Column 2 % fvnl
0	0	<25	≤40
1	1	≥25	>40
2	2	≥43	>60
(HSR only)	3	≥52	>67
(HSR only)	4	≥63	>75
5	5	≥67	>80
(HSR only)	6	≥80	>90
(HSR only)	7	≥90	>95
8*	8*	=100	=100

\*For the purposes of HSRC a food that is >99.5% *fvnl* counts as 100% *fvnl* where food additives or fortificants have been added, e.g. pure fruit juice with added vitamin C

Use Column 1 of Table 3 if the fruit or vegetables in the food product are all concentrated<sup>1</sup> (including dried), for example dried fruit or tomato paste.

Use Column 2 of Table 3 if not concentrated, reconstituted or a mix of conc/non-conc or the food product is potato crisps or a similar low moisture vegetable product.

If the food product contains a mixture of concentrated fruit or vegetables and non-concentrated *fvnl* sources, the percentage of total *fvnl* must be worked out as follows –

$$\frac{(\% \text{ non-concentrated fvnl}) + (2 \times \% \text{ concentrated fruit or vegetables})}{(\% \text{ non-concentrated fvnl}) + (2 \times \% \text{ concentrated fruit or vegetables}) + (\% \text{ non fvnl ingredient})} \times 100/1$$

### NPSC & HSR Protein and fibre points

**Protein (P) points** can be scored if a food scores less than 13 baseline points. A food that scores equal to or more than 13 baseline points can only score protein points if the food scores 5 or more V points.

**Fibre (F) points** can be scored for Category 2, 2D, 3 and 3D foods only. Category 1 and 1D foods (beverages) cannot score F points.

**Table 4: NPSC and HSR Protein (P) and Fibre (F) Modifying Points**

Points	Protein (g) per 100 g or 100 mL	Dietary fibre (g) per 100 g or 100 mL
0	≤1.6	≤0.9
1	>1.6	>0.9
2	≥3.2	>1.9
3	>4.8	>2.8
4	>6.4	>3.7
5	>8.0	>4.7
<b>Nutrient Profiling Scoring STOPS here, max 5 points for each category. Health Star Rating only score below this up to 15 points</b>		
6 (HSR only)	>9.6	>5.4
7 (HSR only)	>11.6	>6.3
8 (HSR only)	>13.9	>7.3
9 (HSR only)	>16.7	>8.4
10 (HSR only)	>20.0	>9.7
11 (HSR only)	>24.0	>11.2
12 (HSR only)	>28.9	>13.0
13 (HSR only)	>34.7	>15.0
14 (HSR only)	>41.6	>17.3
15 (HSR only)	>50.0	>20.0

### Step 5: Calculate the final HSR score

The final NPSC and HSR scores, based on the food's nutrient profile, is calculated by subtracting the HSR modifying points (V, P and/or F points) from the HSR baseline points (see Tables 1-4 above).

Calculate the final NPSC and HSR score using the following formula –

$$\text{Final NPSC Score} = \text{NPSC baseline points} - (\text{V points}) - (\text{P points}) - (\text{F points})$$

$$\text{Final HSR Score} = \text{HSR baseline points} - (\text{V points}) - (\text{P points}) - (\text{F points})$$

On line calculators to double check and future use now you understand the underlying principles:

Food Standards Code for Nutrient Profiling:

[www.foodstandards.gov.au/industry/labelling/pages/nutrientprofilingcalculator/Default.aspx](http://www.foodstandards.gov.au/industry/labelling/pages/nutrientprofilingcalculator/Default.aspx)

Health Star Rating: online calculator also gives the finished star artwork for labels.

[www.healthstarrating.gov.au/internet/healthstarrating/publishing.nsf/Content/calculator](http://www.healthstarrating.gov.au/internet/healthstarrating/publishing.nsf/Content/calculator)

**Worksheet to find opportunities to improve the scores: [www.adecron.co.nz](http://www.adecron.co.nz)**

**Step 6: Nutrient Profiling Score Criterion and Health Star Rating results:**

**Nutrient profiling scoring criterion**  
(for making health claims and GI and diet claims)

	Column 1	Column 2
Category of food for NPSC	NPSC category	The nutrient profiling score must be <b>less than</b>
1	Beverages	1, (= max 0)
2	Any food other than those included in Category 1 or 3.	4, (= max 3)
3	(a) cheese and processed cheese as defined in Standard 2.5.4 (with calcium content >320 mg/100 g)*; and (b) edible oil as defined in Standard 2.4.1; and (c) edible oil spreads as defined in Standard 2.4.2; and (d) margarine as defined in Standard 2.4.2; and (e) butter as defined in Standard 2.5.5.  *All other cheeses (with calcium content ≤320 mg/100 g) are classified as a category 2 food product.	28 (= max 27)

**Health Star Rating results:**

**Table 5: Final scores used to assign Health Star Ratings**

Health Star Rating	Food Category 1 Non-dairy beverage	Food Category 1D Dairy beverage	Food Category 2 * Non-dairy foods	Food Category y 2D# Dairy foods	Food Category 3 Oils and spreads	Food Category 3D Cheese >320 mg Ca/100g
5	≤ -6	≤ -2	≤ -11	≤ -2	≤ 13	≤ 22
4½	-5	-1	-10 to -7	-1	14 to 16	23 to 24
4	-4	0	-6 to -2	0	17 to 20	25 to 26
3½	-3	1	-1 to 2	1	21 to 23	27 to 28
3	-2	2	3 to 6	2	24 to 27	29 to 30
2½	-1	3	7 to 11	3	28 to 30	31 to 32
2	0	4	12 to 15	4	31 to 34	33 to 34
1½	1	5	16 to 20	5	35 to 37	35 to 36
1	2	6	21 to 24	6	38 to 41	37 to 38
½	≥3	≥7	≥25	≥7	≥42	≥39