

# A systematic review of brief dietary questionnaires suitable for clinical use in the prevention and management of obesity, cardiovascular disease and type 2 diabetes

England, CY; Andrews, RC; Jago, R; Thompson, JL

DOI:

[10.1038/ejcn.2015.6](https://doi.org/10.1038/ejcn.2015.6)

License:

None: All rights reserved

*Document Version*

Peer reviewed version

*Citation for published version (Harvard):*

England, CY, Andrews, RC, Jago, R & Thompson, JL 2015, 'A systematic review of brief dietary questionnaires suitable for clinical use in the prevention and management of obesity, cardiovascular disease and type 2 diabetes', *European Journal of Clinical Nutrition*, vol. 69, pp. 977–1003. <https://doi.org/10.1038/ejcn.2015.6>

[Link to publication on Research at Birmingham portal](#)

## **Publisher Rights Statement:**

Eligibility for repository: Checked on 22/12/2015

## **General rights**

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

## **Take down policy**

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact [UBIRA@lists.bham.ac.uk](mailto:UBIRA@lists.bham.ac.uk) providing details and we will remove access to the work immediately and investigate.

Table 3: Summary of key characteristics of dietary assessment tools and evaluation studies

Tool name (date of most recent evaluation)	Number of questions	Purpose <sup>¶</sup> D=Dietary advice (includes clear clinical guidance) M=dietary monitoring (limited clinical guidance) C=sensitive to change	Administration I=interview S=self T=Telephone	Test-retest reliability study	Relative validity study	Some relative validity correlation coefficients >0.4	Relative validity in a clinical sample	Relative validity in men (m) or women (w) only	Access and availability of score sheet
Australian Diet Quality Tool (2012) <sup>50</sup>	13	D	S		✓ <sup>1</sup>	✓	✓		Tool available in paper. Score sheet available on request from authors. Free to use, acknowledgement needed
Bailey Elderly Food Screener (2009) <sup>28, 51</sup>	15	D	S		✓ <sup>2</sup>				Tool and detailed score sheet available in Bailey (2009)
Food Behaviour Checklist: Text version (2003) <sup>10</sup>	16	M	I	✓	✓ <sup>1</sup>	✓		✓ <sup>w</sup>	Tool and scoring derived from validation results in Townsend (2003)
Food Behaviour Checklist: Visual version (2008) <sup>43</sup>	16	M	I						Visual tools, with instructions, are available from <a href="http://townsendlab.ucdavis.edu/PDF_files/UCCE/UCCE_FBC_InstructGuide.pdf">http://townsendlab.ucdavis.edu/PDF_files/UCCE/UCCE_FBC_InstructGuide.pdf</a>
Food Behaviour Checklist: Visual version, Spanish (2011) <sup>44</sup>	16	M	I	✓	✓ <sup>1</sup>	✓		✓ <sup>w</sup>	
Healthy Eating Vital Signs 1 (2012) <sup>8, 53</sup>	14	M	I		✓ <sup>2</sup>	✓	✓		Tool available and scoring described in Greenwood (2008)
Latino Dietary Behaviors Questionnaire (2011) <sup>54</sup>	13	M/C	I		✓ <sup>1</sup>	✓	✓		Tool available and scoring described in Fernandez (2011)
PrimeScreen (2001) <sup>55</sup>	15 food 8 vit/min*	D	S	✓	✓ <sup>1</sup>	✓	✓		Tool and detailed score sheet available free, request from: Department of Nutrition, Harvard School of Public Health ( <a href="http://www.hsph.harvard.edu/">http://www.hsph.harvard.edu/</a> )
REAP (2006)	31	D	S	✓	✓ <sup>2</sup>	✓			Tool and detailed score sheet available from: <a href="http://publichealth.brown.edu/ICHP/research-tools">http://publichealth.brown.edu/ICHP/research-tools</a>

Table 3: Summary of key characteristics of dietary assessment tools and evaluation studies

