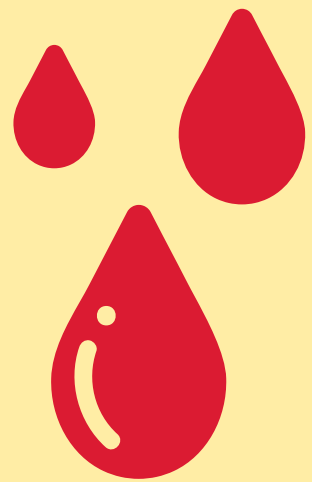
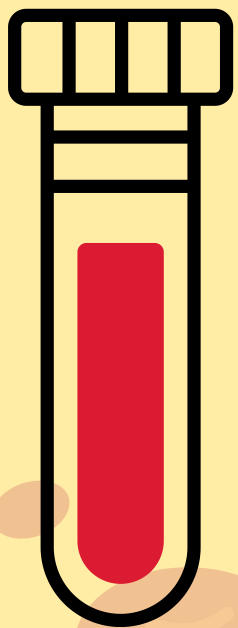
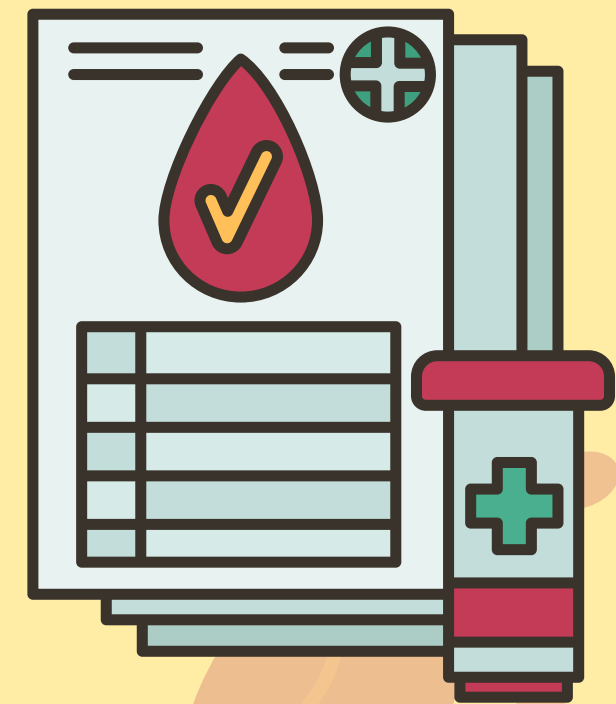


16-mavzu. Eritrotsitlar

O'qituvchi: Teshayeva Mohinur Sayfullo qizi



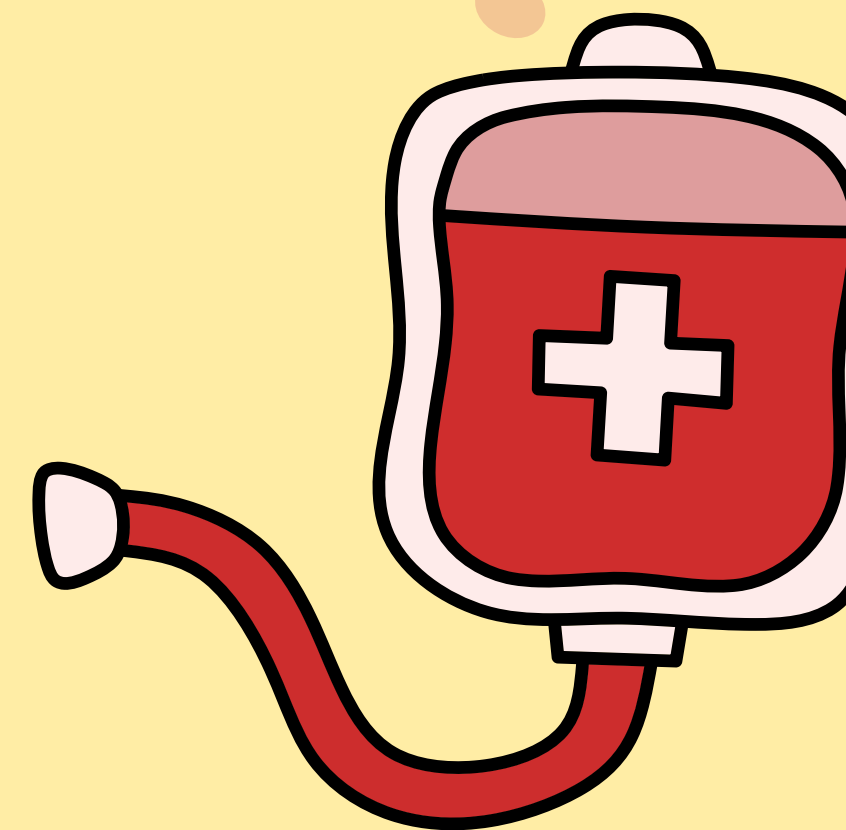
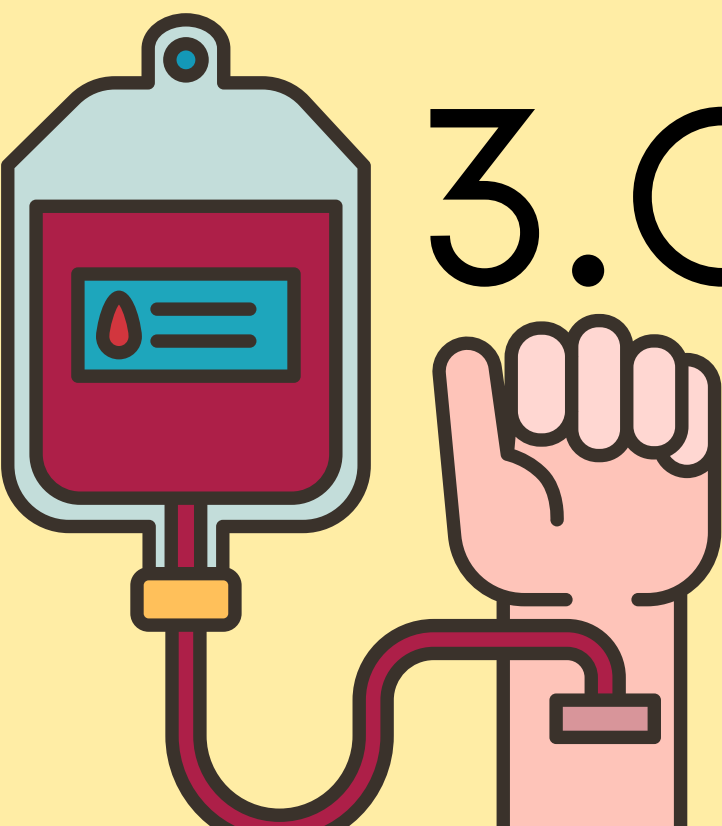
Reja:

