基底节

Basal Ganglia

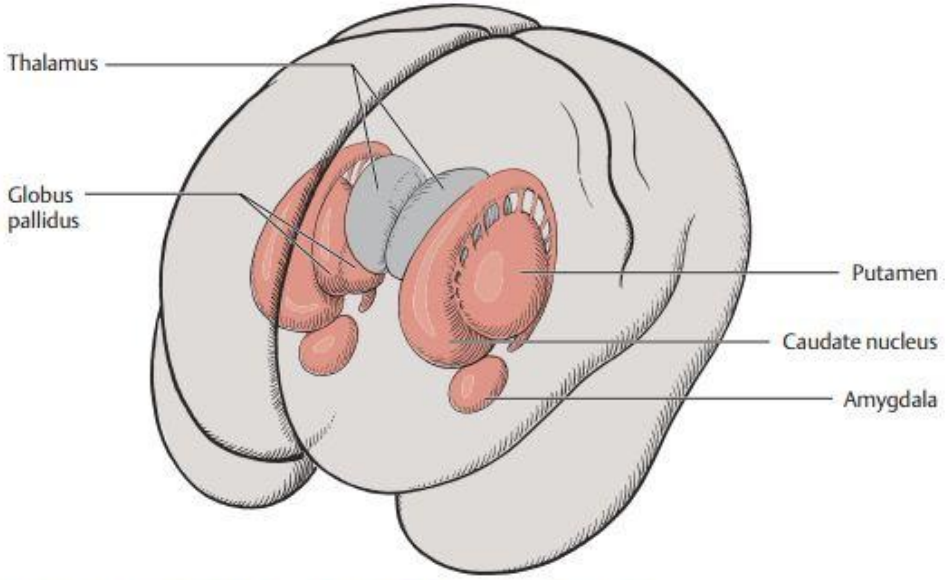
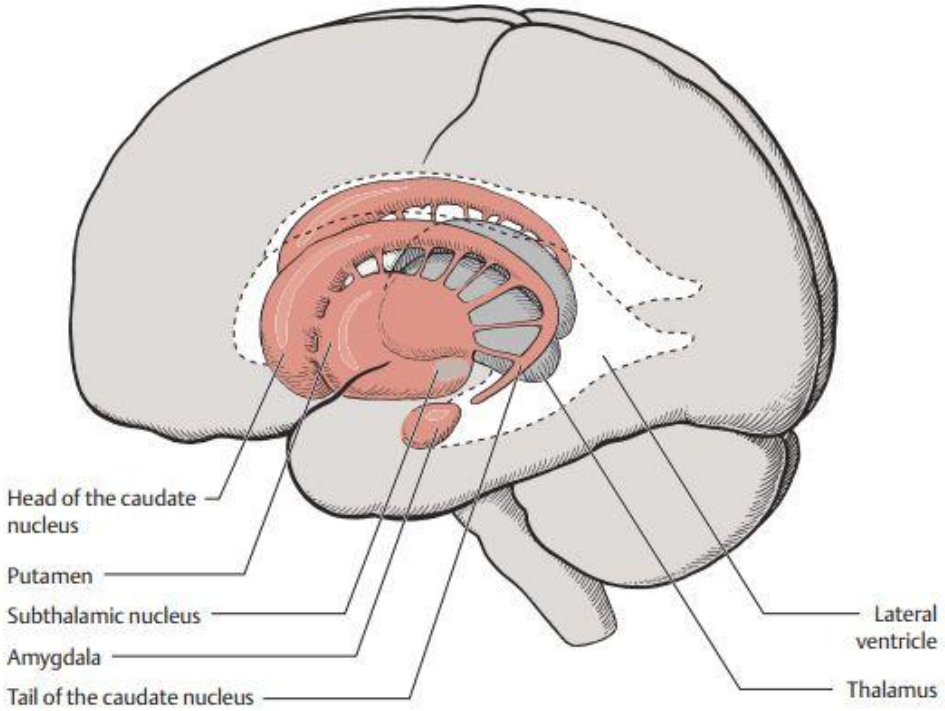


