



3-MA'RUZA

**EKSTRAPIRAMIDAL
SISTEMA VA MIYACHA**

Toshkent tibbiyot akademiyasi
nevrologiya kafedrası

Zarifboy Ibodullayev

EKSTRAPIRAMIDAL SISTEMA

1

- Ekstrapiramidal sistema anatomiyasi

2

- Ekstrapiramidal sistema fizizologiyasi

3

- Ekstrapiramidal sistema patologiyasi

EPS nima uchun javob beradi?

**EPS – ongsiz tarzda
bajariladigan avtomatik
harakatlar uchun javob beradi.**



**Nobel mukofoti
berilmagan
kashfiyot!
U nima edi!**



Mashhur dofamin!



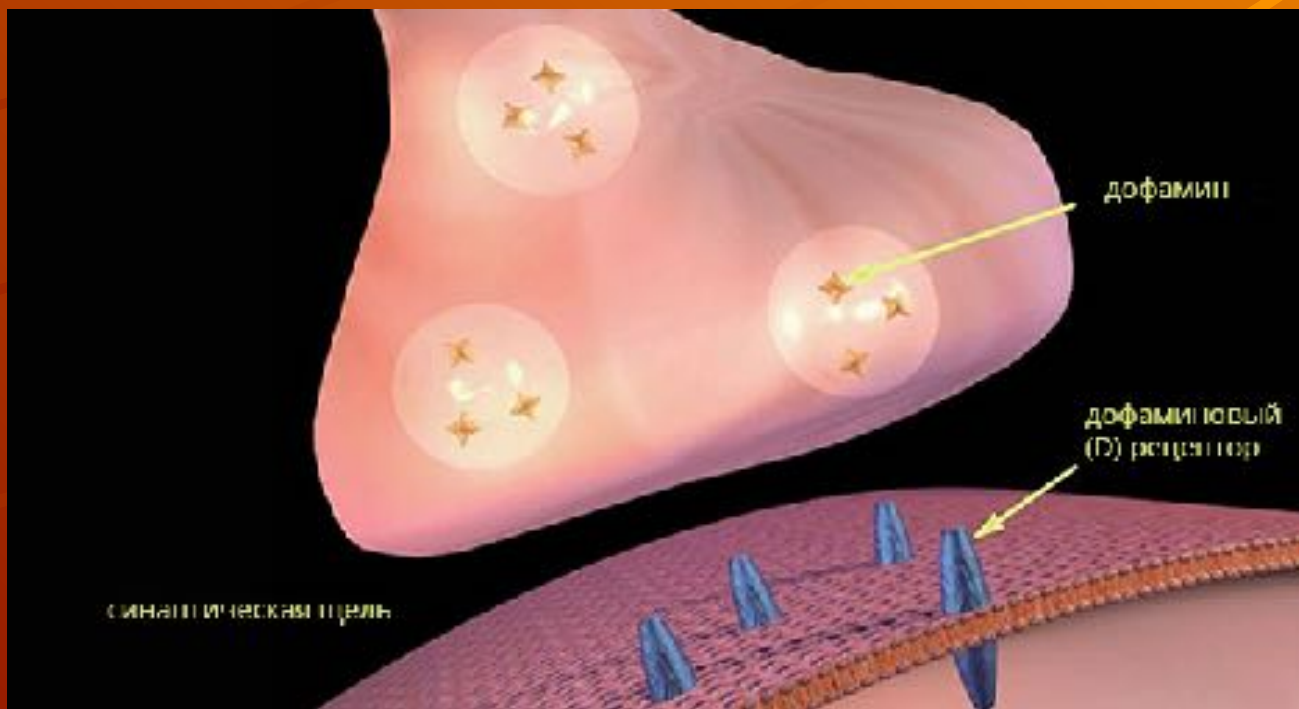
**Dofamin
yetishmasa
parkinsonizm
rivojlanadi!**

**Inson
harakatlarning
biokimyoviy
asosini bazal
yadrolarda ishlab
chiqariladigan
DOFAMIN tashkil
qiladi.**

Dofamin yetishmasa parkinsonizm rivojlanadi!

Dofamin (dioksifenilanin) – o`rta miyaning dofaminergik neyronlarida, xususan, qora moddada (substantia nigra) va gipotalamusning ba'zi yadrolarida ishlab chiqariladi: sintez bosqichlari: fenilalanin → L-tirozin → L-dofa → dofamin.

Dofamin buyrak usti bezida ham ishlab chiqariladi. Biroq bu dofamin miyaga o`ta olmaydi.



DOFAMIN NIMA QILADI?

1

- HARAKATNI TA'MINLAYDI;
- DIQQAT VA XOTIRANI YAXSHILAYDI;

