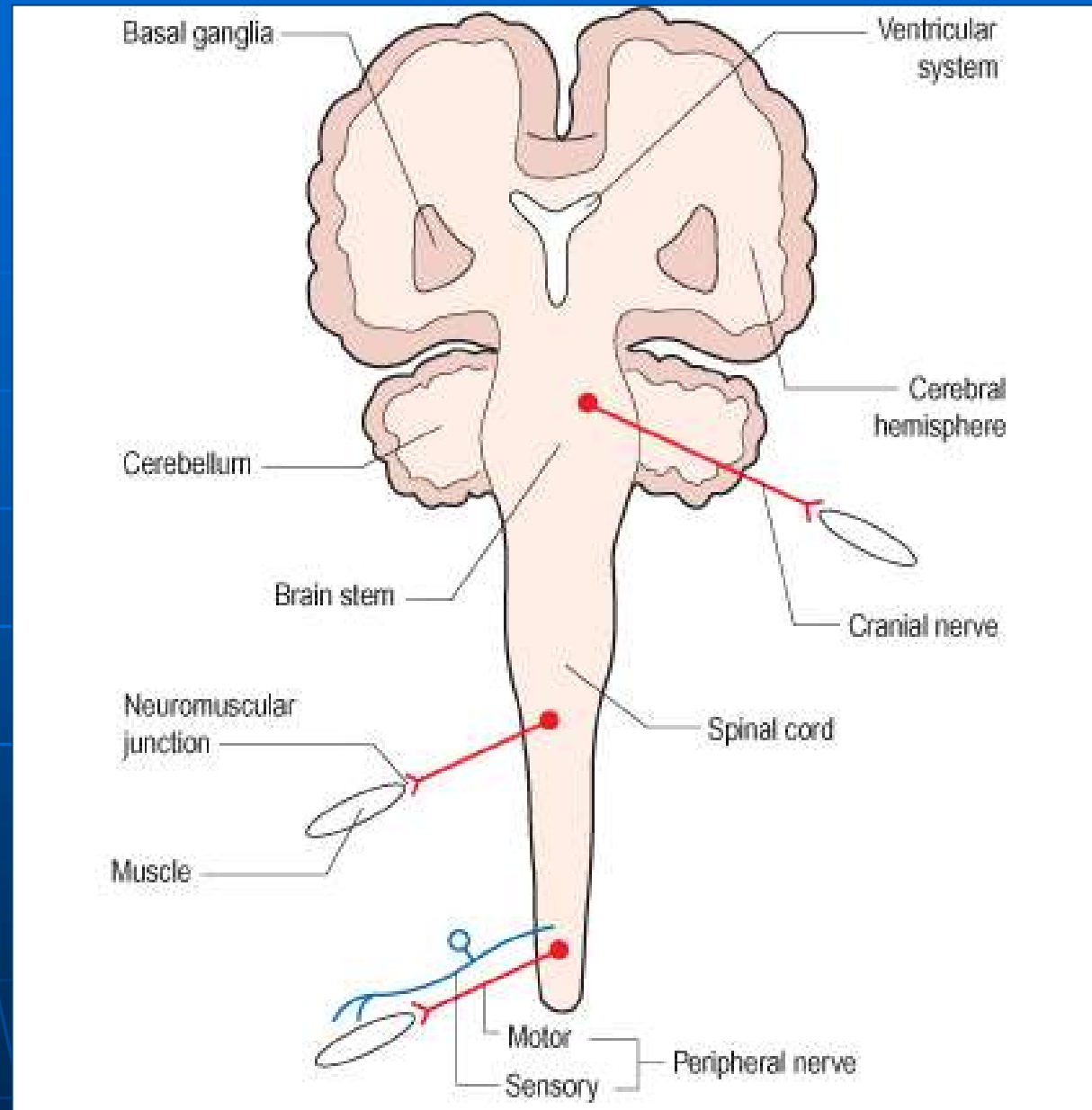


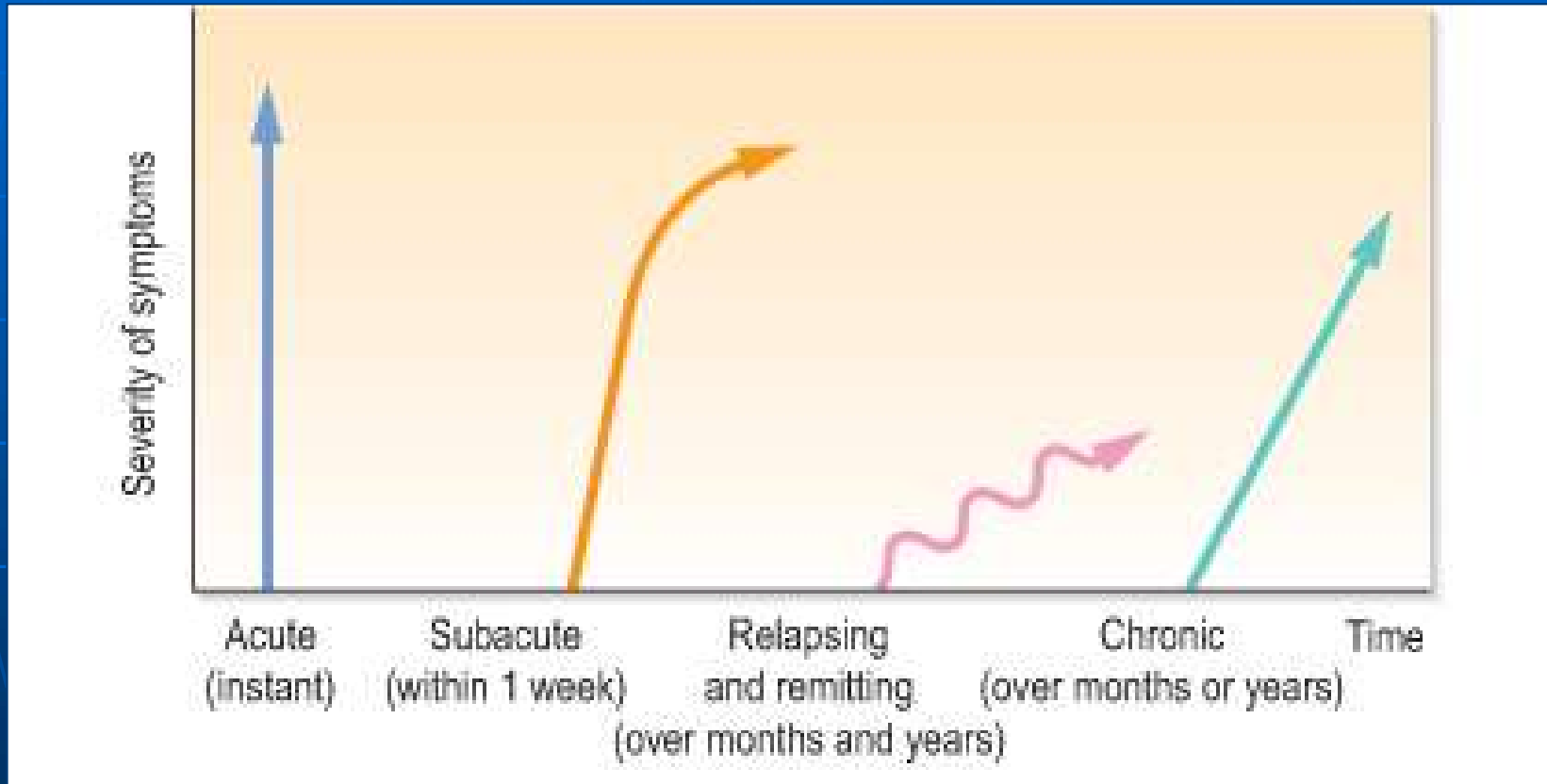


Guglielmo
di OCKHAM
(1290?-1349)