Fig. 8.1 **Topographical relationships of the basal ganglia (in red)**



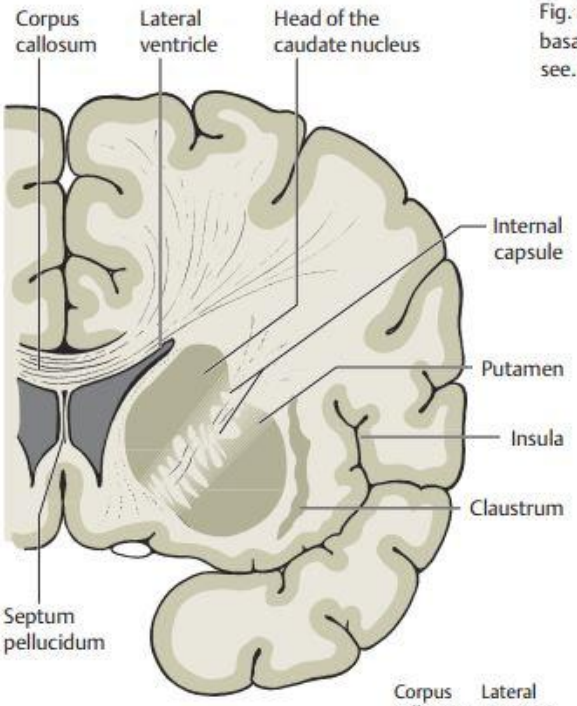


Fig. 8.**5 Coronal section 1** through the basal ganglia (for planes of section, see. Figs. 8.**3** and 8.**4**)

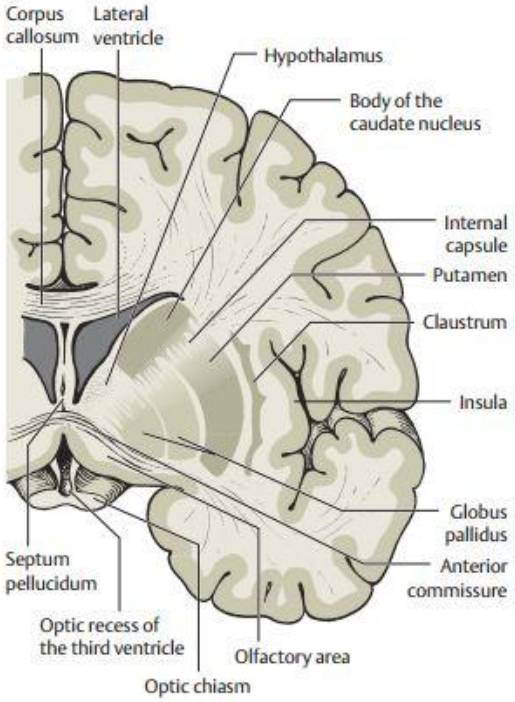


Fig. 8.**6 Coronal section 2** through the basal ganglia (for planes of section, see Figs. 8.**3** and 8.**4**)