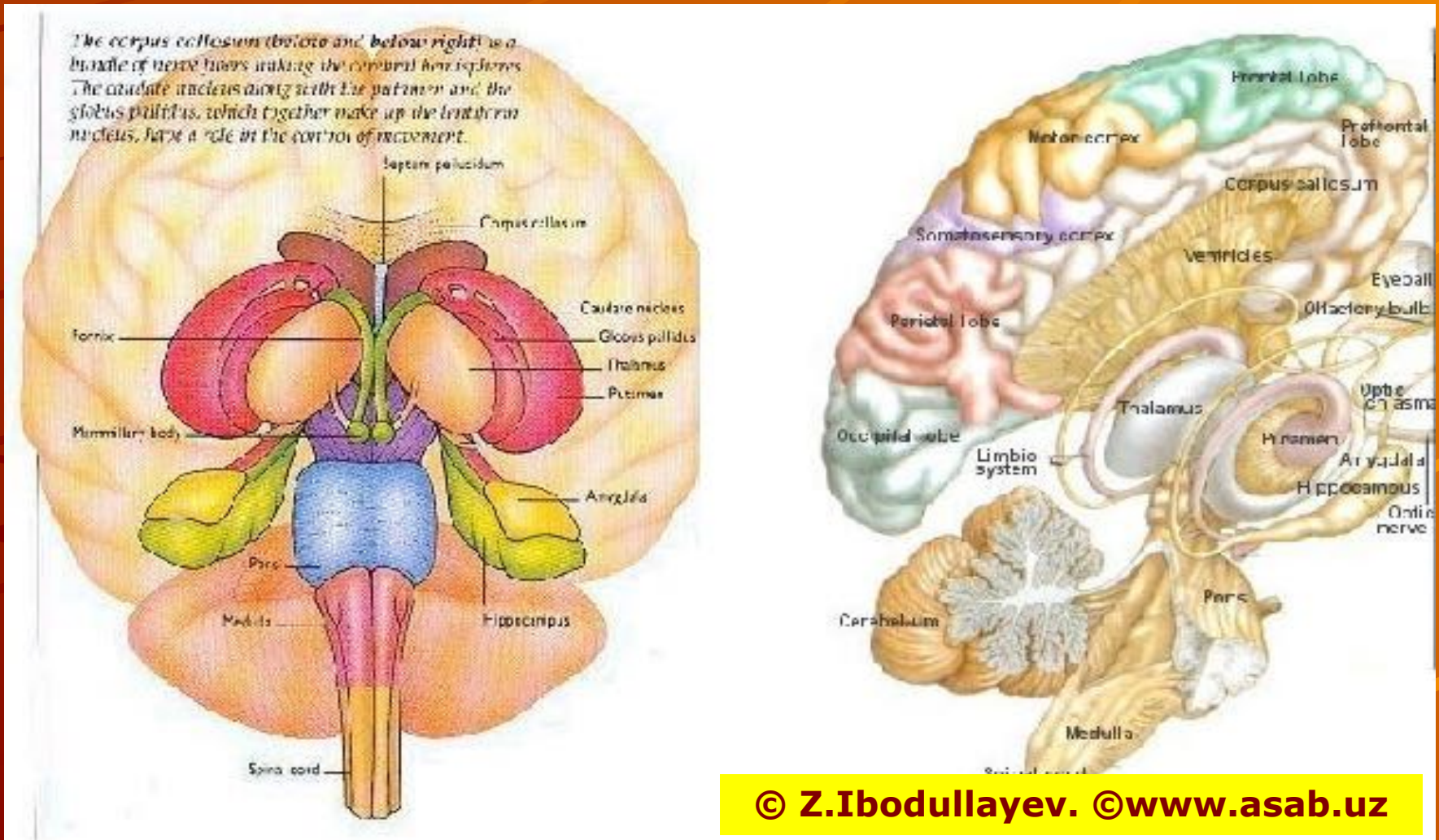
2

- HISSIYOTNI BOSHQARADI;
- O'ZLASHTIRISHNI YAXSHILAYDI

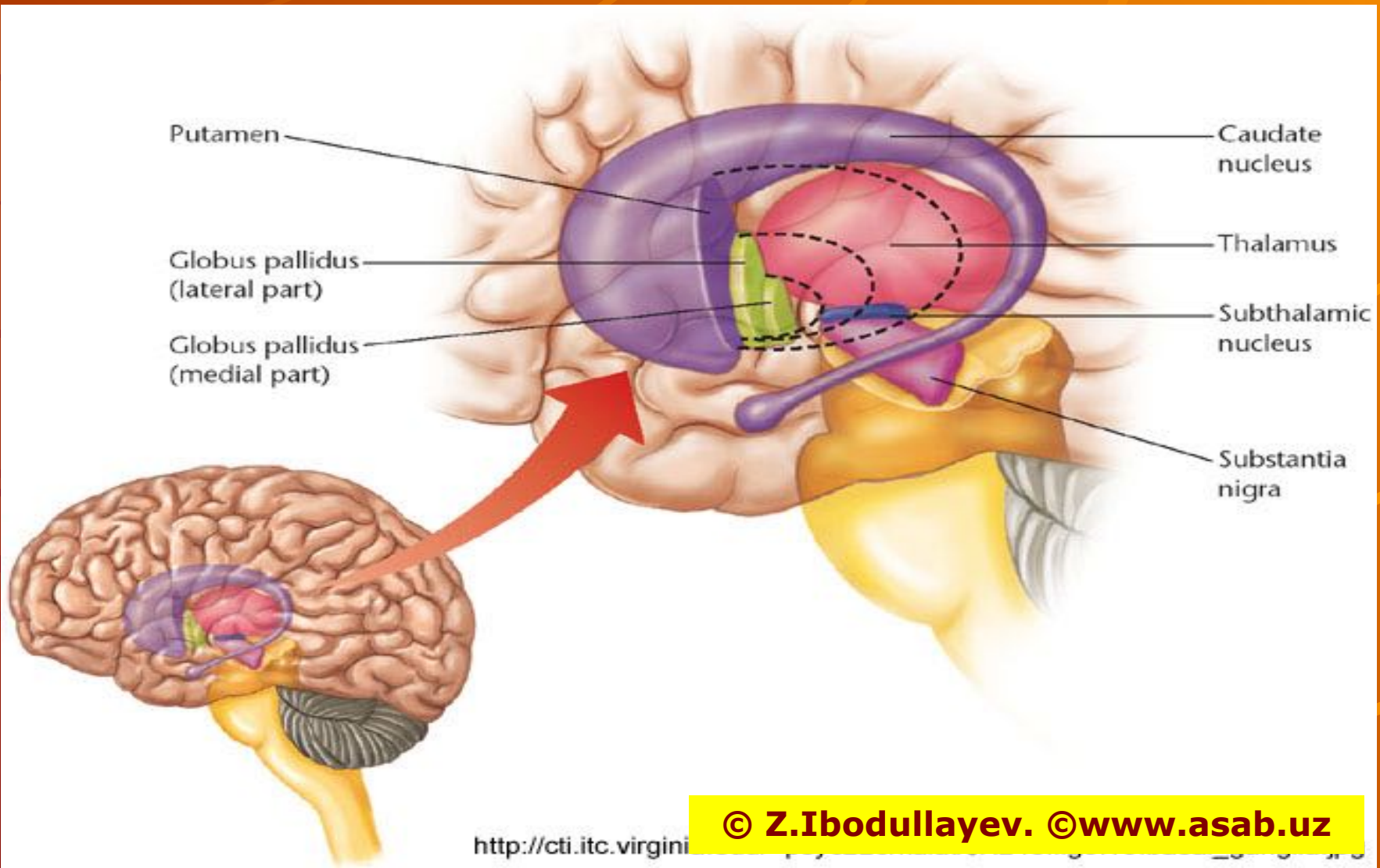
3

- XULQ-ATVORDA ISHTIROK ETADI;
- UYQU JARAYONINI TA'MINLAYDI.