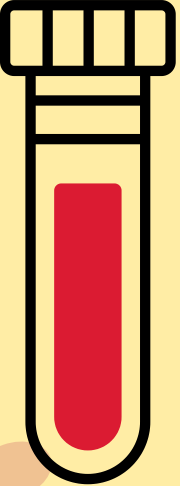


1.ERITROTSITLAR TUZILISHI

2.QON GURUHI

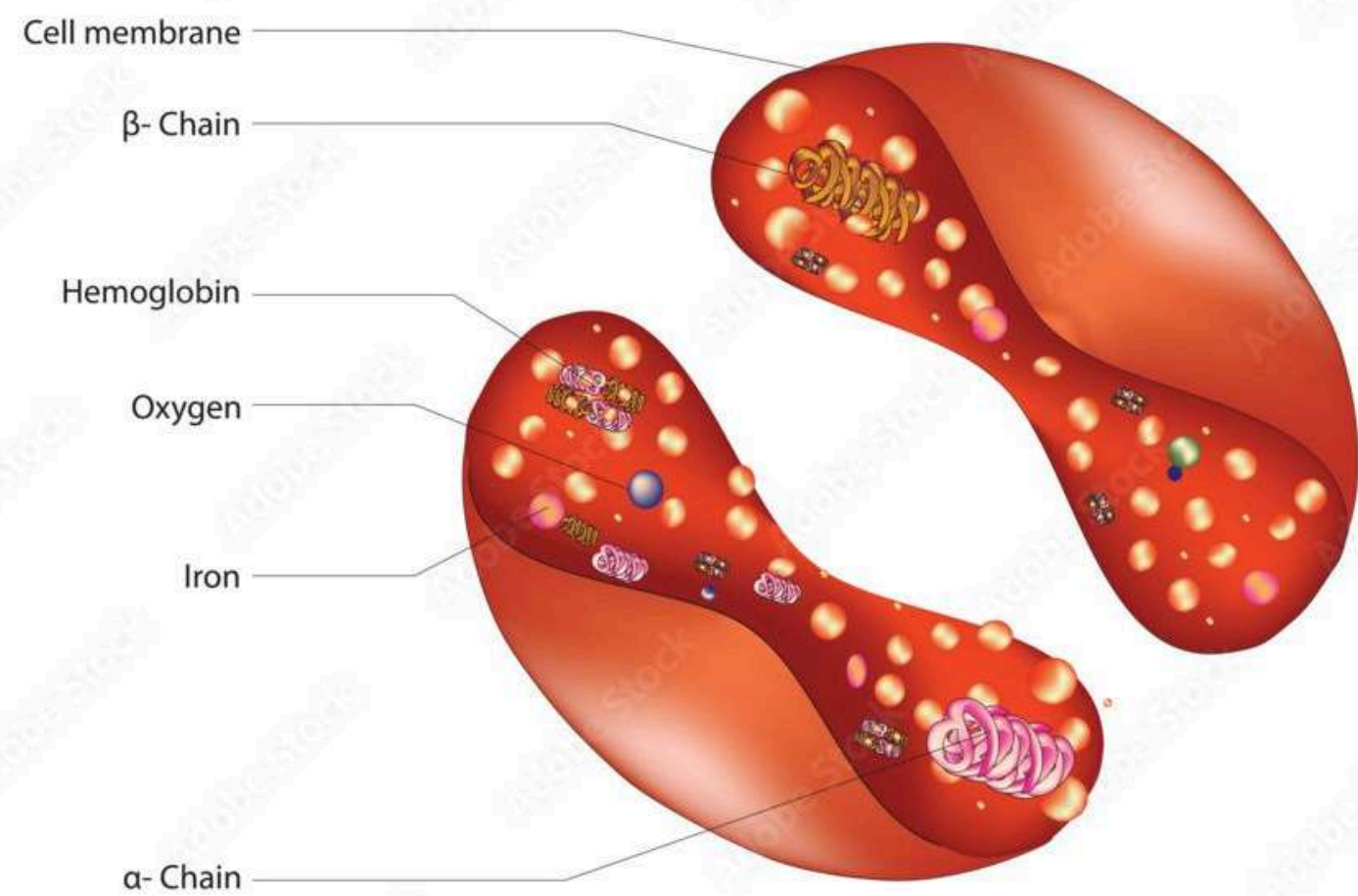
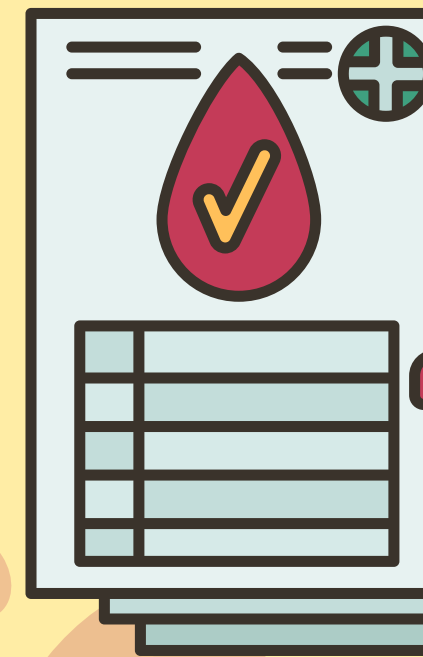
3.QON QUYISH