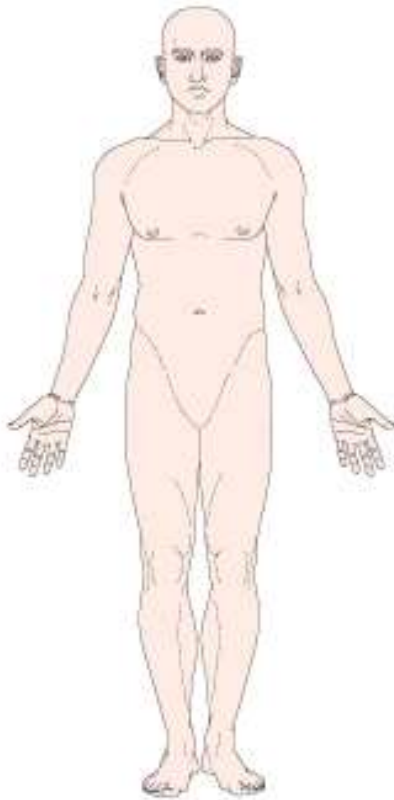
IL RASOIO DI OCCAM



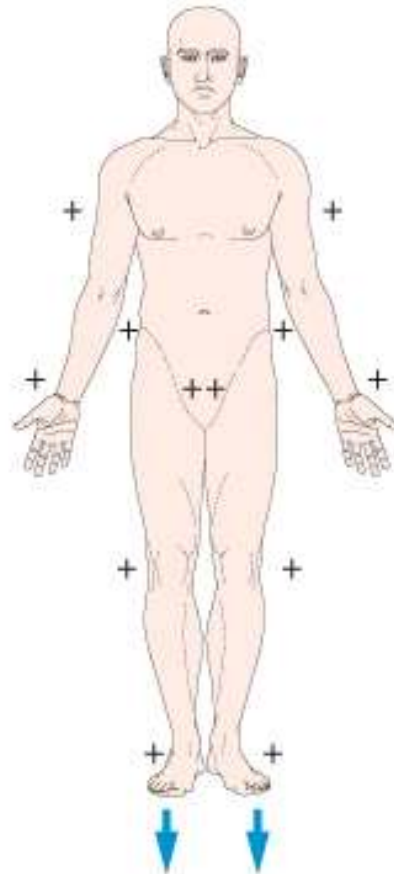
Decorso temporale: un utile indizio?