EPS, talamus, miya ustuni – po'stloqqa bo'ysunadigan tizimlar.



Ekstrapiramidal sistema qayerda joylashgan?



EKSTRAPIRAMIDAL SISTEMA:



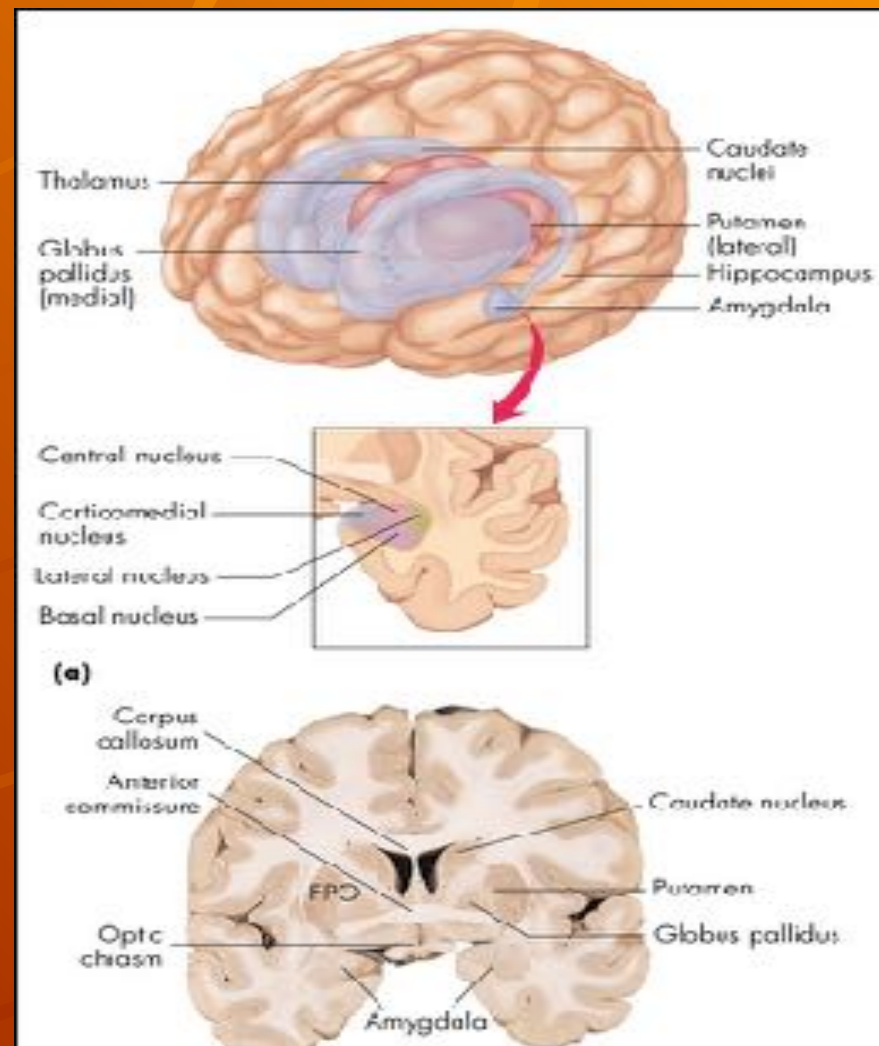
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graph TD; A[EKSTRAPIRAMIDAL SISTEMA:] --> B[PALLIDAR SISTEMA]; A --> C[STRIAR SISTEMA];
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**PALLIDAR
SISTEMA**

**STRIAR
SISTEMA**

PALLIDAR SISTEMA

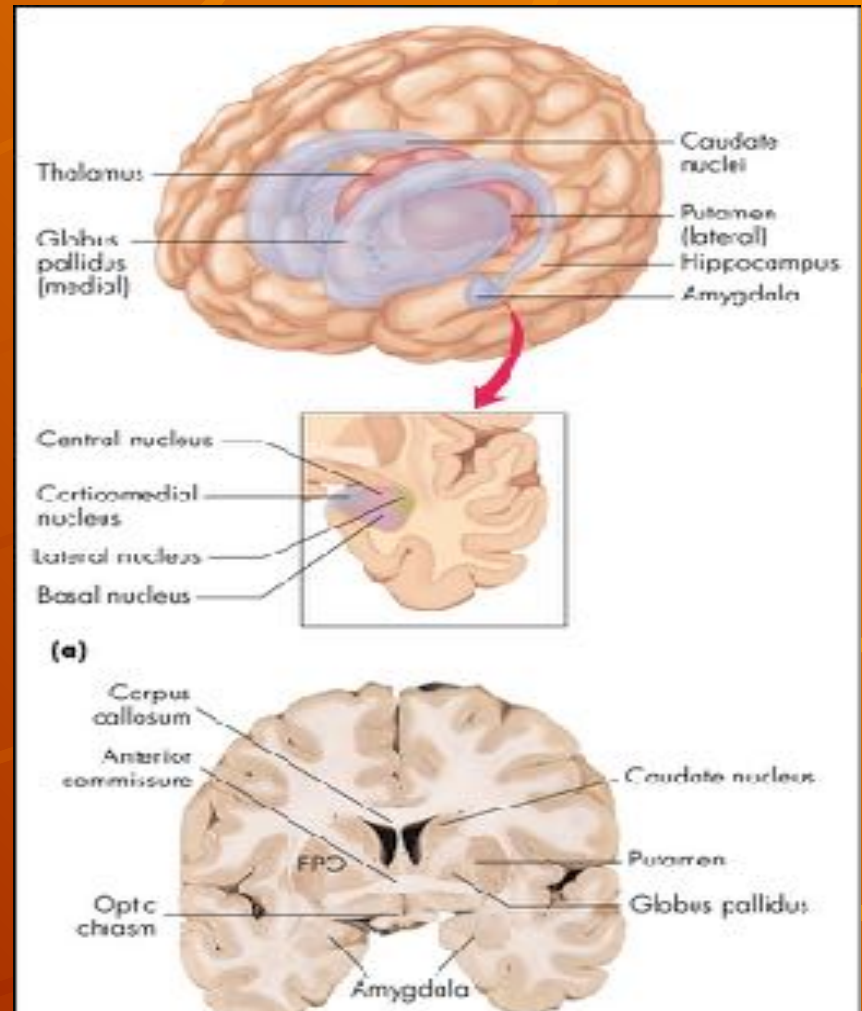
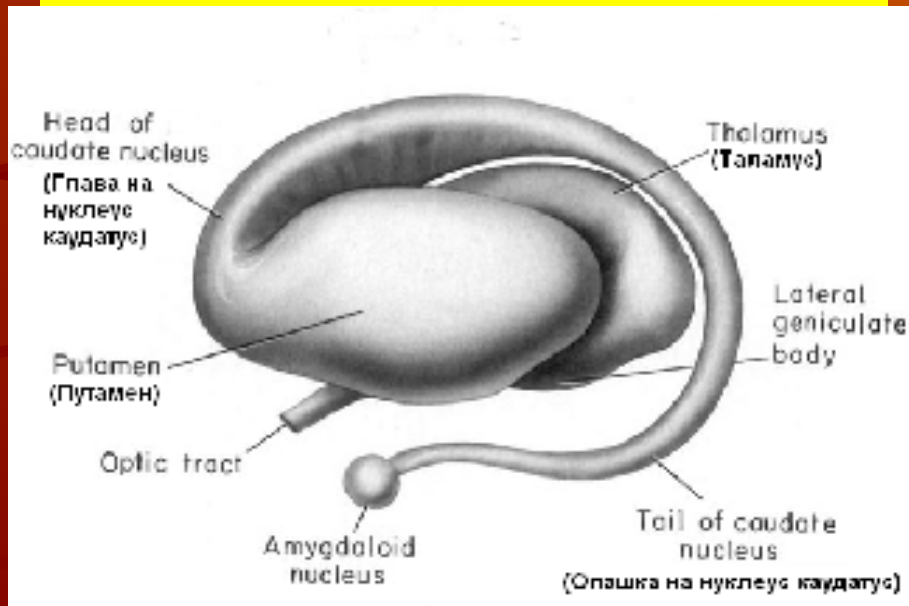
- 1) **Gl. pallidus**
(oq shar)
- 2) **Substantia nigra**
(qora modda)
- 3) **Nucleus ruber**
(qizil yadro)
- 4) **Luis tanasi**
(subtalamik yadro)



