

## **GROW centiles bulk calculator: versions and history** (from February 2007)

Updated April 2018

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### **Current release.** Version **8.0.3** (April 2018)

This is the latest version of the Global Bulk Centile Calculator, which is being issued from the 10<sup>th</sup> April. This contains some essential bug fixes.

This version with the above minor changes is being issued over the previous version (v8.0.2).

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### **Current release.** Version **8.0.2** (March 2018)

This is a version of the Global Bulk Centile Calculator, which was issued from the 19<sup>th</sup> March. The following features were updated:

- Ability to use BCC in non-English Excel
- Countries and Regions tab list enhanced
- Conversion Table tab measurements enhanced

This version with the above minor changes was being issued over the previous version (v8.0.1).

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### **Current release.** Version **8.0.1** (January 2018)

This is a revised version of the Global Bulk Centile Calculator, which has an updated interface and many added features which the following list describes.

- Use of the calculator requires an internet connection for calculations
- Regions (of the world) have been included to calculate centiles in instances where Ethnicity / Country of Origin is not determinable
- Ethnicity / Country of Origin or regions can be entered either by name or three-letter international code. Names and codes are given on a separate sheet
- Conversion tables have been added as an aid in inputting metric measurements
- A new field 'Outcome' has been added to record live birth or fetal death
- The system provides on-line, real time feedback using a system of rigorous input checks to decrease the possibility of errors
- Substituted default values, warnings and errors are clearly marked and statistics produced in a summary
- Buttons have been included to guide the user in resolving warnings and errors
- Any change to any part of the input data necessitates recalculation of all centiles; this is to ensure that all centiles shown are up-to-date
- The input of large datasets (up to 50,000) can result in centile-calculating times of over 5 minutes

Note that a [comprehensive User Guide](#) accompanies the Global Bulk Centile Calculator software.

The following technical adjustments have been made:

- An extra filter,  $18.5 < \text{BMI} < 30$ , is now used when deriving customized coefficients
- Extreme maternal weights are now *not* adjusted to lie within  $15 < \text{BMI} < 50$

The following technical adjustments have been added as [revision 1](#) (March 2018):

- Maternal weight and height data have been reformulated from 3<sup>rd</sup> to 2<sup>nd</sup>-order polynomials when coefficient values are demonstrating an unbalanced general model. This situation occurs when:
  - Both 2<sup>nd</sup> and 3<sup>rd</sup>-order terms are negative, resulting in extreme weights having an unduly (sometimes extreme) negative influence;
  - The 2<sup>nd</sup>-order term has been excluded due to non-significance, which demonstrates that a 3<sup>rd</sup>-order sub-model is not appropriate.
- Argentina centile calculations updated.

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Version **8.0.0** (2017)

This is the new [Global Bulk Centile Calculator](#), based on data from over 3 million records from 21 countries, allowing a single application available for all users, wherever they are in the world. The new application has the following features:

- There are now 106 ethnicities including categories for each of the UK home countries (England, Scotland, Wales and Northern Ireland). A look up list of available ethnic categories is listed in the second tab of the spreadsheet. If you have used previous version(s), please make sure that the new codes are aligned with your data;
- The application includes comprehensive validation rules that alert if a data entry is outside feasible limits;
- A specific gestation/birthweight data quality rule alerts if the data seems outside normal parameters (e.g. gestational age 40 weeks and birthweight of 200g);
- Maternal data fields can be left blank if data are incomplete, in which case default values are used to calculate approximate centiles; the default values used are displayed in a separate column;
- Additional columns display the codes in text format to assist with data quality / validation.

The old version of the Bulk Centile Calculator is being phased out. However, an extension is available in order to complete an ongoing project by contacting [grow@perinatal.org.uk](mailto:grow@perinatal.org.uk)

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Version numbers [changed](#) from **6.X** to **8.X** in line with new systems and procedures.