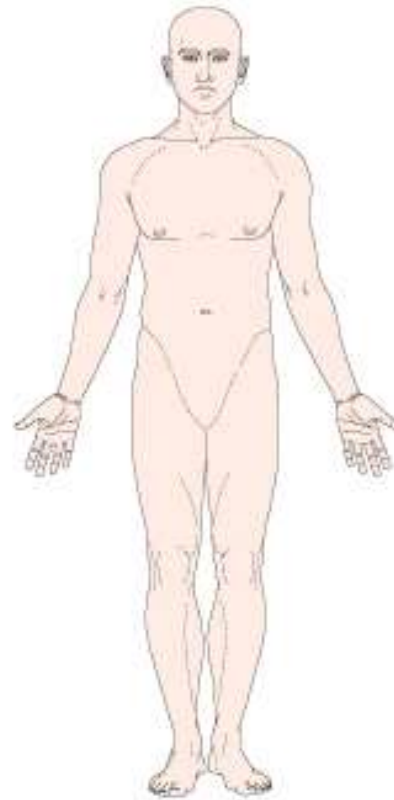
Cranial nerves and motor system



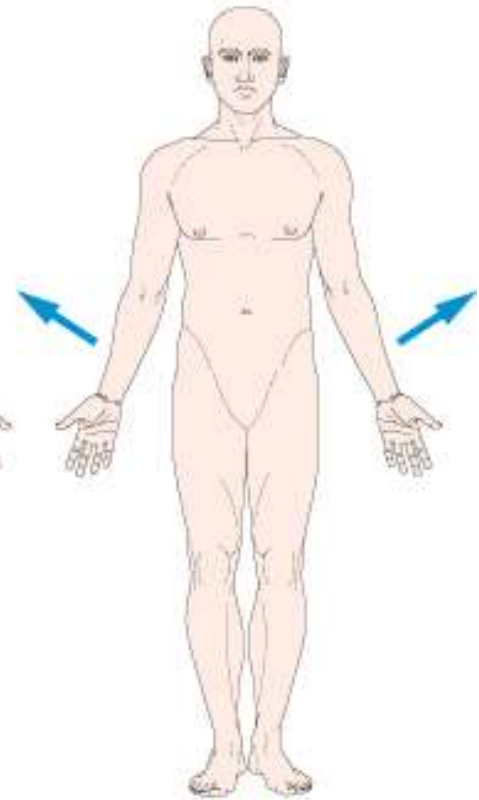
Reflexes





Sensation



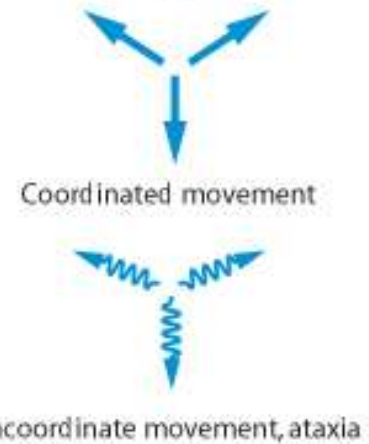
Coordination



-  Muscle weakness and wasting
-  Muscular fatigue
-  Spastic weakness
-  Incontinence

- + Normal tendon or abdominal reflexes
- Absent tendon or abdominal reflexes
- +++ Increased tendon reflex
-  Flexor plantar response
-  Extensor plantar response