STRIAR SISTEMA

**1) Dumli yadro
(nucl. caudatus)**

**2) Putamen
(po`stloq yadro)**

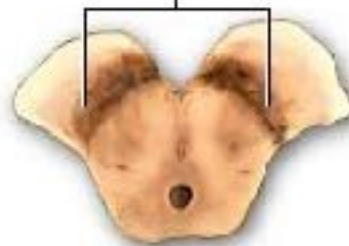


Qora modda miya oyoqchasida joylashgan

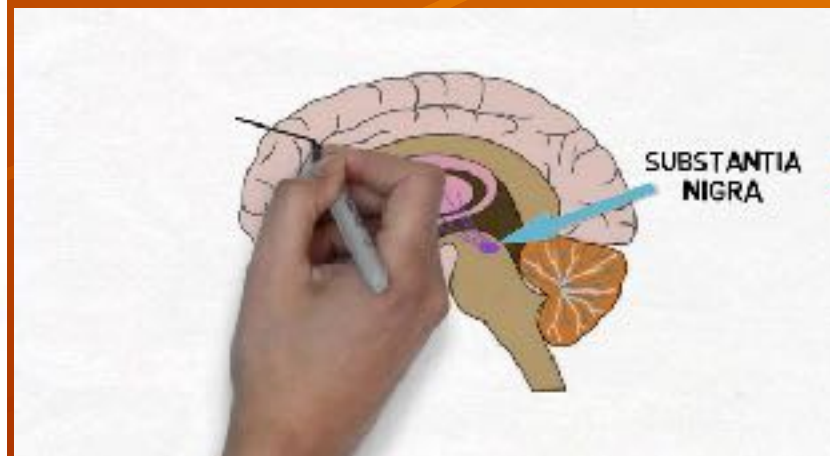
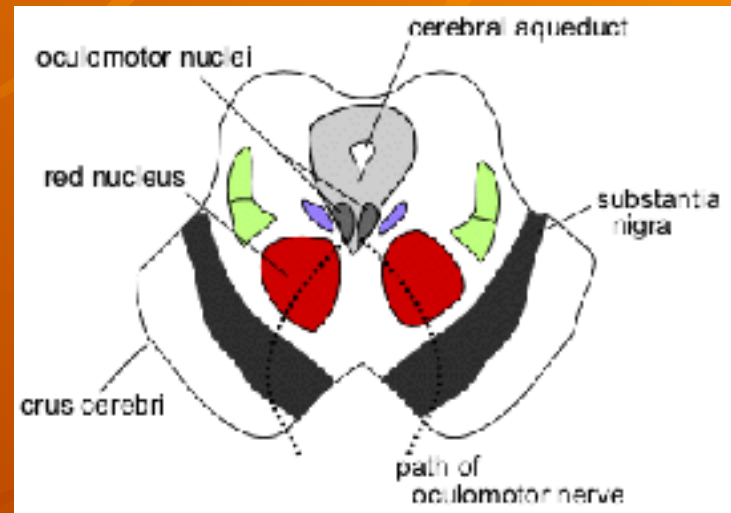
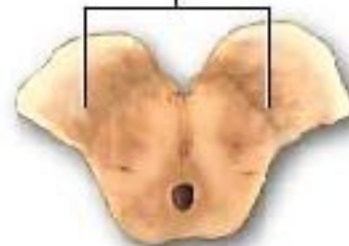