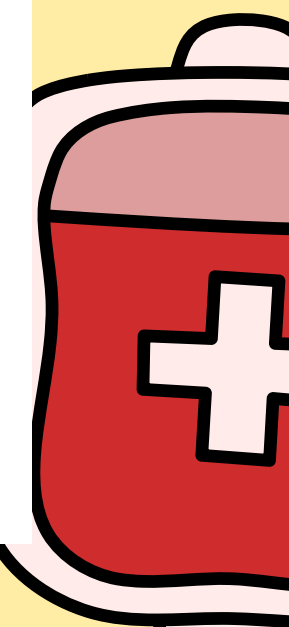
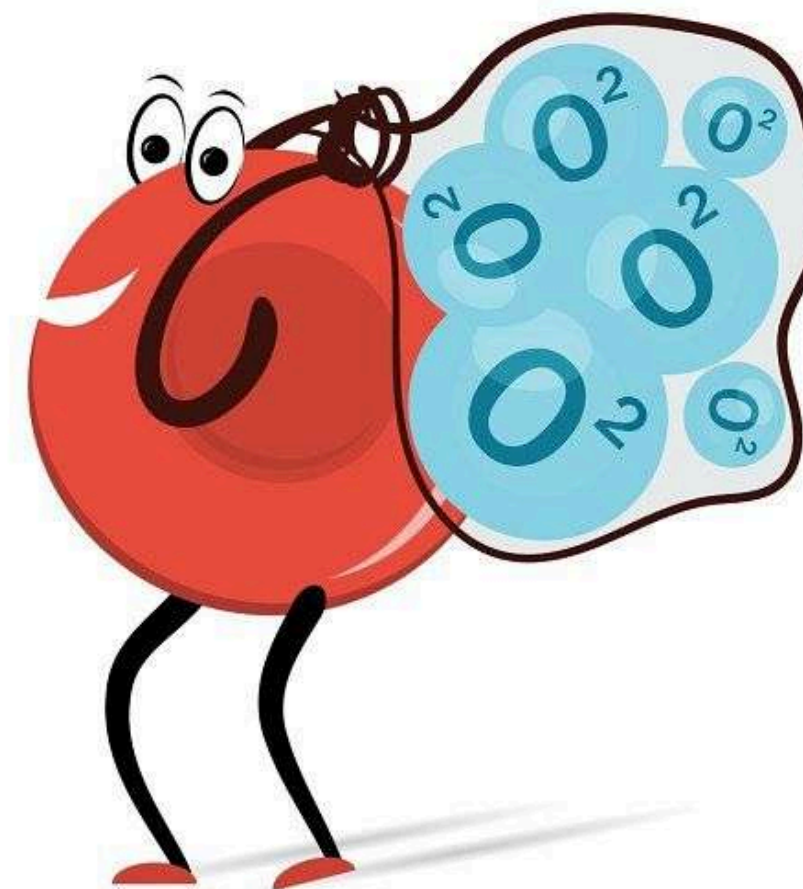


Eritrotsitlar transport funksiyasini bajaradi. Ular organizmdagi barcha hujayralarga kislorod yetkazib beradi, moddalar almashinuvi natijasida hosil bo'lgan karbonat angidrid gazini o'pkaga olib keladi.

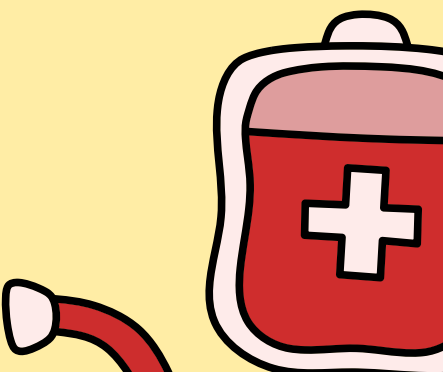
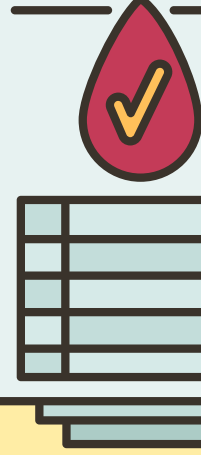
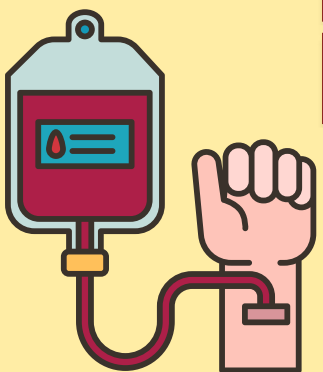
Eritrotsitlarning tuzilishi. Eritrotsitlar - o'rtasi ikki tomondan yupqalashgan disk shaklidagi qizil rangli yadrosiz hujayralar. Bunday shakl hujayra yuzasini kengaytirib, gaz almashinuvini yaxshilaydi. Ularning o'lchami juda kichik bo'lib, millimetrning mingdan bir qismiga to'g'ri keladi. 1 mm³ qonda 4-6 mln, ortacha 5 mln dona eritrotsit bo'ladi. Eritrotsitlar to'rt oyga yaqin yashaydi (120 kun).