-  Sensory loss

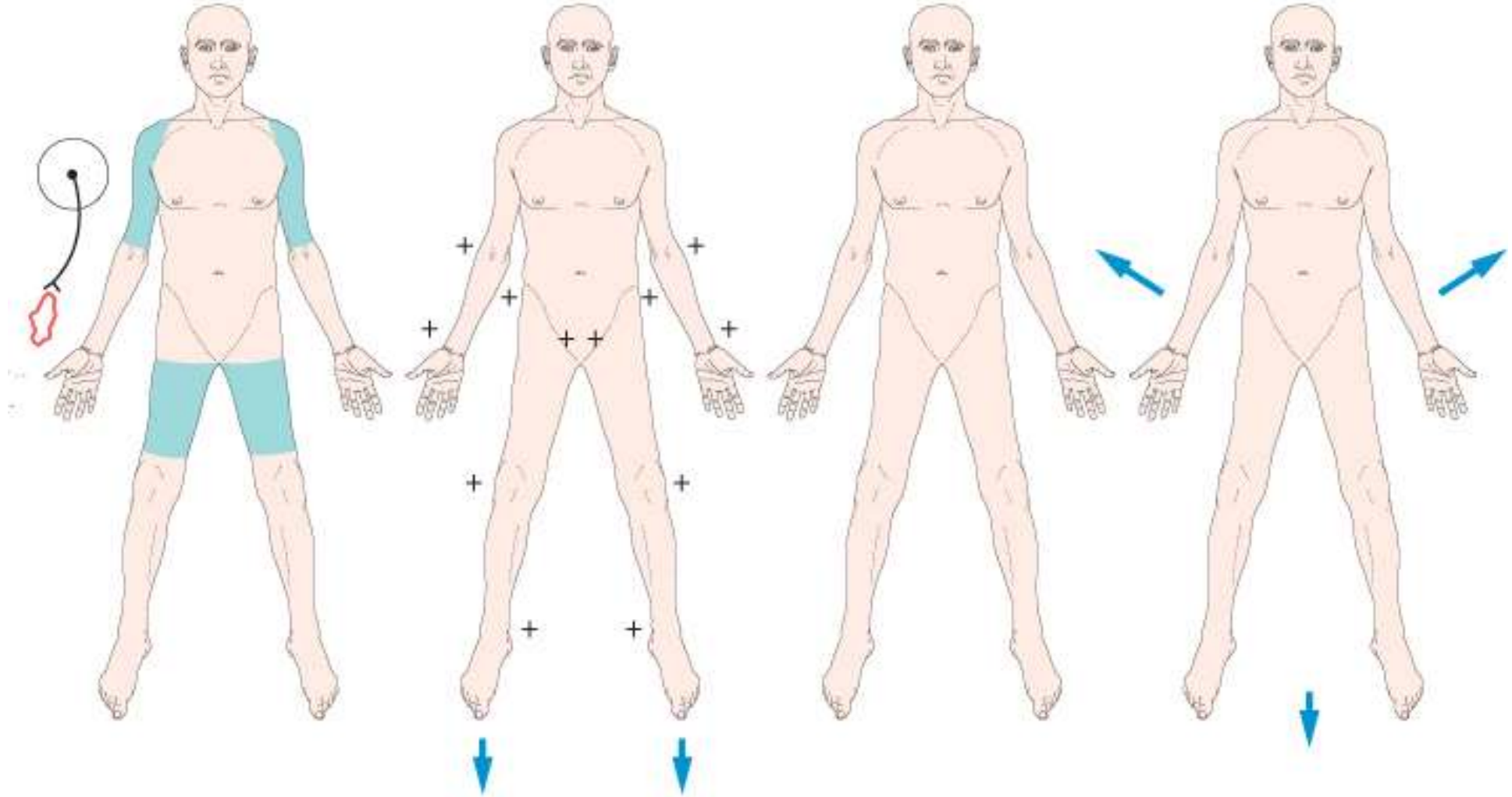


Cranial nerves and motor system

Reflexes

Sensation

Coordination



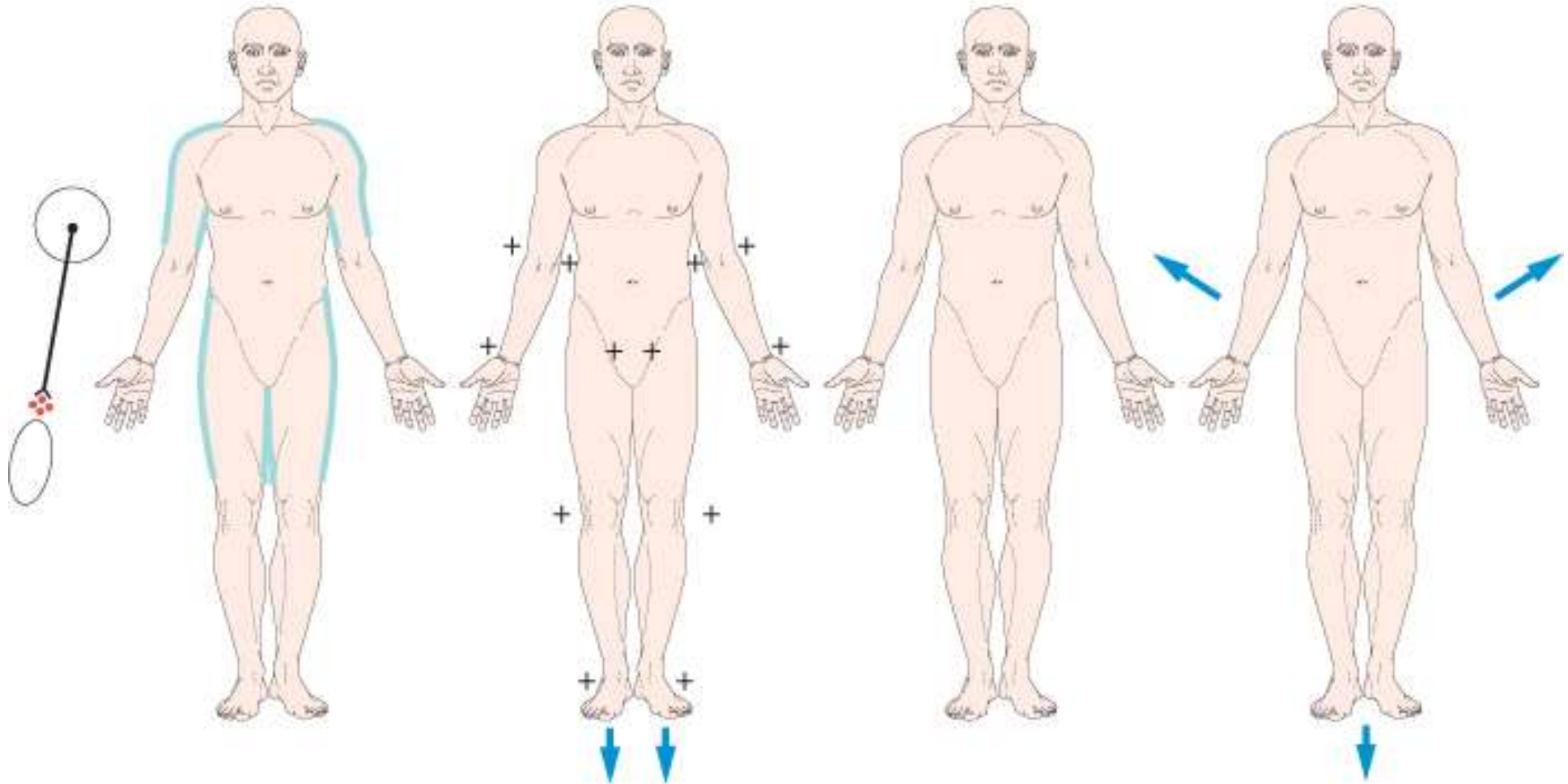
MIOPATIA

Cranial nerves and
motor system