Cut section
of the midbrain
where a portion
of the substantia
nigra is visible

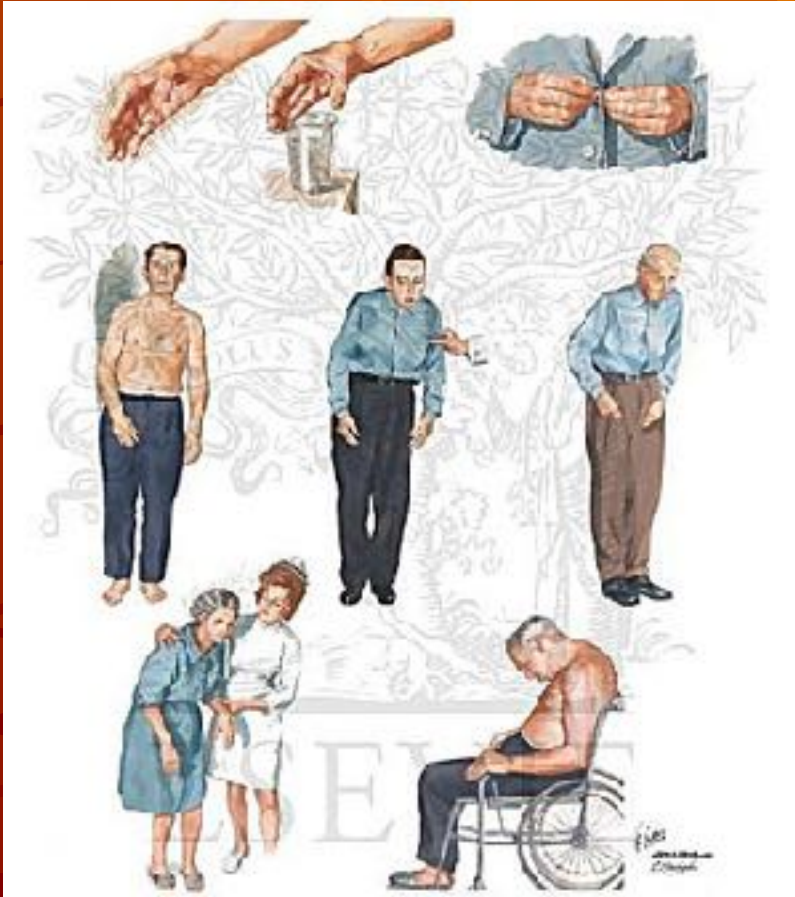
Substantia nigra



Diminished substantia
nigra as seen in
Parkinson's disease



EPS PATOLOGIYASI



- ◆ Parkinsonizm (pallidar sistema)
- ◆ Giperkinezlar (striar sistema)

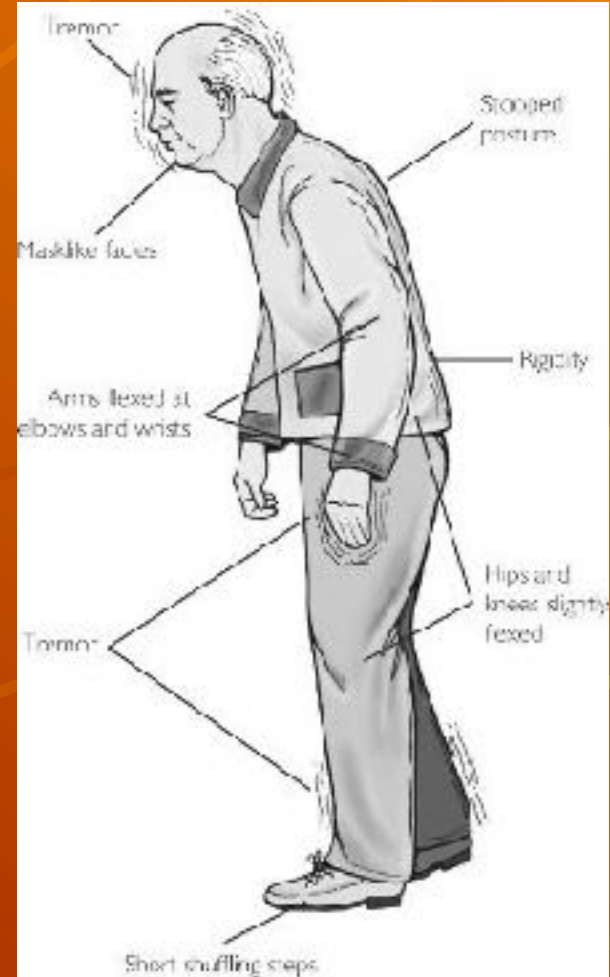
Pallidar sistema zararlanishi

- ◆ Amimiya, gipomimiya
- ◆ Gipokineziya, oligokineziya
- ◆ Monoton nutq
- ◆ Mikrografiya



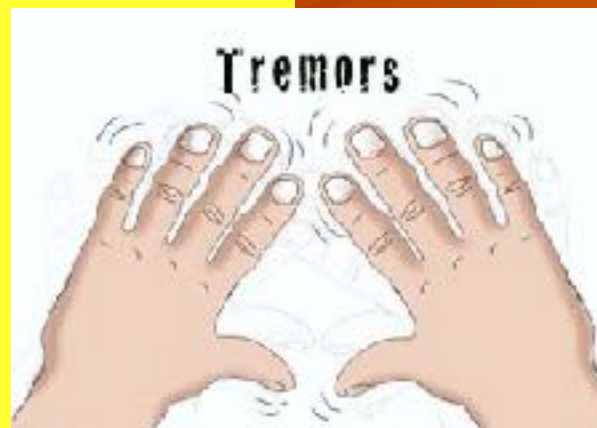
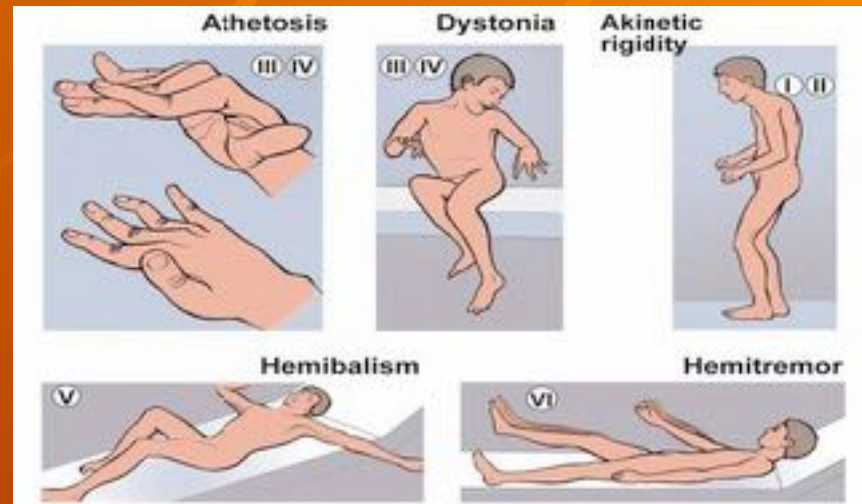
Pallidar sistema zararlanishi