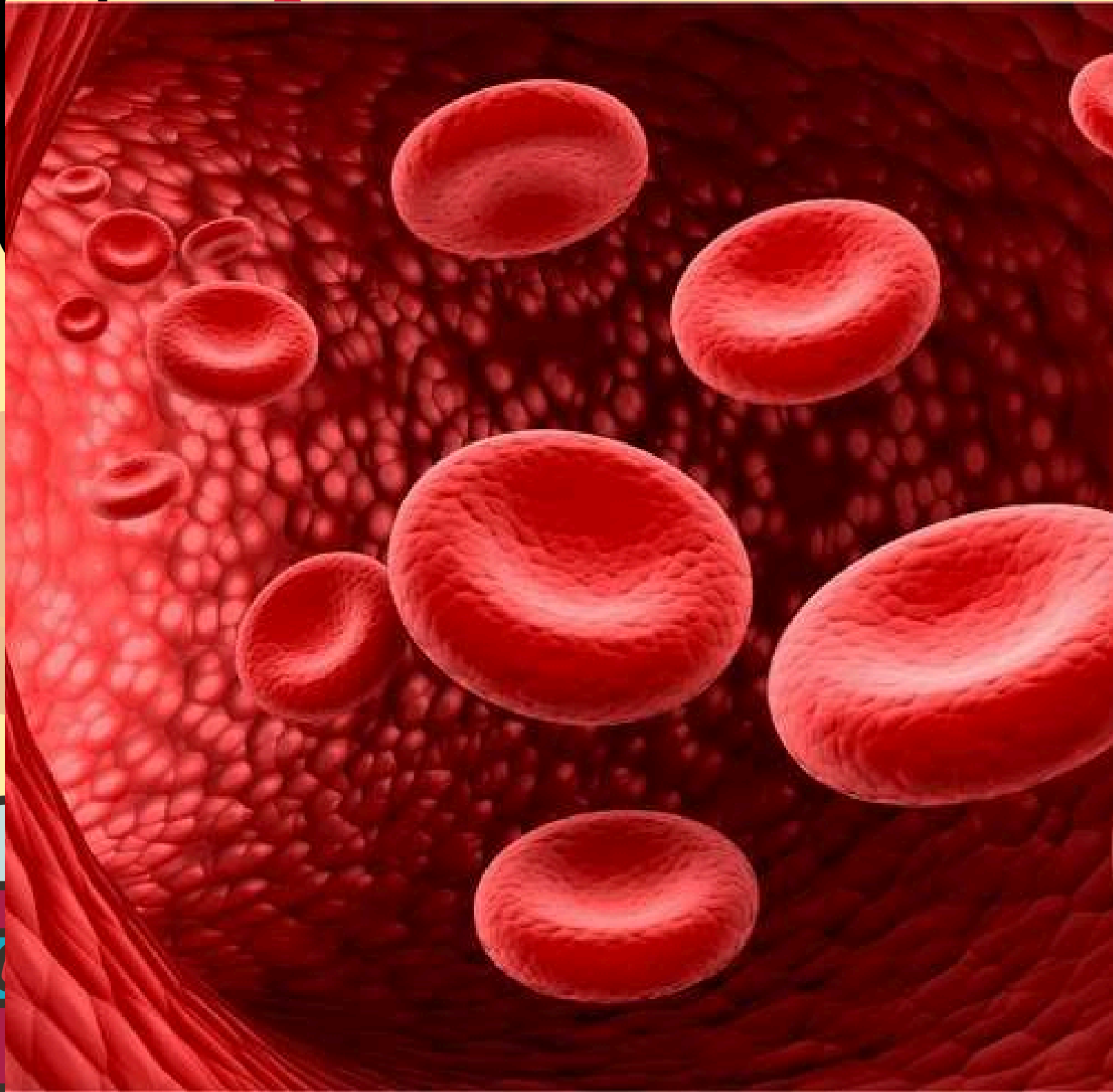


Typical Structure of Erythrocyte

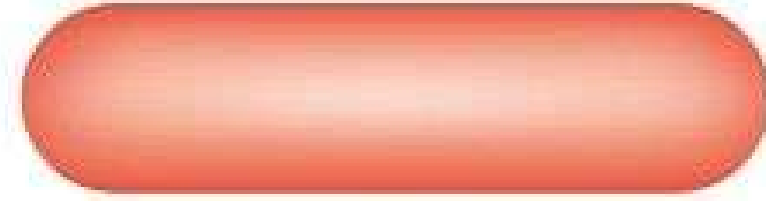


Organizmدا eritrotsitlar o't, jigar va terida saqlanadi. Bu organlarda eritrotsitlarning 70 % dan ko'proq qismi saqlanishi mumkin. To'qima va organlarda qonga ehtiyoj tug'ilganida bu organlar zarur miqdorda qon beradi. Faoliyati tugab bo'lgan eritrotsitlar jigarda va taloqda yemiriladi. Qonning qizil rangi eritrotsitlar tarkibidagi gemoglobinga bog'liq. Gemoglobin kislorodni to'qimalarga tashiydi. Gemoglobin ikki qismdan iborat. Uning oqsil qismi globin, temir saqlovchi oqsilli qismi gem deyiladi. O'pka kapillarlarida gemoglobin kislorod bilan birikib - oksigemoglobinrti hosil qiladi. Kislorod bilan to'yingan qon och qizil tusda bo'lib, arteriya qora deyiladi. To'qimalarda oksigemoglobin yana gemoglobin va erkin kislorodga parchalanadi. Erkin kislorod 4 - Biologiya (Odam va uning salomatligi), 8-sinf 49 hujayralarga o'tadi. Kislorodini hujayralarga berib, karbonat angidrid gazi bilan to'yingan qon to'q qizil bolib, vena qoni deyiladi