Reflexes

Sensation

Coordination



DISTURBO DI PLACCA

PRE



PAZ. ZM

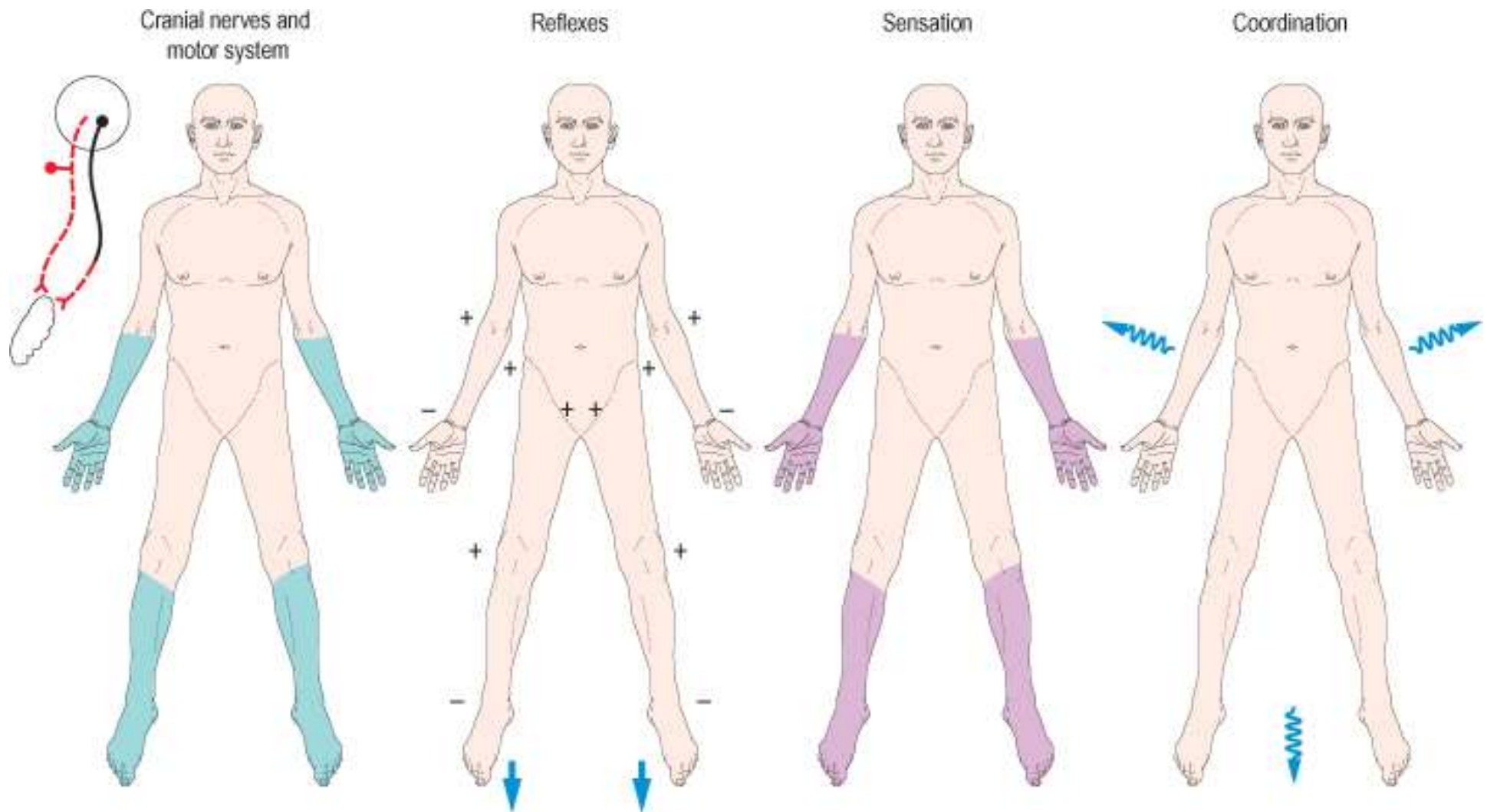
ICE-ON-EYES TEST

19/03/08

**Dopo 2 minuti
dall'applicazione di
ghiaccio in OD la
ptosi risulta
