Supplementary Fetal Growth Curves

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The following growth curves are described in the manuscript entitled “Quantitative Standards for Fetal and Neonatal Autopsy.” While the tables in the manuscript are better suited for displaying these numerical data, some may still prefer charts, hence the reason for this document.

Most of these curves are constructed from regressions on data from multiple sources, and the remaining curves are derived from a single source. All sources studied non-macerated tissue examined at autopsy and excluded fetuses with obvious malformations. (The one exception to this rule is hand length at later ages, which incorporates data from normal liveborns.) Thus, these standards are designed to show whether various measurements obtained at autopsy are normal when compared to other seemingly normal fetuses examined at autopsy.

The dotted, dash-dotted, and dashed lines correspond to plus or minus 1.00, 1.28, and 1.64 standard deviations, respectively. Assuming the data are normally distributed, these lines also correspond with 16–84th, 10–90th, and 5–95th percentiles, respectively. Note that standard deviation data is not available for philtrum length, chest circumference, abdominal circumference, small intestine length, and large intestine length.

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Body Weight (12–44 Weeks)

Sources: Cussen et al. (1990), Gruenwald and Minh (1960), Hansen et al. (2003), and Wigglesworth and Singer (1991)
Body Weight (12–24 Weeks)

Sources: Cussen et al. (1990), Gruenwald and Minh (1960), Hansen et al. (2003), and Wigglesworth and Singer (1991)
Brain Weight (12–44 Weeks)

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Sources: Cussen et al. (1990), Gruenwald and Minh (1960), Hansen et al. (2003), Larroche (1977), and Wigglesworth and Singer (1991)
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**Pancreas Weight (20–42 Weeks)**

- **1.00 SD; 16–84th percentile**
- **1.28 SD; 10–90th percentile**
- **1.64 SD; 5–95th percentile**

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Kidney Weight (12–44 Weeks)

Sources: Cussen et al. (1990), Gruenwald and Minh (1960), Hansen et al. (2003), Larroche (1977), and Wigglesworth and Singer (1991)
Kidney Weight (12–24 Weeks)

- 1.00 SD; 16–84th percentile
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- 1.64 SD; 5–95th percentile

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- 1.64 SD; 5–95th percentile

Source: Guihard-Costa et al. (2003)
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- 1.00 SD; 16–84th percentile
- 1.28 SD; 10–90th percentile
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Source: Guihard-Costa et al. (2003)
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Postmenstrual Gestational Age (Weeks)

Length (mm)

Source: Chambers et al. (1993)
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- 1.64 SD: 5–95th percentile

Source: Guihard-Costa et al. (2003)
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Abdominal Circumference (13–26 Weeks)

Postmenstrual Gestational Age (Weeks)

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Source: Chambers et al. (1993)
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Length (mm)

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Sources: Hansen et al. (2003) and Wigglesworth and Singer (1991)
Small Intestine Length (12–25 Weeks)

Source: FitzSimmons et al. (1988)
Large Intestine Length (12–25 Weeks)

Source: FitzSimmons et al. (1988)
References