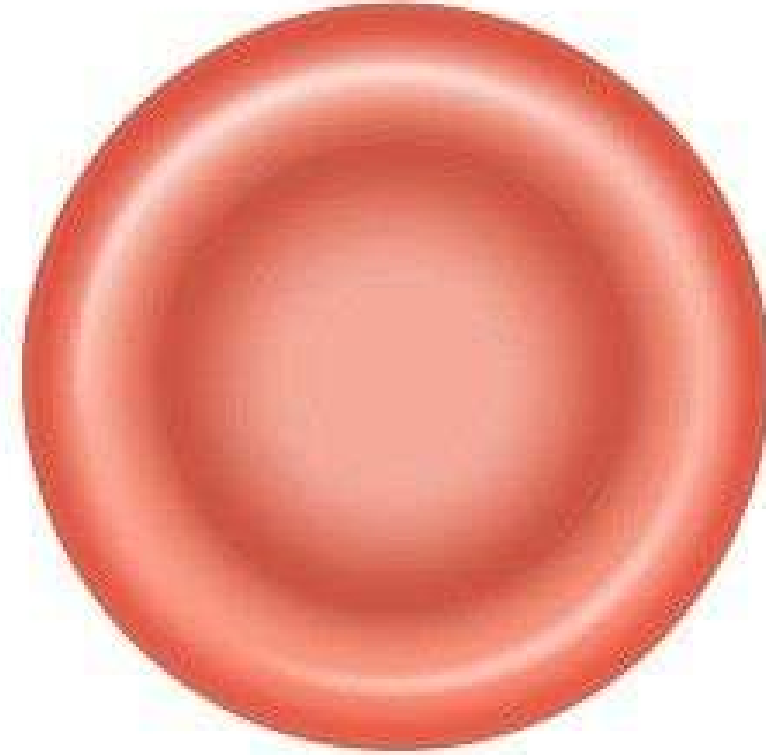




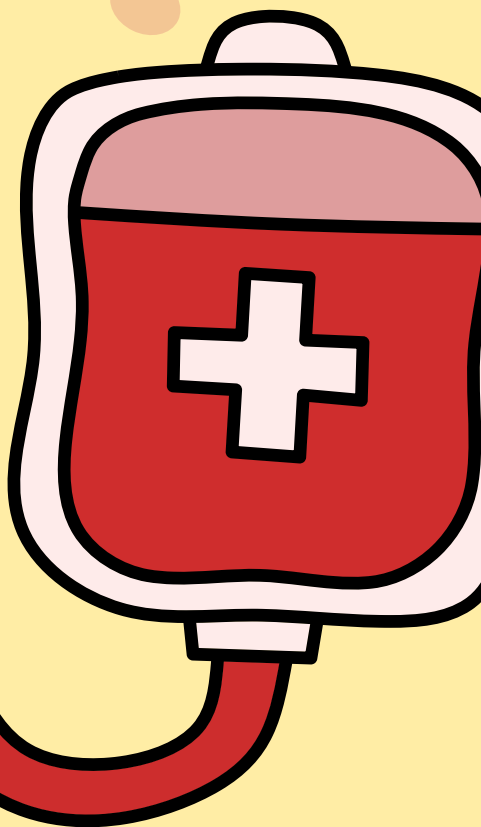
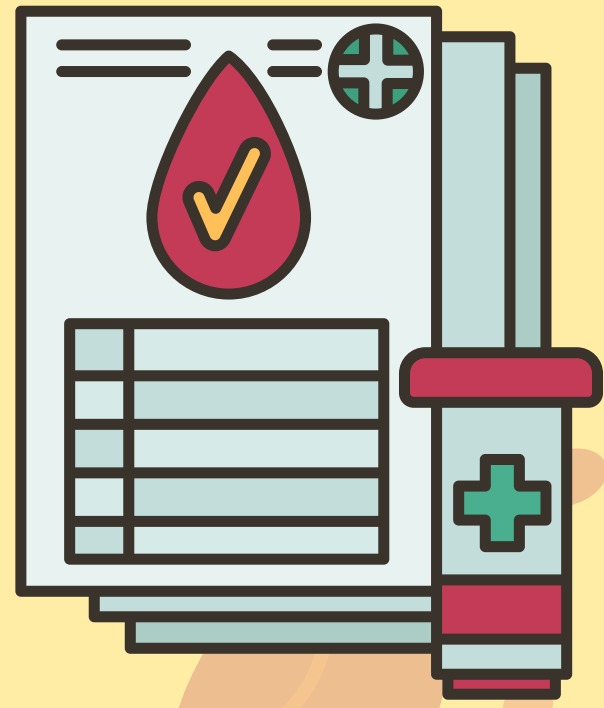
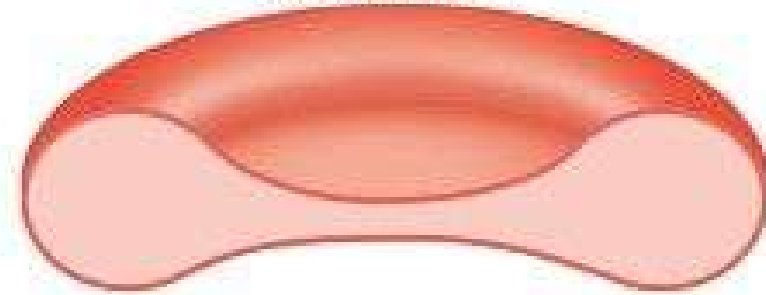
Side view

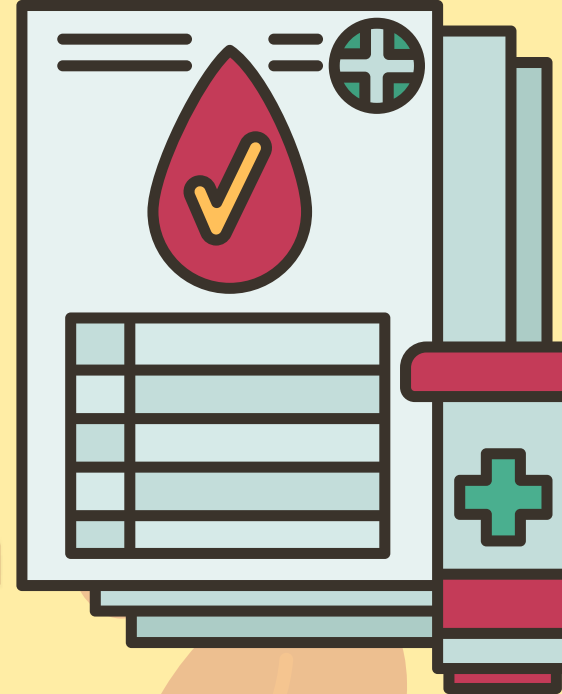
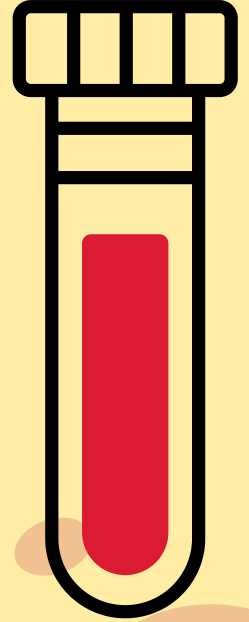