migliorata
(>2 mm)**

POST





NEUROPATHIA

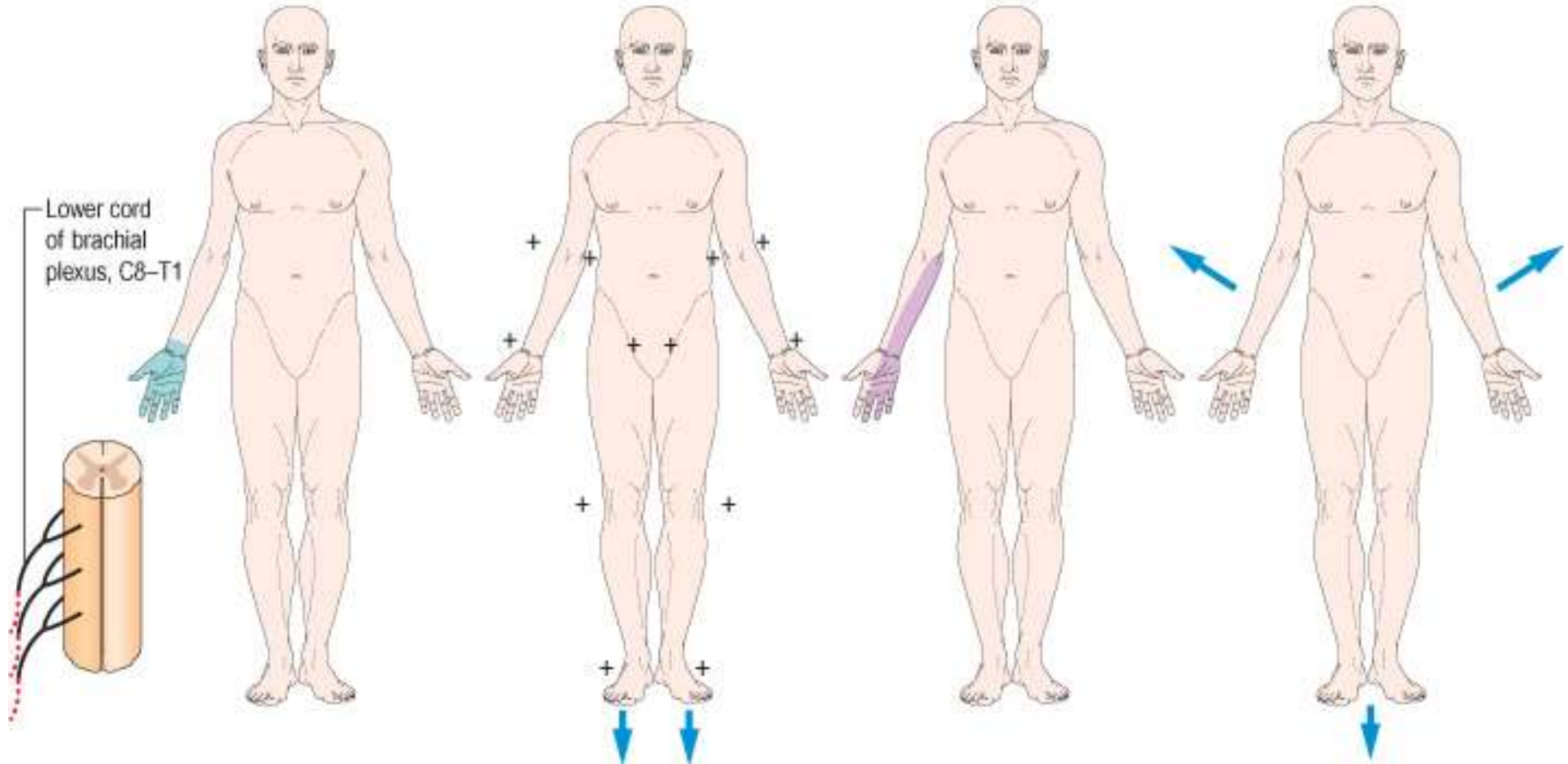
Cranial nerves and motor system

Reflexes

Sensation

Coordination

Lower cord of brachial plexus, C8-T1