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Version **6.7.8** (April 2016). Expires 31 Oct 2017

1. Updated expiry date and version for all countries.  
Verified for **Excel 2013** (and **Excel 2010**) **only**
  2. **Developed Middle East coeffs** v6.7.8.21
  3. **Developed Canada coeffs** v6.7.8.22
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Version **6.7.7** (October 2015) ..... Expires 31 Oct 2016

1. Verified for **Excel 2013** (and **Excel 2010**) **only**
  2. **New version for UK**, with extended African coefficients (v6.7.7.1)
  3. **Developed Uzbekistan** coefficients (v6.7.7.14)
  4. Developed **Portugal new version** (Portugal2), using revised data.
  5. **Developed Slovenia** coefficients (v6.7.7.15)
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Version **6.7.6** (Jun 2015) ..... Expires 31 Oct 2016

1. Verified for **Excel 2013** (and **Excel 2010**) **only**
  2. **Updated** to expire **31 Oct 2016**
  3. **Added Portugal** coefficients (v6.7.6.13)
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Version **6.7.5** (Nov 2014) ..... Expires 31 Oct 2015

1. This version is for **Excel 2013** (and **Excel 2010**) **only**
  2. **BMI limits now** set to low=15, high=50
  3. **New version for UK**, based on WMids DBX (MRX run 04b, N=161,000) with new extended ethnic coeffs
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Version **6.7.4** (Aug 2014) ..... Expired 31 Oct 2015

1. This version is for **Excel 2013** (and Excel 2007/10) **only**
2. Application has extension **.xlsm**
3. Extends **previous proportionality formula** (gest > 24 <= 42 weeks) by adding **new proportionality formula** segment for gest 20 < 25 weeks

4. **New version for Australia (WA)**, based on Western Australia data. New extended ethnic coeffs.

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Version **6.7.1\_03** (Nov 2013) ..... Expired 31 Oct 2014

Version **6.7.3\_13** (Feb 2014) ..... Expired 31 Oct 2014

1. v6.7.1\_03 is for **Excel 2003** (and earlier)
2. v6.7.3\_13 is for **Excel 2013** (developed and tested), but works under Excel 2010 and *should* be OK for Excel 2007. This version replaces v6.7.2\_13, which:
  - (a) fixes a bug when producing certain comment boxes
  - (b) updates Netherlands coeffs to latest 536K data.

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Version **6.7.2\_13** (Nov 2013) ..... Expired 31 Oct 2014

v6.7.2\_13 is for **Excel 2013** (developed and tested), but works under Excel 2010 and *should* be OK for Excel 2007.

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Version **6.7** (Oct 2013) ..... Expired 31 Oct 2014

1. **New interface**.
2. Updated to provide **estimated centile** where data is missing using documented default values.
3. More **compact**; at 3.9MB; shouldn't need zipping on despatch

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Version **6.6** (Jan 2013) ..... Expired 31 Oct 2014

1. Now allows up to **50,000** sets of data to be entered.
2. Size increased to about **30MB**, so needs compacting on despatch.
3. **New version for Netherlands** added.

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Version **6.5** (Nov 2011) ..... Expired 31 Oct 2013

1. **User registration database** introduced
2. **International coefficients synchronised** with GROW chart central server. As a consequence, some international ethnic codes may have been rearranged on pull-down menus.
3. **Coefs for UK now updated** ref: MR12 02c1.7 (Oct 2011)

4. Updated version for NZ (ref Anderson) with 14 ethnic categories + Other
5. NZ version amended slightly on request for inclusion of 2 extra (non-significant) ethnics: Samoan and LatinAmer. Sent out as v6.5u.
6. New version for Ireland added.
7. New version for Spain added.
8. Extra amended version for Spain which keeps menu items in main bar. Was sent accompanied by warning.

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Version 6.4.2 (Nov 2011) ..... Expired 31Oct13

Special version for NZ. This is v6.4.1 extended for a further 2 years.

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Version 6.4.1 (Oct 2010) ..... Expired 31Oct11

NZ version updated following rounding errors (reported by Ngaire Anderson)

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Version 6.4 (Oct 2009) ..... Expired 31Oct11

1. Now has baby TOW limits of 1500-4500
  2. The Australian version has extra NZ coeffs added by request
  3. Button "About GROW" is now linked to documentation on website
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Version 6.3 (May 2009) ..... Expired 31Aug11

This version has NO BMI limits. They have been removed in this and future versions unless specifically mentioned

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Version 6.2.3 (21/8/08) ..... Updated to expire 31Aug10

1. New version for US added.
  2. BMI version for UK produced
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Version 6.2.2 (March 2007) ..... Expired 31Aug08

New version for Australia added

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Version 6.2.1BMI for New Zealand (February 2007)

Bugfix. Unprotected cells not extensive enough – OK now

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Version **6.2** (February 2007) ..... Expired Aug 08

BMI version (6.2BMI) developed for NZ

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