Front view

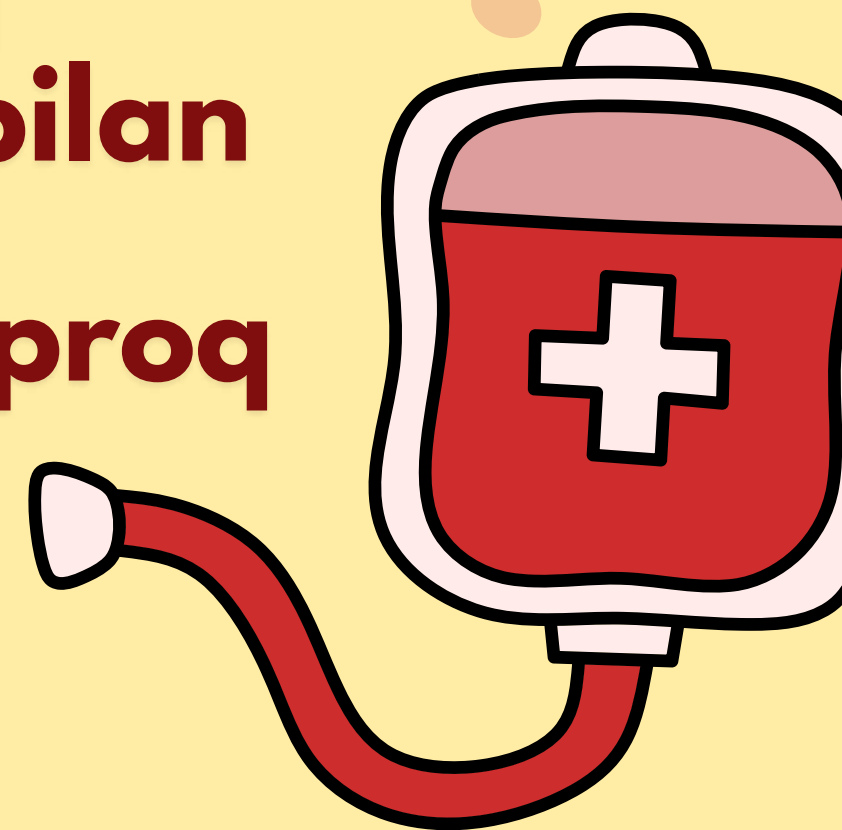
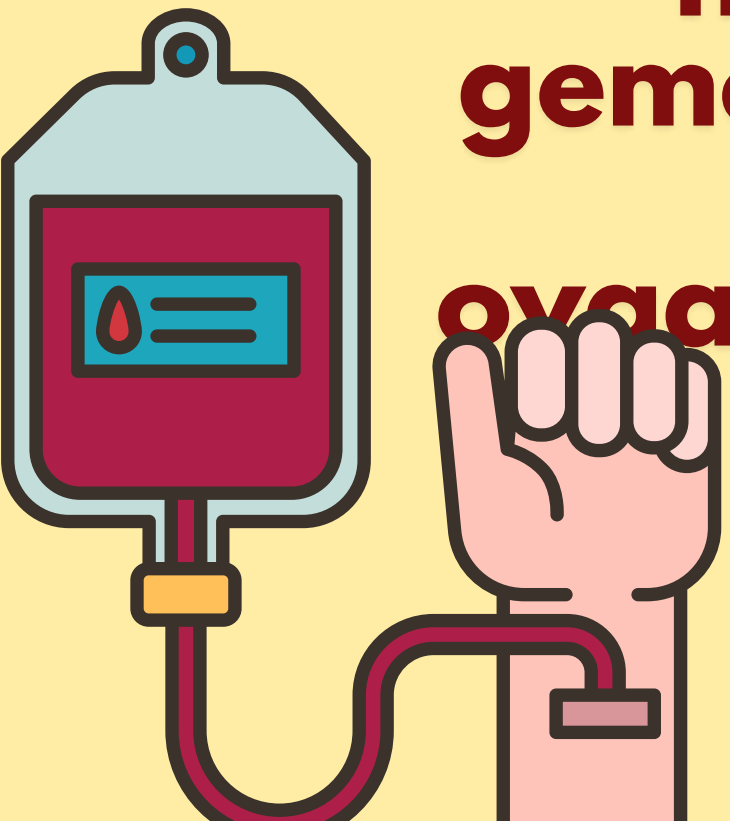


Sectional view



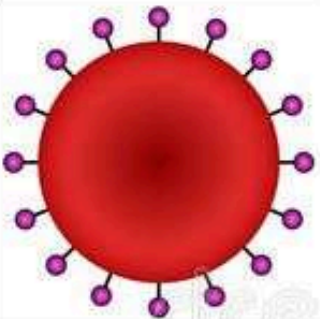
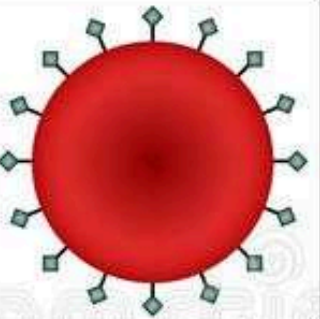
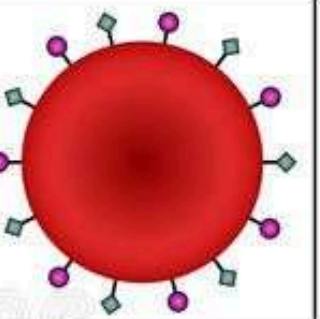
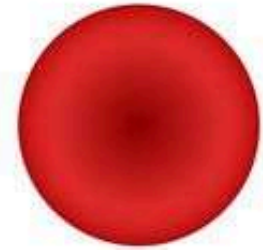