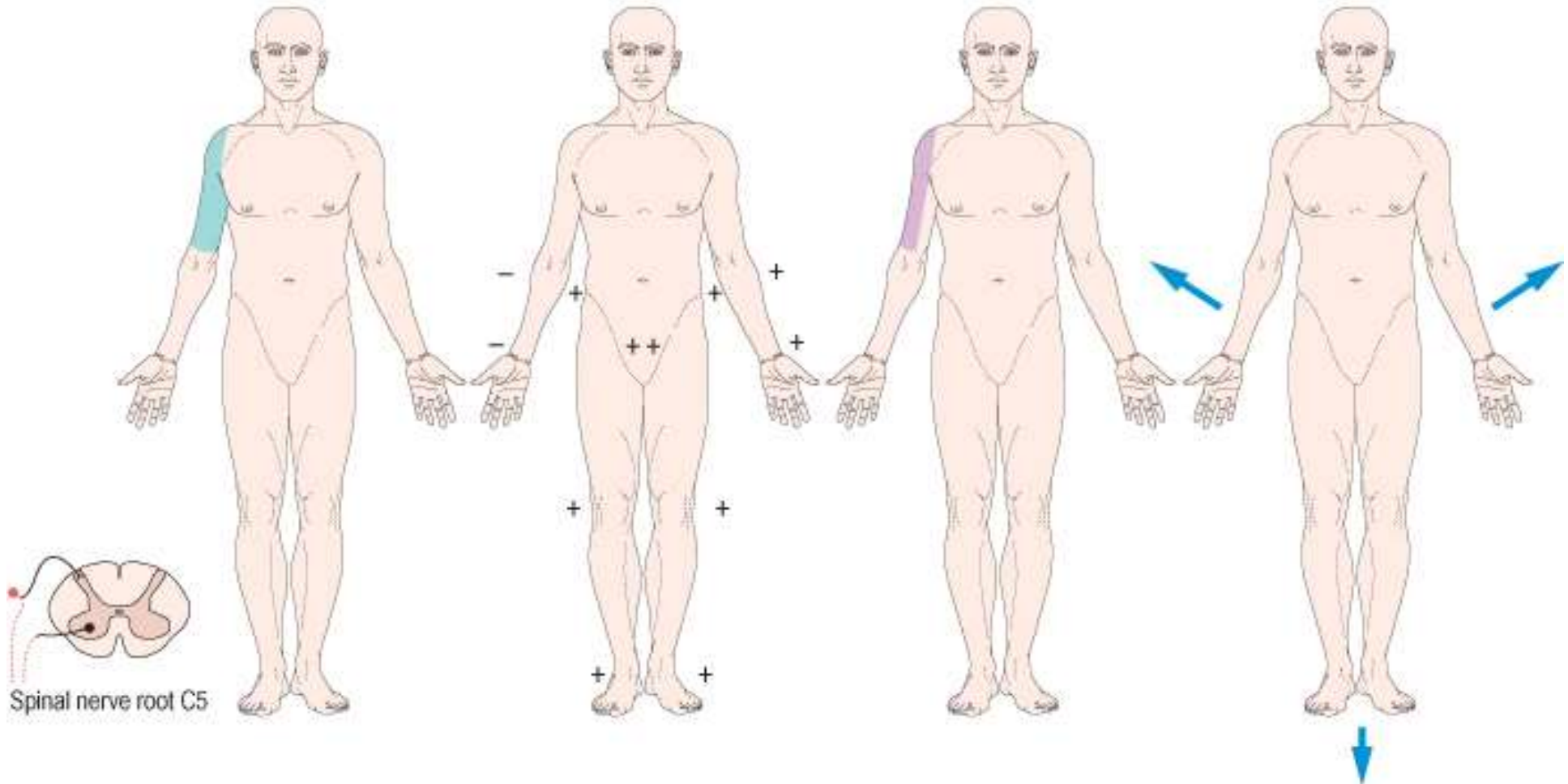
LESIONE DEL PLESSO BRACHIALE

Cranial nerves and motor system

Reflexes

Sensation

Coordination



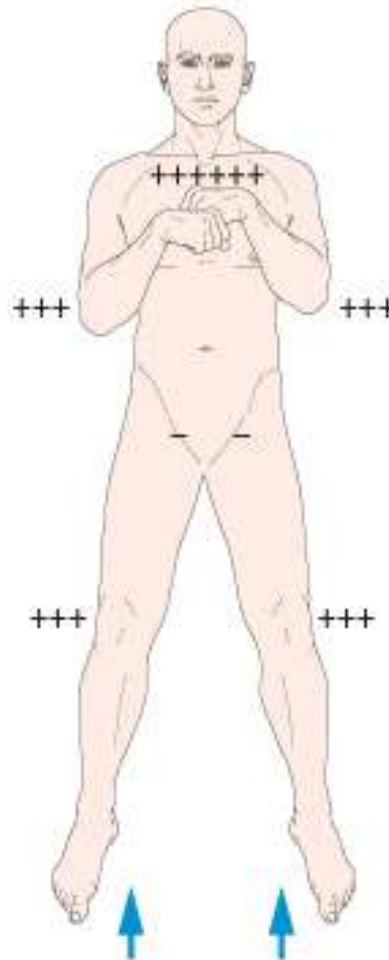
RADICOLOPATIA: C5

Cranial nerves and
motor system