Tool name (date of most recent evaluation)	Number of questions	Purpose <sup>¶</sup> D=Dietary advice (includes clear clinical guidance) M=dietary monitoring (limited clinical guidance) C=sensitive to change	Administration I=interview S=self T=Telephone	Test-retest reliability study	Relative validity study	Some relative validity correlation coefficients >0.4	Relative validity in a clinical sample	Relative validity in men (m) or women (w) only	Access and availability of score sheet
REAP-S (2004) <sup>29</sup>	16	D	S		✓ <sup>1</sup>	✓			Tool and detailed score sheet available from: <a href="http://www.einstein.yu.edu/centers/diabetes-research/research-areas/survey-instruments.aspx">http://www.einstein.yu.edu/centers/diabetes-research/research-areas/survey-instruments.aspx</a>
Short Diet Quality Screener (2012) <sup>13</sup>	18	M	S		✓ <sup>1</sup>	✓			Tools available on request from authors. Scoring described in Schroder (2011).
Brief Mediterranean Diet Screener (2012) <sup>13</sup>	15	M	S		✓	✓			Tools available on request from authors. Scoring derived from Schroder (2011).
Mediterranean Diet Adherence Score (2011) <sup>56</sup>	14	M	I		✓	✓	✓		Tool available and scoring described in Martinez-Gonzalez (2012)
Dutch fat consumption questionnaire (Dutch) (1992) <sup>57</sup>	25	M	T	✓	✓ <sup>1</sup>	✓			Tool available and scoring described in van Assema (1992)
Fat-Related Diet Habits Questionnaire /Kristal's Food Habits Questionnaire (2002) <sup>11,46,21,47</sup>	20/25	M	S / I	✓	✓ <sup>5</sup>	✓	✓		Tool and detailed score sheet available from: <a href="http://sharedresources.fhcr.org/documents/fat-related-questionnaire">http://sharedresources.fhcr.org/documents/fat-related-questionnaire</a> . Rights from nasr@fhcr.org
Short Fat Questionnaire (1993) <sup>56</sup>	17	M	S	✓	✓ <sup>1</sup>	✓			Tool and detailed score sheet available in Dobson (1993)

Table 3: Summary of key characteristics of dietary assessment tools and evaluation studies

Tool name (date of most recent evaluation)	Number of questions	Purpose <sup>¶</sup> D=Dietary advice (includes clear clinical guidance) M=dietary monitoring (limited clinical guidance) C=sensitive to change	Administration I=interview S=self T=Telephone	Test-retest reliability study	Relative validity study	Some relative validity correlation coefficients >0.4	Relative validity in a clinical sample	Relative validity in men (m) or women (w) only	Access and availability of score sheet
Sister Talk Food Habits (short form) (2007) <sup>3</sup>	30	M/C	S		✓ <sup>1</sup>		✓		Tool available and scoring derived from Anderson (2007). No response to a request for a full description of scoring.
Starting the Conversation (2011) <sup>39</sup>	8	M/C	S	✓	✓ <sup>1</sup>		✓		Tool and detailed score sheet available in Paxton (2011)
Dietary Fat Quality Assessment (2013) <sup>60</sup>	20	M	S /I	✓	✓ <sup>1</sup>	✓	✓	✓ <sup>w</sup>	Tool available and scoring described in Kraschnewski (2013)
Heart Disease Prevention Project Screener (1981) <sup>61</sup>	10	M	S	✓	✓ <sup>1</sup>			✓ <sup>m</sup>	Tool and detailed score sheet available in Heller (1981)
Medfacts (2008) <sup>12,62,63,64</sup>	20	D	S		✓ <sup>6</sup>	✓	✓		Tool and detailed score sheet available in Kris-Etherton (2001)
NLSchol Questionnaire (2012) <sup>58</sup>	11	D	S	✓	✓ <sup>1</sup>	✓	✓		Tool and detailed score sheet available in Beliard (2012)
Northwest Lipid Research Clinic Fat Intake Score (1997) <sup>20</sup>	12	D/C	S	✓	✓ <sup>1</sup>	✓			Tool and detailed score sheet obtained directly from Alice Dowdy. Tool is considered to be outdated (Dowdy, personal communication, 2013)
Rate Your Plate (1993) <sup>15</sup>	23	D	S		✓ <sup>1</sup>	✓	✓		Tool and detailed score sheet available from Nutrition in Clinical Care. 2000; 3: 163 - 169. RYP was developed for and used during the Pawtucket Heart Health Program as a clinical tool to guide consultations.