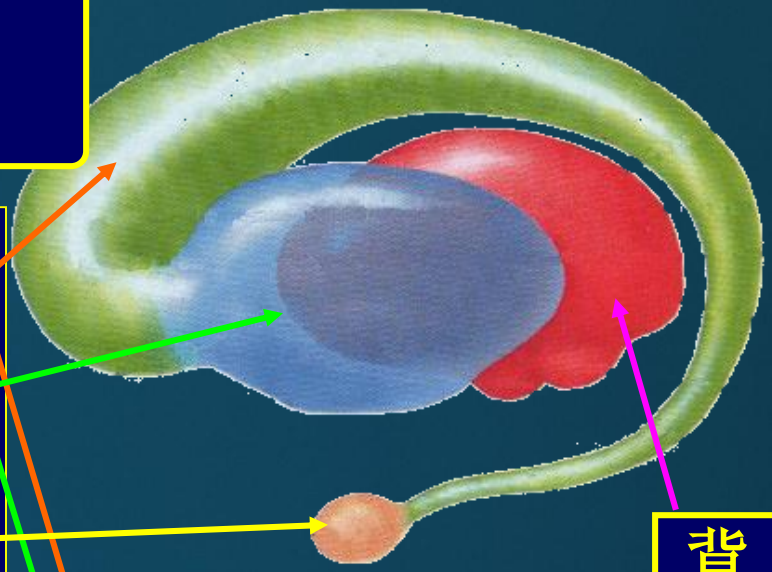
基底核 basal nuclei

尾状核 caudate nucleus

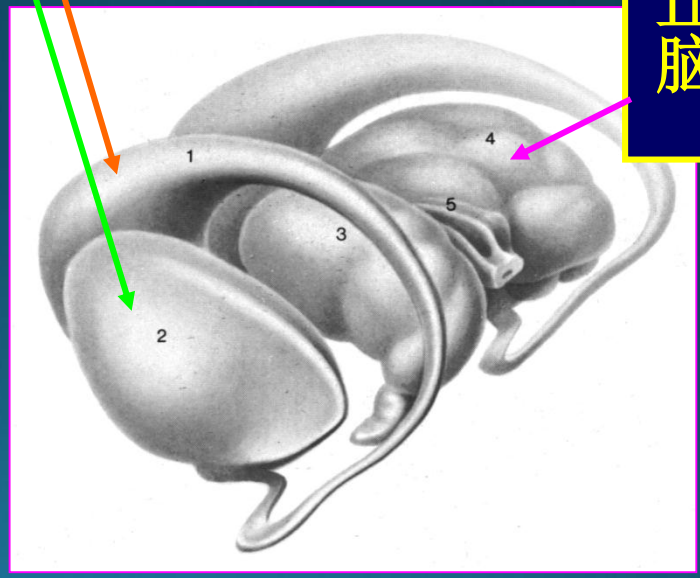
豆状核 lentiform nucleus

（苍白球+壳）

杏仁体 amygdaloid body

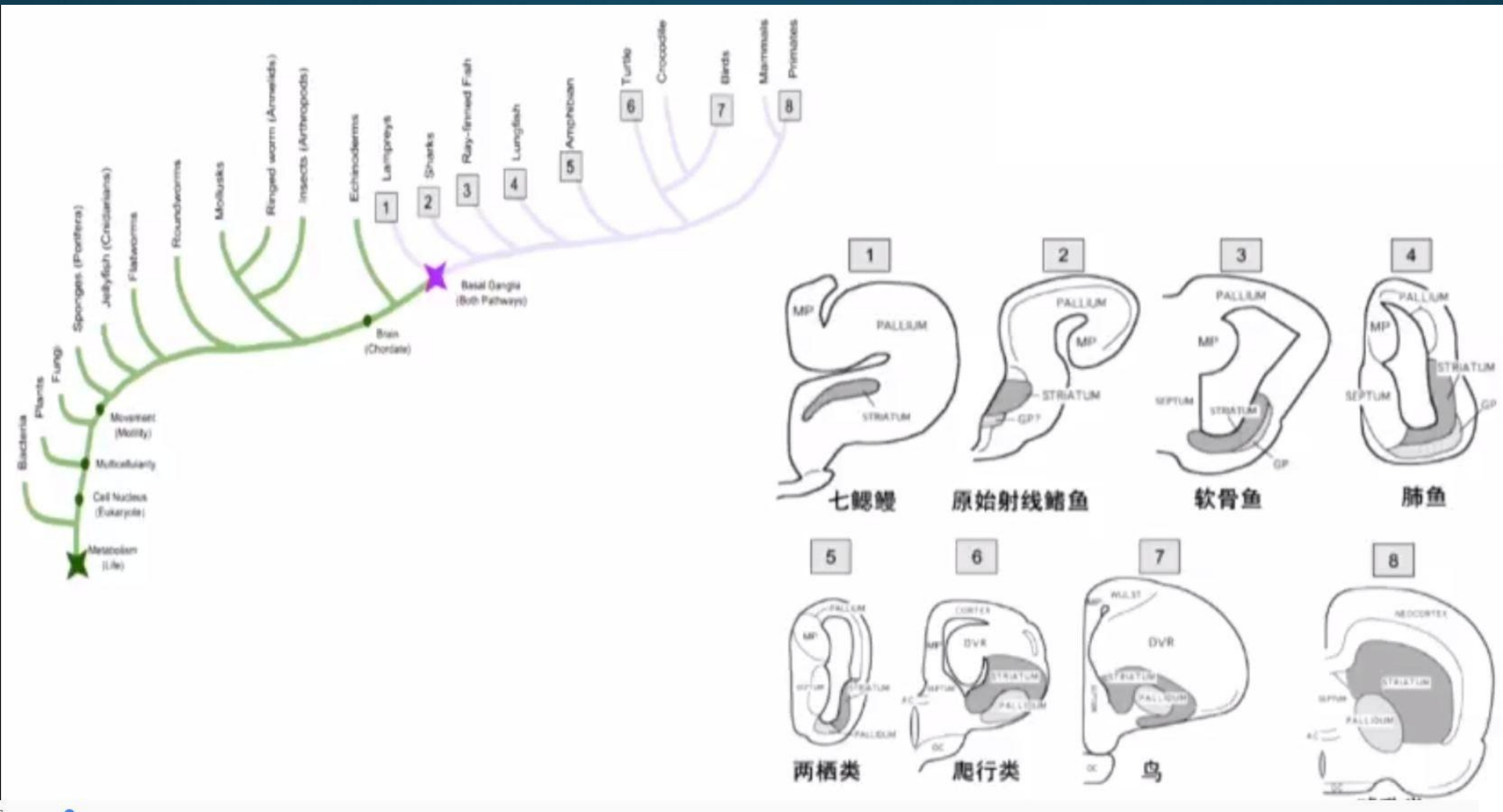


背侧丘脑



纹状体=尾状核+豆状核；
新纹状体=尾状核+壳；
旧纹状体=苍白球。

进 化


Bacteria
Plants
Fungi
Sponges (Porifera)
Jellyfish (Cnidarians)
Flatworms
Roundworms
Molluskis
Ringed worm (Annelids)
Insects (Arthropods)
Echinoderms
Lampreys
Sharks
Ray-finned Fish
Lungfish
Amphibian
Turtle
Crocodile
Birds
Mammals
Primates
1
2
3
4
5
6
7
8
Movement (Motility)
Multicellularity
Cell Nucleus (Eukaryote)
Metabolism (Life)
Brain (Chordate)
Basal Ganglia (Both Pathways)
PALLIUM
MP
STRIATUM
GP?
SEPTUM
GP
七鳃鳗
原始射线鳍鱼
软骨鱼
肺鱼
两栖类
爬行类
鸟
DVR
CORTEX
NEOCORTEX