- ◆ Kichik qadamlar bilan yurish
- ◆ Propulsiya, lateropulsiya, retropulsiya
- ◆ "Tanga sanash" simptomi
- ◆ Plastik gipertonus



Striar sistema zararlanishi

- ◆ Blefarospazm
- ◆ Yuz gemispazmi
- ◆ Miokloniyalar
- ◆ Xoreya
- ◆ Atetoz
- ◆ Xoreatetoz
- ◆ Tremor
- ◆ Gemitremor
- ◆ Gemiballizm
- ◆ Muskullar gipotoniyasi



MIYACHA (CEREBELLUM)

1

- Miyacha anatomiyasi

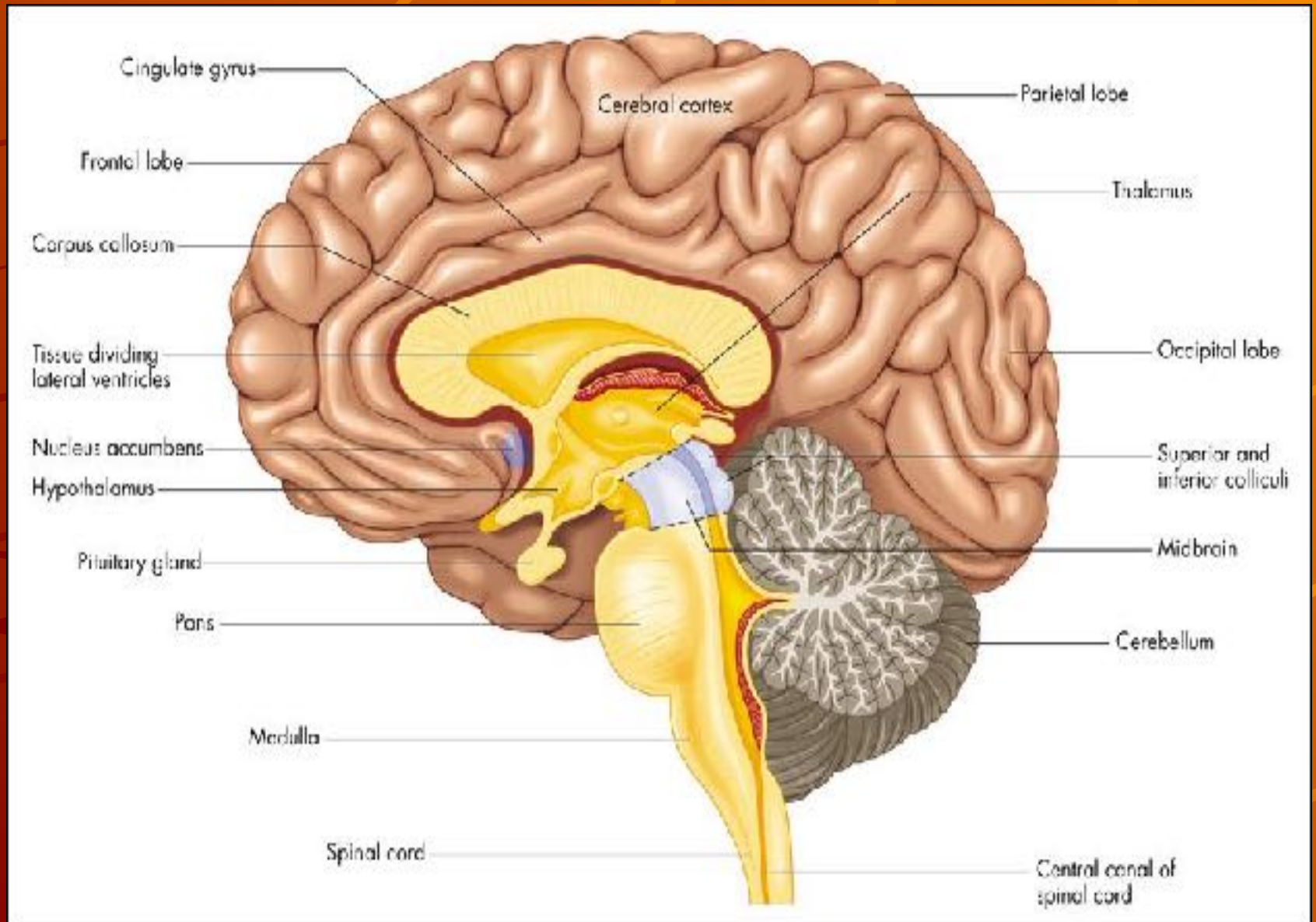
2

- Miyacha funksiyalari

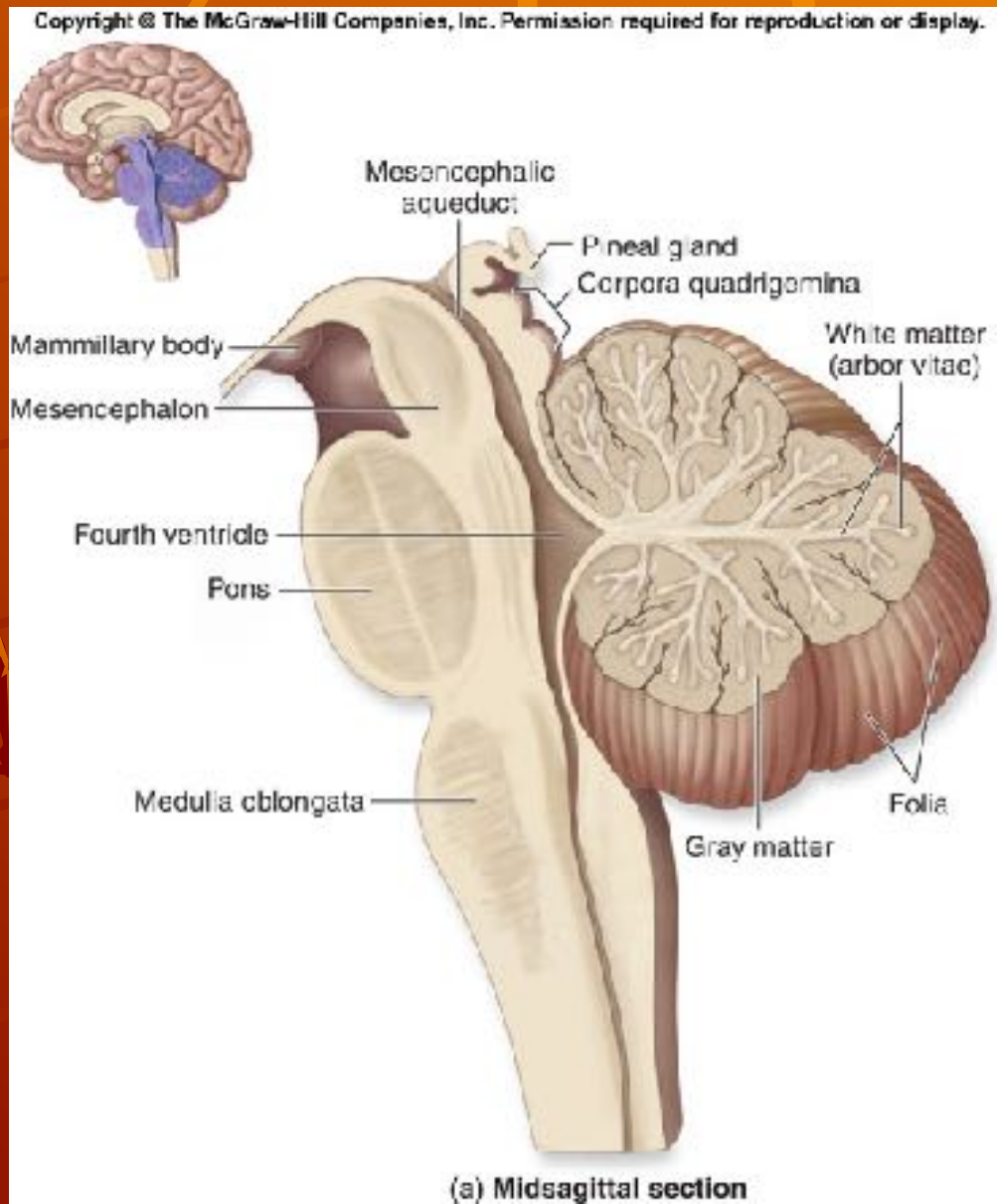
3

- Miyacha patologiyasi

Bosh miya sagital yuzasi