Table 3: Summary of key characteristics of dietary assessment tools and evaluation studies

Tool name (date of most recent evaluation)	Number of questions	Purpose <sup>¶</sup> D=Dietary advice (includes clear clinical guidance) M=dietary monitoring (limited clinical guidance) C=sensitive to change	Administration I=interview S=self T=Telephone	Test-retest reliability study	Relative validity study	Some relative validity correlation coefficients >0.4	Relative validity in a clinical sample	Relative validity in men (m) or women (w) only	Access and availability of score sheet
Dietary Fat and Free Sugar Short Questionnaire (2012) <sup>69</sup>	26	M	S	✓	✓ <sup>1</sup>	✓			Tool and description of scoring available in Francis (2012)
DINE (1994) <sup>5</sup>	29	D	S / I		✓ <sup>1</sup>	✓			Tool and detailed score sheet available. Copyright is held by The Department of Primary Care at Oxford University and permission must be sought from the Department or from Liane Roe, <a href="mailto:lsr7@psu.edu">lsr7@psu.edu</a> .
Fat and Fibre Barometer (2000) <sup>9</sup>	20	D	S	✓	✓ <sup>1</sup>	✓			A version with detailed score sheet was developed for use in practice by Seal and O'Keef, (creative commons licence) available from : <a href="http://www.diabetesoutreach.org.au/7Steps/HealthyEating/docs/Healthy%20Eating%20Fat%20%20Fibre%20Barometer.pdf">http://www.diabetesoutreach.org.au/7Steps/HealthyEating/docs/Healthy%20Eating%20Fat%20%20Fibre%20Barometer.pdf</a>
Fat and Fibre Diet Behaviour Questionnaire (1997) <sup>18</sup>	29	M/C	I	✓	✓ <sup>1</sup>	✓	✓		Tool and scoring derived from validation results in Shannon (1997)
Norwegian SmartDiet Questionnaire (2000) <sup>7</sup>	15	D	S	✓	✓ <sup>1</sup>	✓	✓		Tool available in and scoring described in Svilaas (2002). No response to request for further information re administrator copy
Block fat and fruit and vegetable screener (2000) <sup>6</sup>	Fat 17 F&V* 7	D	S		✓ <sup>1</sup>	✓			Tool and detailed score sheet available for research (pay to use). Available on-line to individuals and provides instant feedback. <a href="http://nutritionquest.com/assessment/list-of-questionnaires-and-screeners/">http://nutritionquest.com/assessment/list-of-questionnaires-and-screeners/</a>

Table 3: Summary of key characteristics of dietary assessment tools and evaluation studies

Tool name (date of most recent evaluation)	Number of questions	Purpose <sup>¶</sup> D=Dietary advice (includes clear clinical guidance) M=dietary monitoring (limited clinical guidance) C=sensitive to change	Administration I=interview S=self T=Telephone	Test-retest reliability study	Relative validity study	Some relative validity correlation coefficients >0.4	Relative validity in a clinical sample	Relative validity in men (m) or women (w) only	Access and availability of score sheet
Hispanic fat and fruit and vegetable screener (2006) <sup>42</sup>	Fat 16 F&V 7	D	S	✓					Tool and detailed score sheet available in Wakimoto (2006)
Canadian Fruit and Veg Questionnaire (2008) <sup>66</sup>	6	D	S		✓ <sup>1</sup>	✓			Tool and detailed score sheet available in Godin (2008)
Dutch fruit and vegetable questionnaire (2004) <sup>19</sup>	8	M/C	S	✓	✓ <sup>1</sup>			✓ <sup>w</sup>	Tool available and scoring described in Bogers (2004)
Five a day screener / NCI fruit and vegetable screener (2000) <sup>17,67</sup>	7	M	S	✓	✓ <sup>2</sup>	✓			Tool and detailed score sheet available in Thonpson (2000)
Mainvil fruit habits questionnaire (2011) <sup>68</sup>	5	M	S		✓ <sup>1</sup>	✓			Tool and detailed score sheet available on request from the authors
Short Dutch questionnaire to measure fruit and vegetables (2002) <sup>16</sup>	10	M	S		✓ <sup>1</sup>	✓			Tool available and scoring described in van Assema (2002)

<sup>¶</sup>Clinical guidance may be provided in the form of a crib sheet or scoring cut offs. Questionnaires that do not include this may still be suitable for the provision of advice but there may be a need for more training before use.

<sup>u</sup> Tested for acceptability by an undescribed sample or not in the population of interest

<sup>c</sup> Pre-tested by clinicians

\* vit/min=vitamin / mineral supplements; F&V = fruit and vegetables

Numerical superscript indicates the number of samples for reliability and validity testing

Table 3: Summary of key characteristics of dietary assessment tools and evaluation studies