运动控制区域的演变

脊髓&网状结构

↓

苍白球（旧纹状体）

↓

尾状核和壳核（新纹状体）

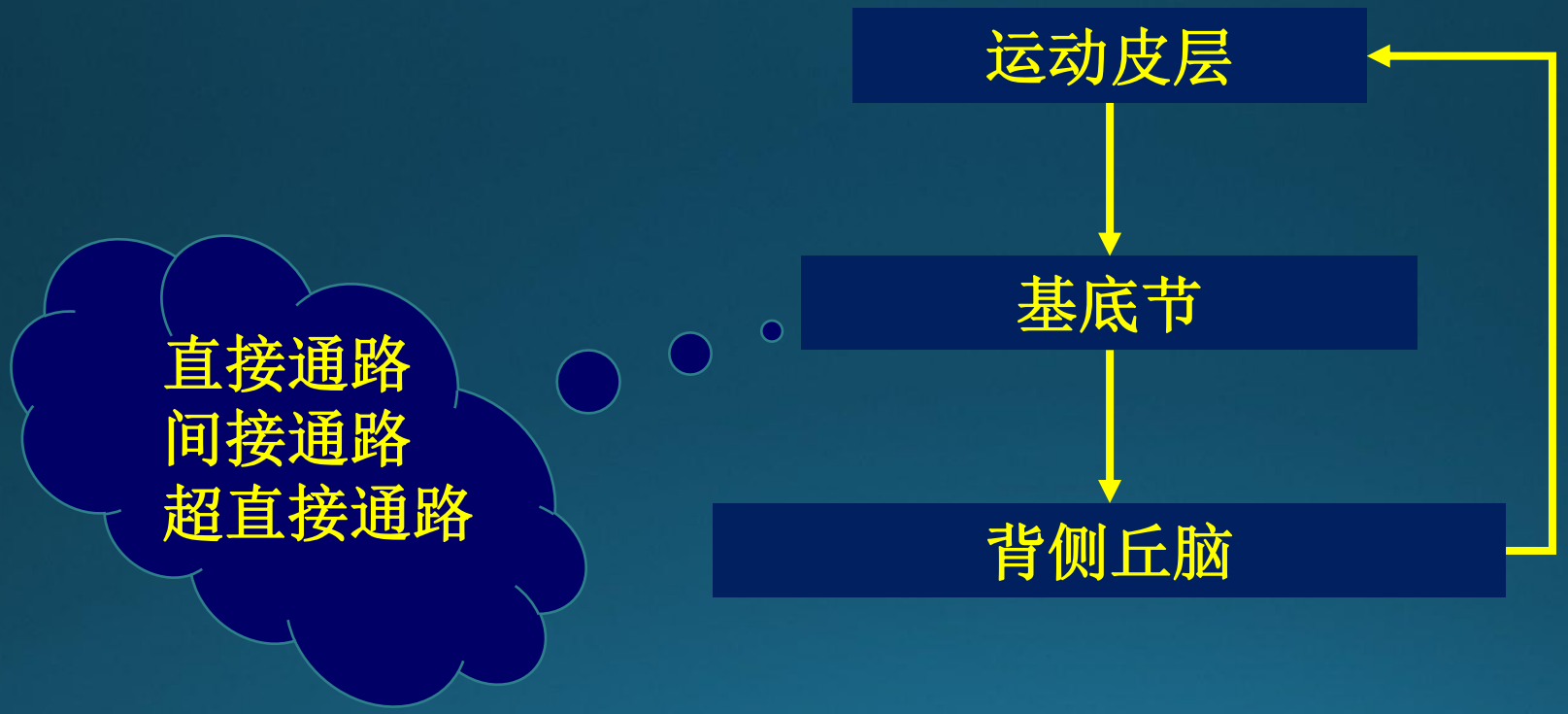
↓

锥体束

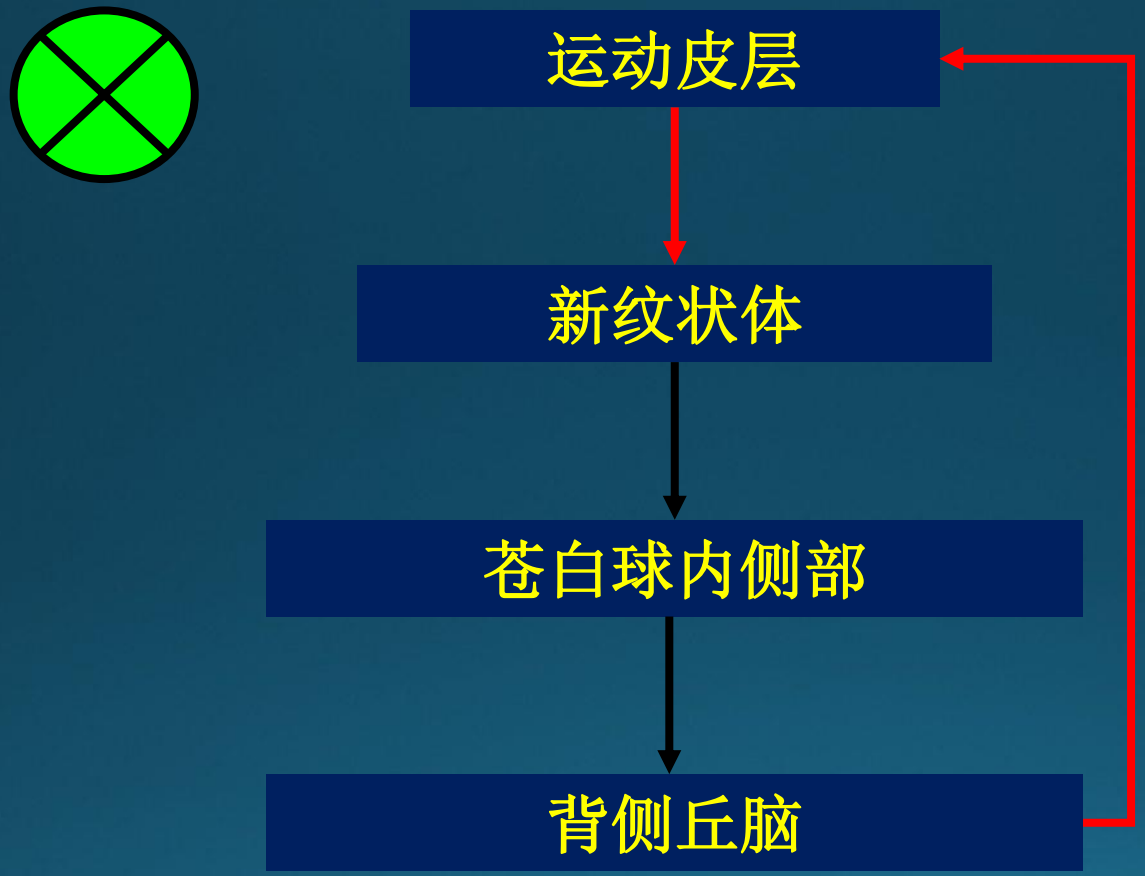
端脑

底丘脑
红核
黑质

基底节对运动的控制



直接通路



黑色：抑制

红色：兴奋

间接通路

运动皮层

新纹状体

苍白球外侧部

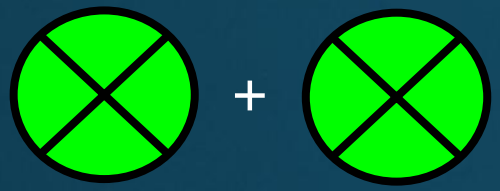
苍白球内侧部

底丘脑核

背侧丘脑

超直接通路

黑质对直接通路的影响



运动皮层

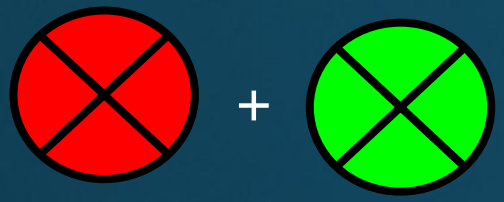
