

Mean erythrocyte volume

Mean corpuscular volume (MCV) is the average volume of one erythrocyte .

It is calculated according to the formula:

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$$\text{MCV} = \frac{\text{hematocrit}}{\text{number of erythrocytes} \cdot 10^6} \cdot 10^6$$**

The physiological value is 85 ± 10 fl.

An erythrocyte with a smaller volume is referred to as a microcyte, one with a larger volume as a makrocyte. In the blood of a healthy adult, there is normally present a certain proportion of microcytes and macrocytes, this state is referred to as physiological anisocytosis. An increase in the number of microcytes is referred to as microcytosis, an increase in macrocytes as macrocytosis. Microcytosis typically occurs with iron deficiency anemia. Macrocytosis occurs physiologically in newborns, from pathological conditions it is typical for anemia due to a lack of folic acid or vitamin B₁₂.

Links

Related articles

- Mean Corpuscular Hemoglobin Concentration=MCHC
- Color value of erythrocyte=MCH

Source

ŠVÍGLEROVÁ, Jitka. *Střední objem erytrocytu* [online]. [cit. 12.11.2010]. <http://wiki.lfp-studium.cz/index.php/Střední_objem_erytrocytu>.