Miya ustuni va miyacha

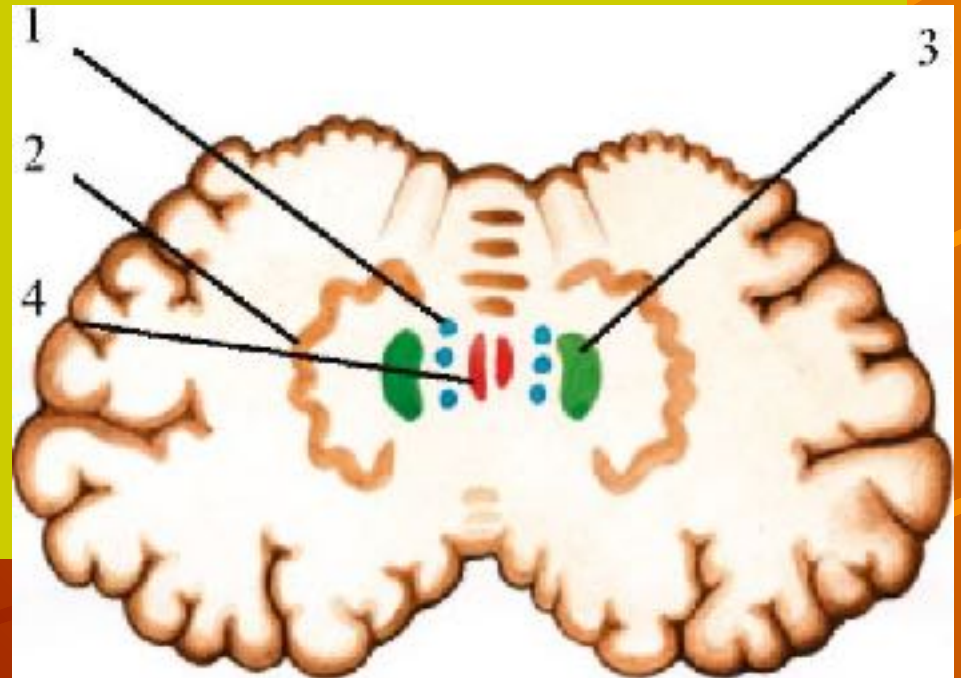


Miyacha (cerebellum)

- ◆ Miyacha - koordinatsiya va muvozanat markazi;
- ◆ Miyacha - miyaning orqa chuqurchasida yotadi;
- ◆ Miyacha - ikkita yarim shardan iborat, o`rtada chuvalchang birlashtirib turadi;
- ◆ Miyachaning uchta oyoqchasi bor;
- ◆ Kulrang modda bilan qoplangan;
- ◆ Oq moddada 4 juft yadrosi bor.

Miyacha yadrolari

- ◆ 1. Sharsimon yadrolar (n.globosus)
- ◆ 2. Tishsimon yadro (n.dentatus)
- ◆ 3. Probkasimon yadro
(n.emboliformis)
- ◆ 4. Bargsimon yadro
(n.fastigii)