新纹状体

黑质D1

苍白球内侧部

背侧丘脑

黑质对间接通路的影响



运动皮层

苍白球外侧部

新纹状体

黑质

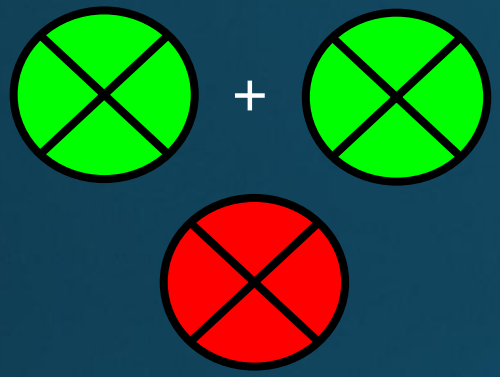
D2

苍白球内侧部

底丘脑核

背侧丘脑

黑质病变



运动皮层

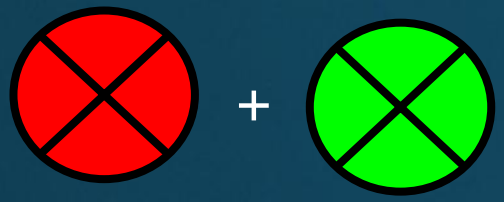
新纹状体

[illegible]

苍白球内侧部

背侧丘脑

黑质病变



运动皮层

苍白球外侧部

新纹状体

D2

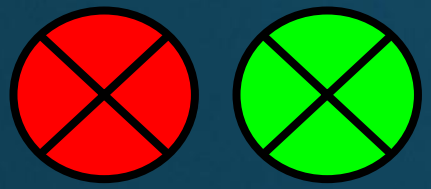
苍白球内侧部

底丘脑核

背侧丘脑

黑质病变会出现什么表现?

