Description

Instrument
The Beckman Coulter MAXM instrument in the Mobile Examination Center (MEC) produces a complete blood count on blood specimens and provides a distribution of blood cells for all participants.

Eligible Sample
Participants were 1+ years of age.

Examination Protocol
Detailed specimen collection and processing instructions are discussed in NHANES Laboratory/Medical Technologists Procedures Manual (LPM). The analytical method used by MEC medical technologists is in the Analytic Methodology section.

Analytic Methodology

CBC Parameters
The methods used to derive complete blood count (CBC) parameters are based on the Beckman Coulter method of counting and sizing, in combination with an automatic diluting and mixing device for sample processing, and a single-beam photometer for hemoglobinometry. The white blood count (WBC) differential uses VCS technology. See Chapter 7 of the NHANES Laboratory/Medical Technologists Procedures Manual for details.

Analytic Notes
Derived variables were created using the following calculation:

\[
\begin{align*}
\text{LBDLYMNO} &= \text{LBXWBCSI} \times \text{LBXLYPCT}/100 \\
\text{LBDMONO} &= \text{LBXWBCSI} \times \text{LBXMOPCT}/100 \\
\text{LBDNENO} &= \text{LBXWBCSI} \times \text{LBXNEPCT}/100 \\
\text{LBDEONO} &= \text{LBXWBCSI} \times \text{LBXEOPCT}/100 \\
\text{LBDBANO} &= \text{LBXWBCSI} \times \text{LBXBAPCT}/100
\end{align*}
\]
The five counts (variable names) were:

- Segmented neutrophils number (LBDNENO)
- Lymphocyte number (LBDLYMNO)
- Monocyte number (LBDMONO)
- Eosinophil number (LBDEONO)
- Basophil number (LBDBANO)