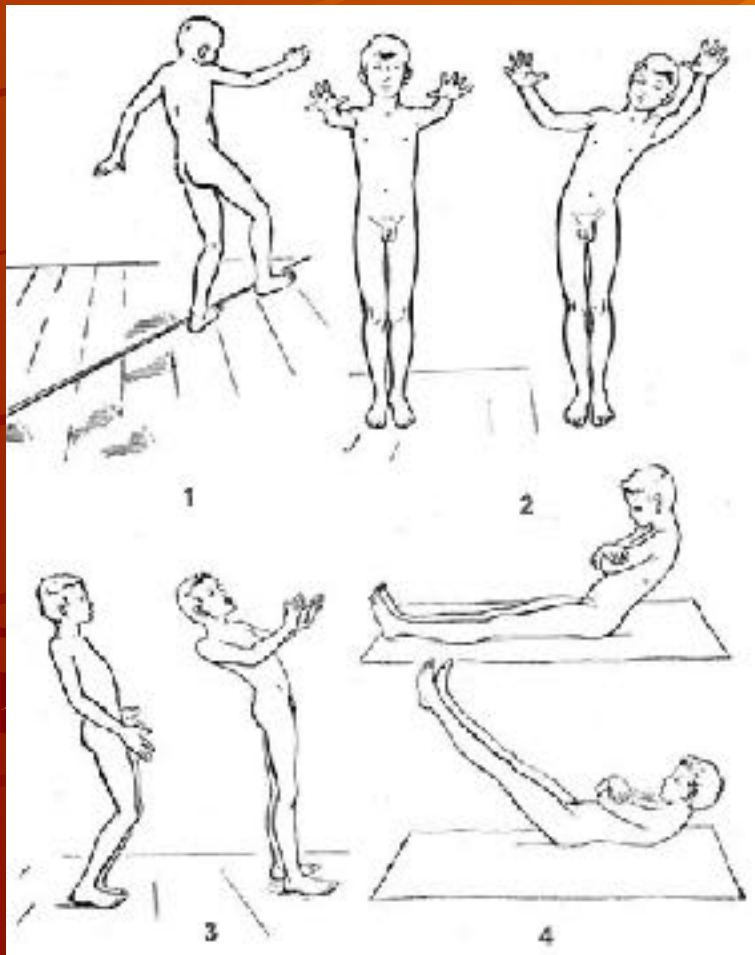
Miyacha – muvozanat va koordinatsiya



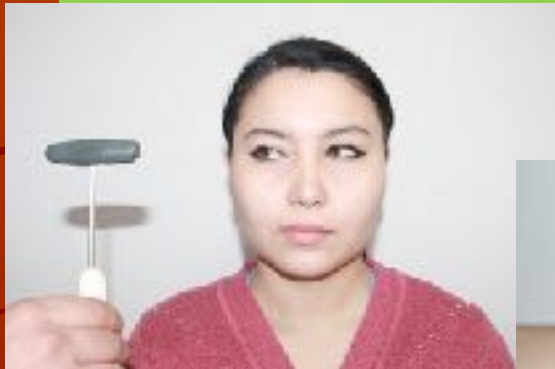
Miyacha oyoqchalari

- ◆ **Yuqori oyoqchalar** – miyachani o`rta miya (to`rttepalik) bilan bog`laydi.
- ◆ **O`rta oyoqchalar** – miyachani ko`prik bilan bog`laydi (frontotserebral va oksipitotserebral yo`llar);
- ◆ **Pastki oyoqchalar** – miyachani uzunchoq miya bilan bog`laydi.

Miyacha funksiyalarini tekshirish usullari



Miyachani tekshirish usullari



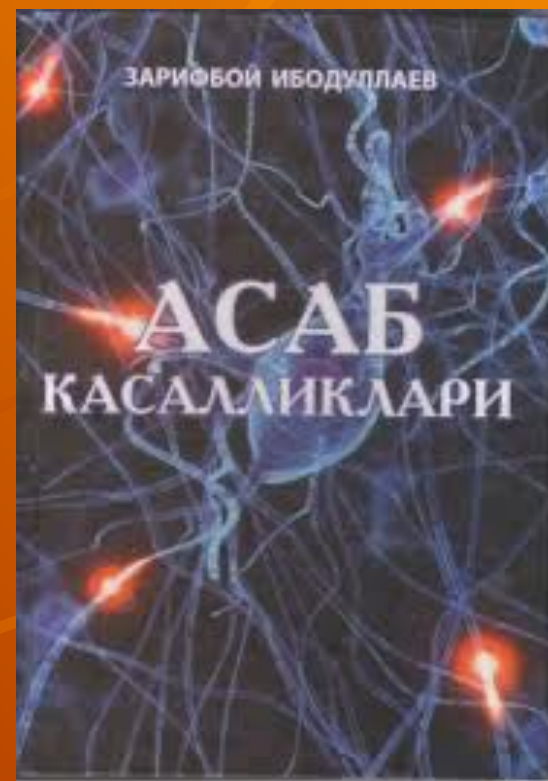
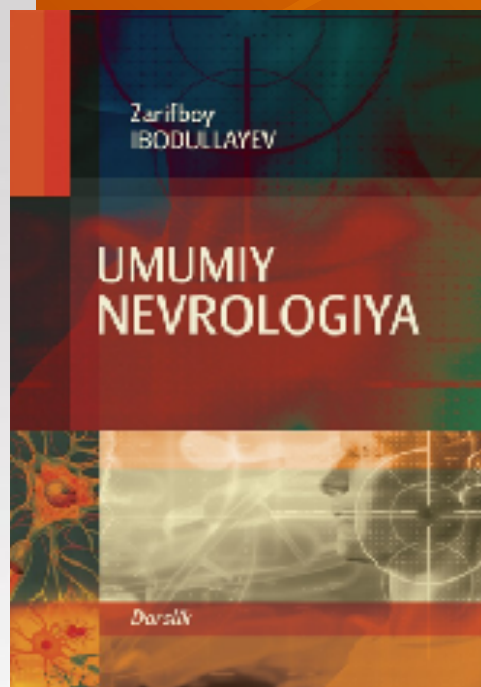
Miyacha sindromlari

- ◆ Nistagm
- ◆ Skandirlashgan nutq
- ◆ Ataksiya (dinamik va statik)
- ◆ Mushaklar gipotoniyasi
- ◆ Intension tremor
- ◆ Mast holatda yurish

Miyacha sindromlari

- ◆ **Styuart-Xolms simptomi**
- ◆ **Babinskiy asinergiyasi**
- ◆ **Megalografiya**
- ◆ **Adiodoxokinez**
- ◆ **Dizmetriya**

E'tiboringiz uchun rahmat!



Muallif haqida



Zarifboy Ibodullayev – tibbiyot fanlari doktori, professor. Toshkent tibbiyot akademiyasida ishlaydi. Olim 150 dan oshiq ilmiy asarlar muallifi. Uning “Asab kasalliklari” va “Tibbiyot psixologiyasi” darsliklari “Yilning eng yaxshi darsligi” sovriniga sazovor bo‘lgan. Uning yirik asarlari “Umumiy nevrologiya” darsligi, “Epilepsiya va epileptik sindromlar”, “Asab va ruhiyat” “Insult va Koma” nomli qo‘llanmalari chop etilgan.

Bugungi kunda olim O‘zbekistonda “Neyropsixologiya, tibbiy psixologiya va psixosomatik tibbiyot” ni rivojlantirish