新纹状体病变



运动皮层

苍白球外侧部

[illegible]

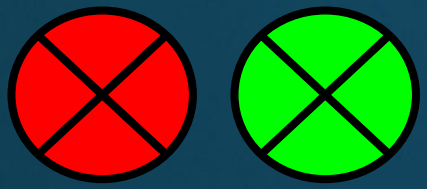
苍白球内侧部

底丘脑核

背侧丘脑

新纹状体病变会出现什么表现?

底丘脑核病变



运动皮层

新纹状体

苍白球外侧部

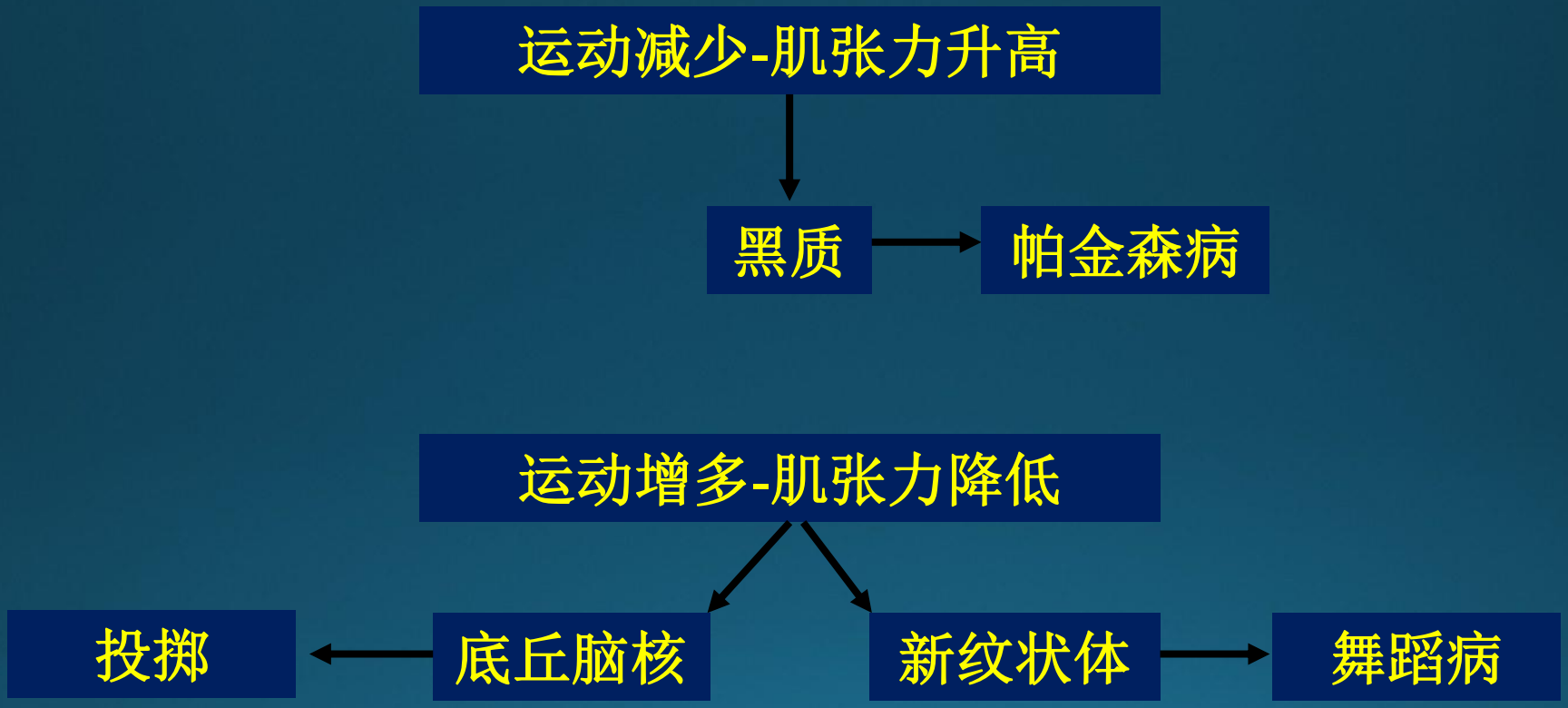
苍白球内侧部

[illegible]核

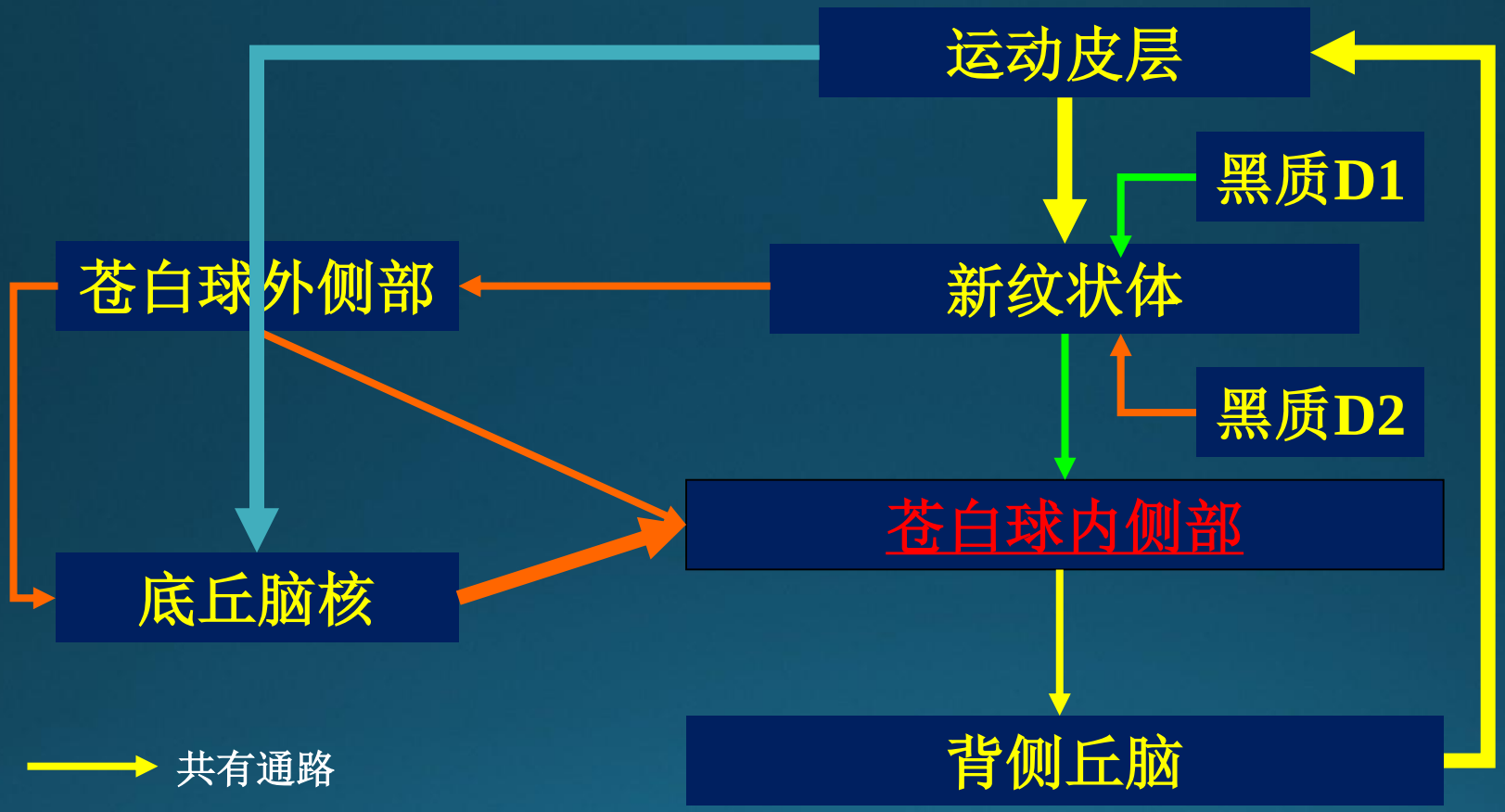
背侧丘脑

底丘脑核病变会出现什么表现?

基底节病变症候



基底节通路



粗线兴奋，细线抑制