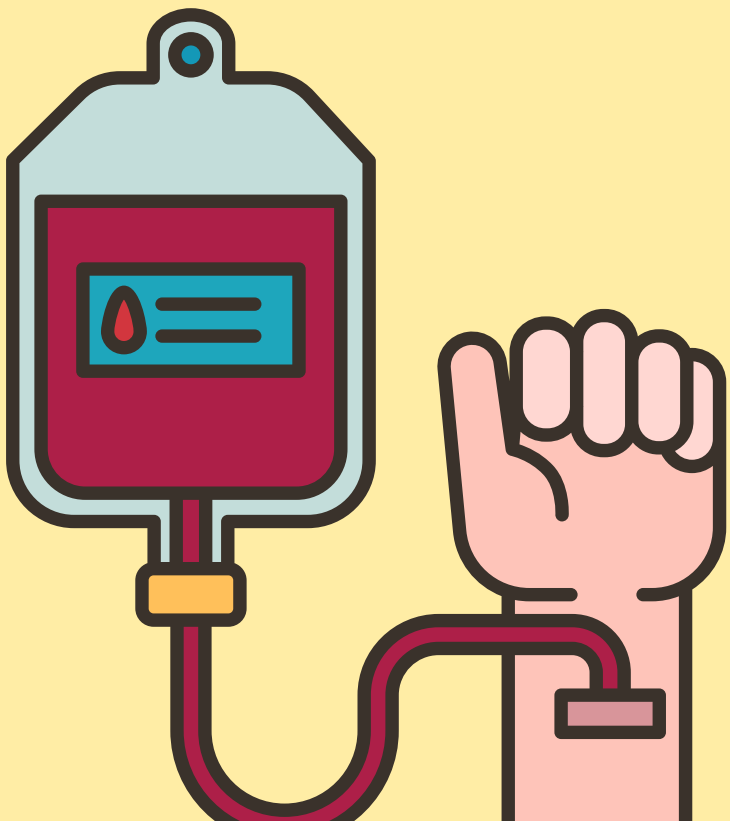
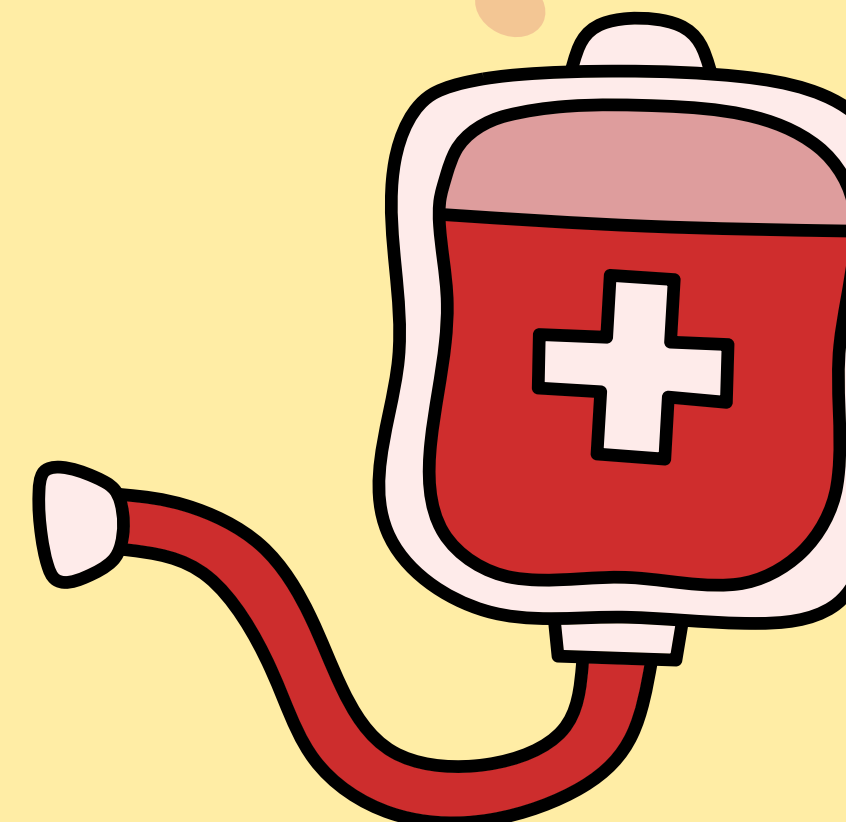
**Yangi eritrotsitlar qizil ilikda hosil boladi.
Eritrotsitlar taloqda ham saqlanadi.
To'qimalarda qon kamayib ketganida taloqdan
qonga kerakli miqdorda eritrotsitlar
chiqariladi. Eritrotsitlar yoki ulardagi
gemoglobin miqdori kamayib ketishi
kamqonlikka olib keladi. Ko'p qon yo'qotish,
to'yib ovqat yemaslik, ayrim yuqumli
kasalliklar ham kamqonlikka sabab bolishi
mumkin, Kamqonlikni davolash qonda
gemoglobin miqdorini me'yorga keltirish bilan
bog'liq. Buning uchun yaxshi
ovqatlanish, dam olish va toza havoda ko'proq
sayr qilish zarur.**

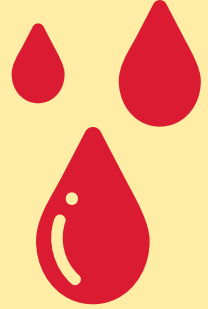


Qon guruhlari. 1901-yili K. Landshteyner, 1907-yili Y. Yanskiy qonning eritrotsitlari tarkibida agglutinogen, plazmasi tarkibida agglutinin moddalari bo'lishini aniqladilar. Bu moddalar agglutinogen A va B, agglutinin a va fi dan iborat. Binobarin, bitta odam qonining eritrotsitlari va plazmasida agglutinogen A va agglutinin a yoki agglutinogen B va agglutinin fi bolmasligi kerak. Normada agglutinogen A va agglutinin fi yoki agglutinogen B va agglutinin a bolishi mumkin. Agglutinogen A va B bolgan qonda agglutininlar umuman bolmaydi. Aksincha, agglutinin a va fi bo'lgan qonda agglutinogenlar umuman bo'lmaydi. Ana shunga ko'ra, barcha odamlar qoni to'rt guruhga bo'linadi.



ABO Blood Group System				
Group	A	B	AB	O
Red Blood Cell Type				
Antigens Present	 Antigen A	 Antigen B	 Antigen A & B	None
Antibodies Present	 Anti-B	 Anti-A	None	 Anti-A & Anti-B





I guruh - eritrotsitlarda agglutinogen umuman bo'lmaydi, plazmada agglutinin *a va beta* bo'ladi.

