Red Blood Cell Indices

(MCV, MCH, MCHC)

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1. Mean Cell Volume (MCV)

- **MCV** is the average volume of single red blood cells.
- it is expressed in cubic micron or fimtoliter (10^{-15} liter)
- The normal value is **(82 - 98 FL).**
- When MCV is increased, the cell is known as a **macrocyte** and when it is decreased, the cell is called **microcyte.**

$$\text{MCV} = \frac{\text{Packed cell volume (P.C.V.)} \times 10}{\text{No. of R.B.C.}} = \ ? \ \text{(FL)}$$

2. Mean Cell Hemoglobin (MCH)

- This is the weight or amount of hemoglobin present in one red blood cell.
- It is expressed in micro micro gram or Pico gram (pg).
- The normal value of MCH is **(27 - 32 pg.)**.

$$\textbf{MCH} = \frac{\textbf{Hemoglobin in grams} \times 10}{\textbf{No. of R.B.C.}} = ? \textbf{ (Pg)}$$

3. Mean Cell Hemoglobin Concentration (MCHC)

- This is the concentration of hemoglobin in one red blood cell.
- It is the amount of hemoglobin expressed in relation to the volume of one red blood cell. So, the unit of expression is percentage.
- This is the most important absolute value in the diagnosis of anemia.
- The normal value of MCHC is **(32% to 36%).**

$$\text{MCHC} = \frac{\text{Hemoglobin in grams} \times 100}{\text{P.C.V.}} = \% \quad \textbf{Without units}$$

рахмат
danke
謝謝
ngiyabonga
teşekkür ederim
spas
Баярлалаа
mersi
kia ora
barka
welalin
tack
mahalo
спасибо
faafetai lava
vinaka
blagodaram
спасибі
dank je
misaotra
matondo
paldies
grazzi
tapadh leat
thank you
gracias
хвала
kiitos
dankie
nanni
nandri
dhanyavad
mauruuru
köszönöm
hvala
gràçie
bayarlalaa
bedankt
asante
manana
obrigada
murakoze
tenki
enkosi
dankon
aĉiū
akun
djiere dieuf
tau
mochchakkeram
дякую
mamnun
chokrane
dziękuję
chnorakaloutioun
gratias ago
gràcies
sulpáy
taiku
go raibh maith agat
sobodi
děkuji
sagolun
sukriya
kop khun krap
obrigado
mèsi
didi madloba
najis tuke
ありがとう
tanemirt
grazie
arigatô
takk
dakujem
trugarez
kam sah hamnida
rahmat
terima kasih
rahmet
ευχαριστώ
diolch
dhanyavadagalu
shukriya
mercé
мерси
তোমাকে ধন্যবাদ
감사합니다
xièxie
merci