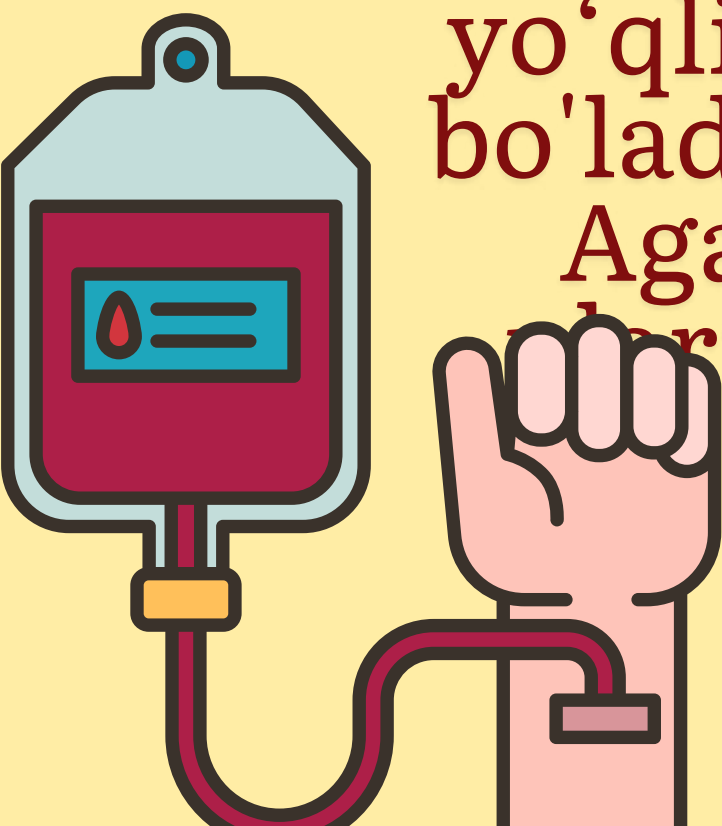
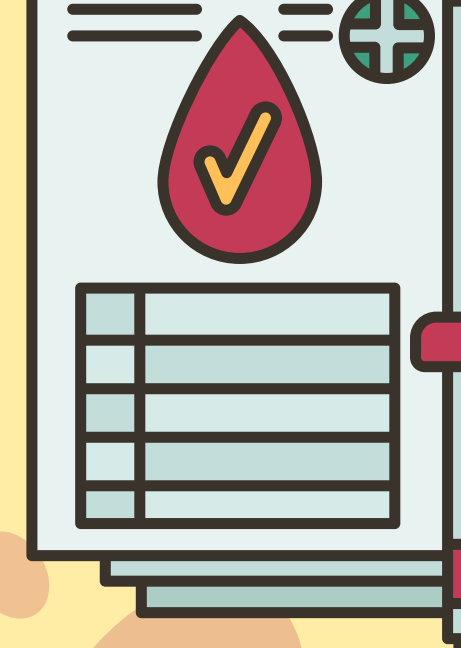
II guruh - eritrotsitlarda agglutinogen A, plazmada agglutinin *beta* bo'ladi.

III guruh - eritrotsitlarda agglutinogen B, plazmada agglutinin *a* boladi.

IV guruh — eritrotsitlarda agglutinogen *A va B* bo'lib, plazmada agglutinin umuman bo'lmaydi.

K. Landshteyner va boshqalar 1940-yilda eritrotsitlarda rezus omil, antigen borligini aniqlaganlar. Rezus omil avloddan avlodga irsiy o'tadi. Rezus omilning bor yoki yo'qligiga ko'ra, rezus musbat va rezus manfiy odamlar bo'ladi. Rezus omil odam hayoti davomida o'zgarmaydi.

Agar ona rezus manfiy, homila rezus musbat bolsa, homilaning rezus omili mos bolmaganligi tufayli bolada gemolitik kasallik yuzaga keladi.

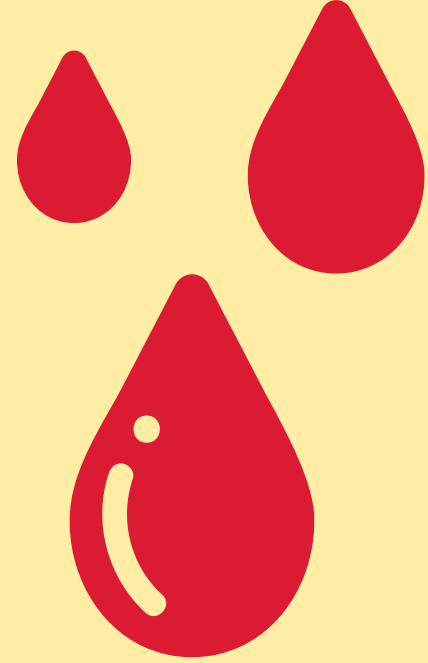
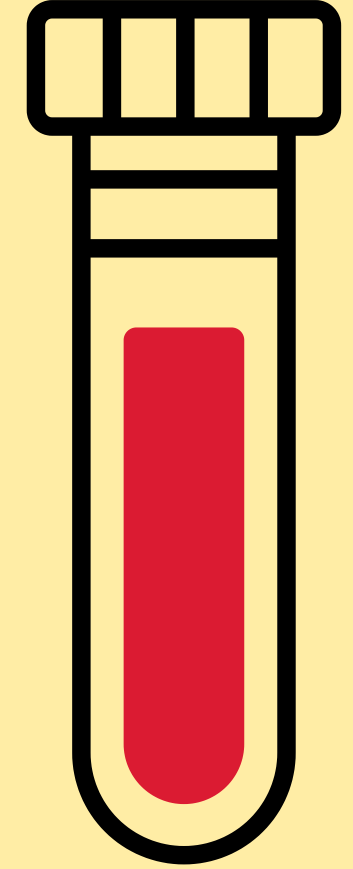


Qon quyish. Og‘ir shikastlanganda va ko‘p qon yo‘qotilganda, uzoq davom etadigan og‘ir kasalliklarda bemorni davolash uchun qon quyish kerak boladi, I qon guruhiga ega odamlar qonini barcha qon guruhdagi odamlarga berishi mumkin. Shuning uchun ular **universal donor** deb ataladi (boshqalarga qon beruvchi odamdonor, boshqalardan qon oluvchi odam retsipyent deb ataladi). II qon guruhli odamlar II va IV qon guruhli odamlarga, III qon guruhli odamlar III va IV qon guruhli odamlarga qon berishi mumkin. IV qon guruhli odamlar faqat shu qon guruhli odamlarga qon berishi mumkin, lekin o‘zi hamma guruhdan qon oladi. Shuning uchun ular **universal retsipyent** deb ataladi (jadvalga qarang).

Qon guruhlari	Qon berish mumkin	Qon qabul qilish mumkin
I	I, II, III, IV	I
II	II, IV	I, II
III	III, IV	I, III
IV	IV	I, II, III, IV

Masalalarni yeching:

1. Katta yoshdagi odam organizmi tomirlarida 5 litr qon bo'ladi. Erkaklarda qonning 14 % i, ayollarda 13% i gemoglobinga to'g'ri keladi. Agar bir gramm gemoglobin 1,3 ml kislorodni tutsa, erkaklar va ayollar qonida qanchadan kislorod bo'ladi?
2. Odam qoni o'lchami 0,007 mm, echkiniki 0,004 mm, baqaniki 0,004 mm ga teng. 1 mm³ odam qonida 5 mln, echki qonida 10 mln, baqa qonida 400000 eritrotsit bo' ladi. Qaysi organizm qoni muayyan vaqt birligida yurakka ko'proq qon olib keladi?



E'TIBBORIN
GIZ
UCHUN
RAXMAT!