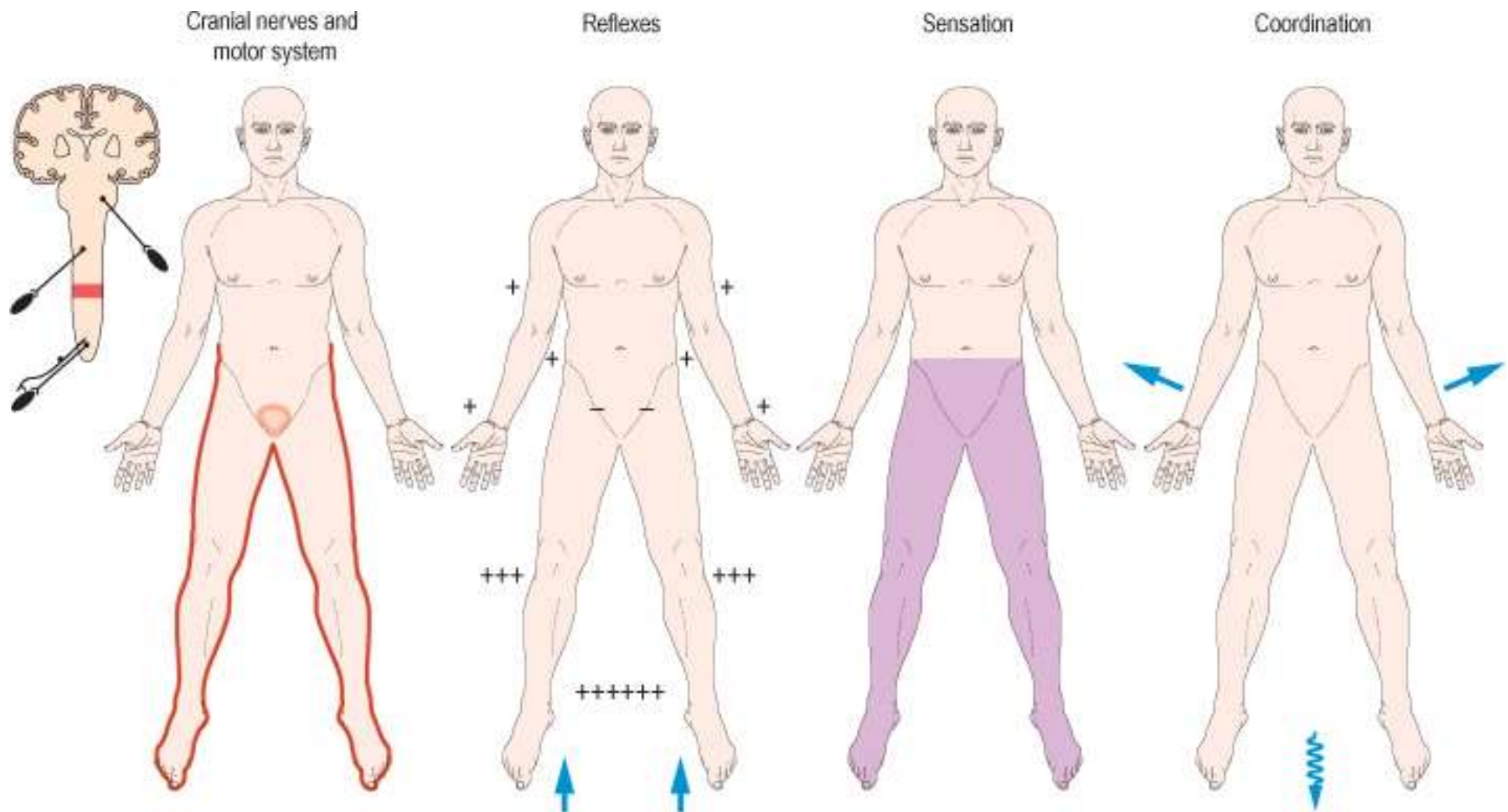
Reflexes

Sensation

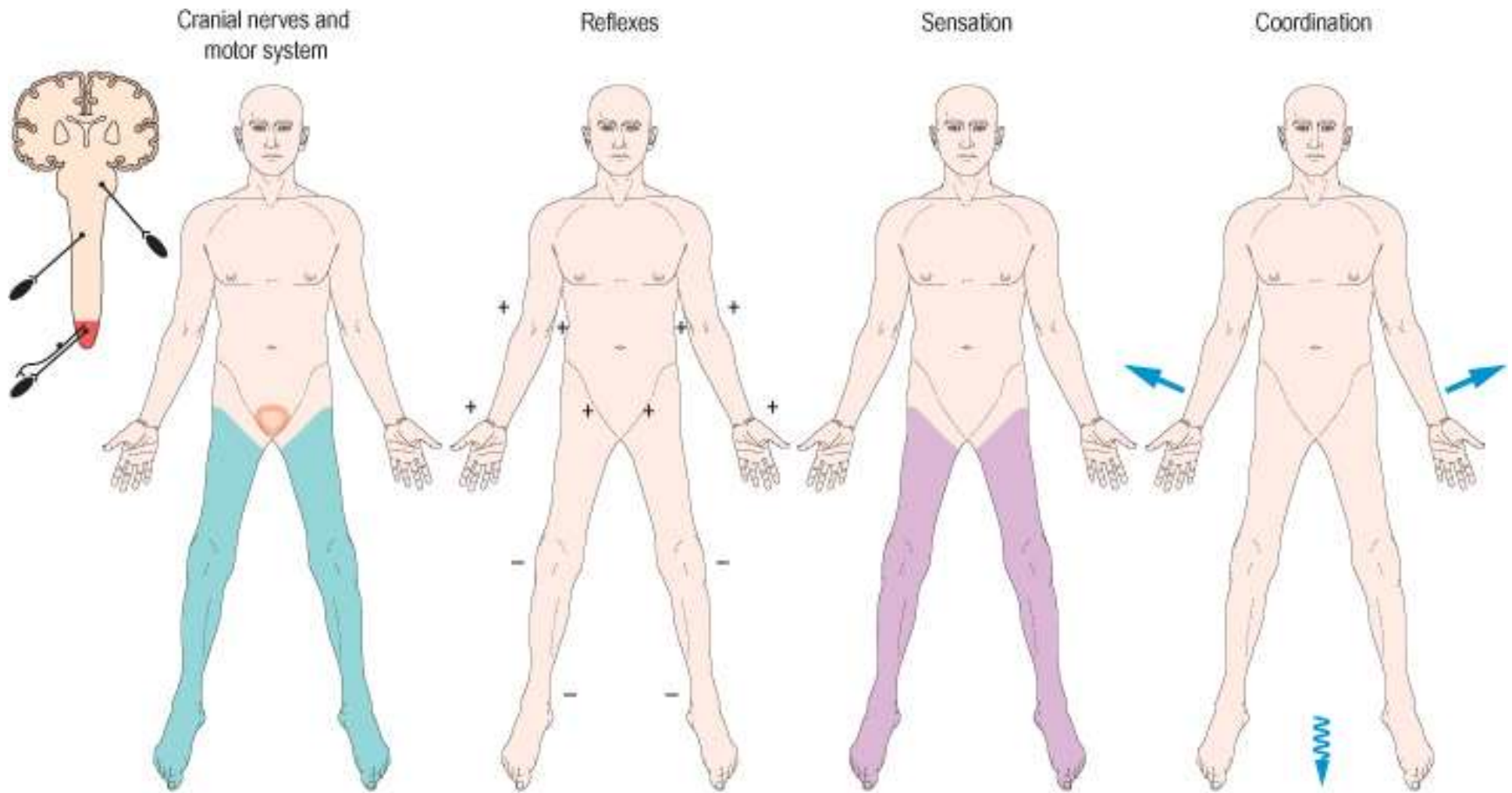
Coordination



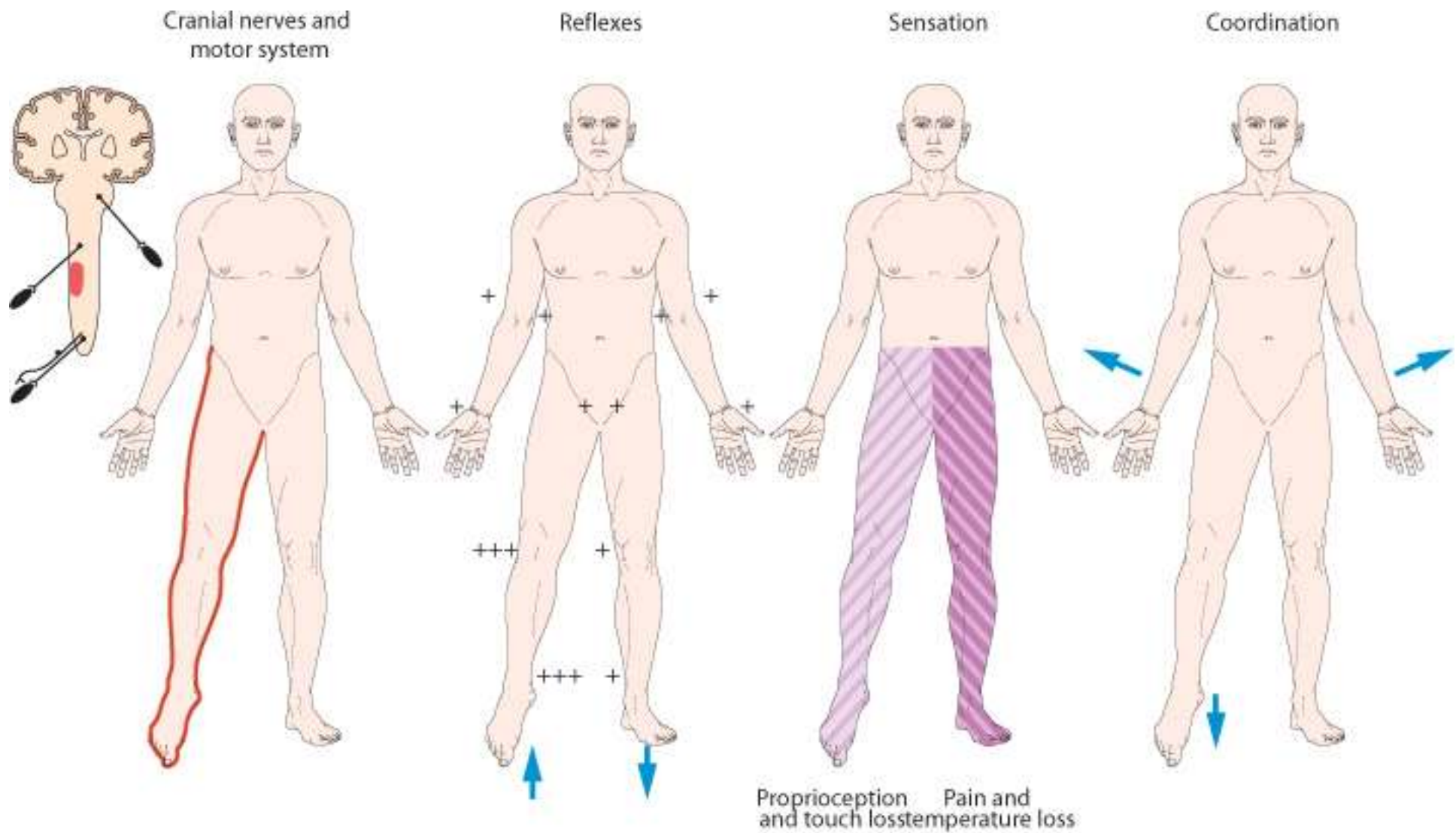
LESIONE DEL MIDOLLO SPINALE CERVICALE SUPERIORE



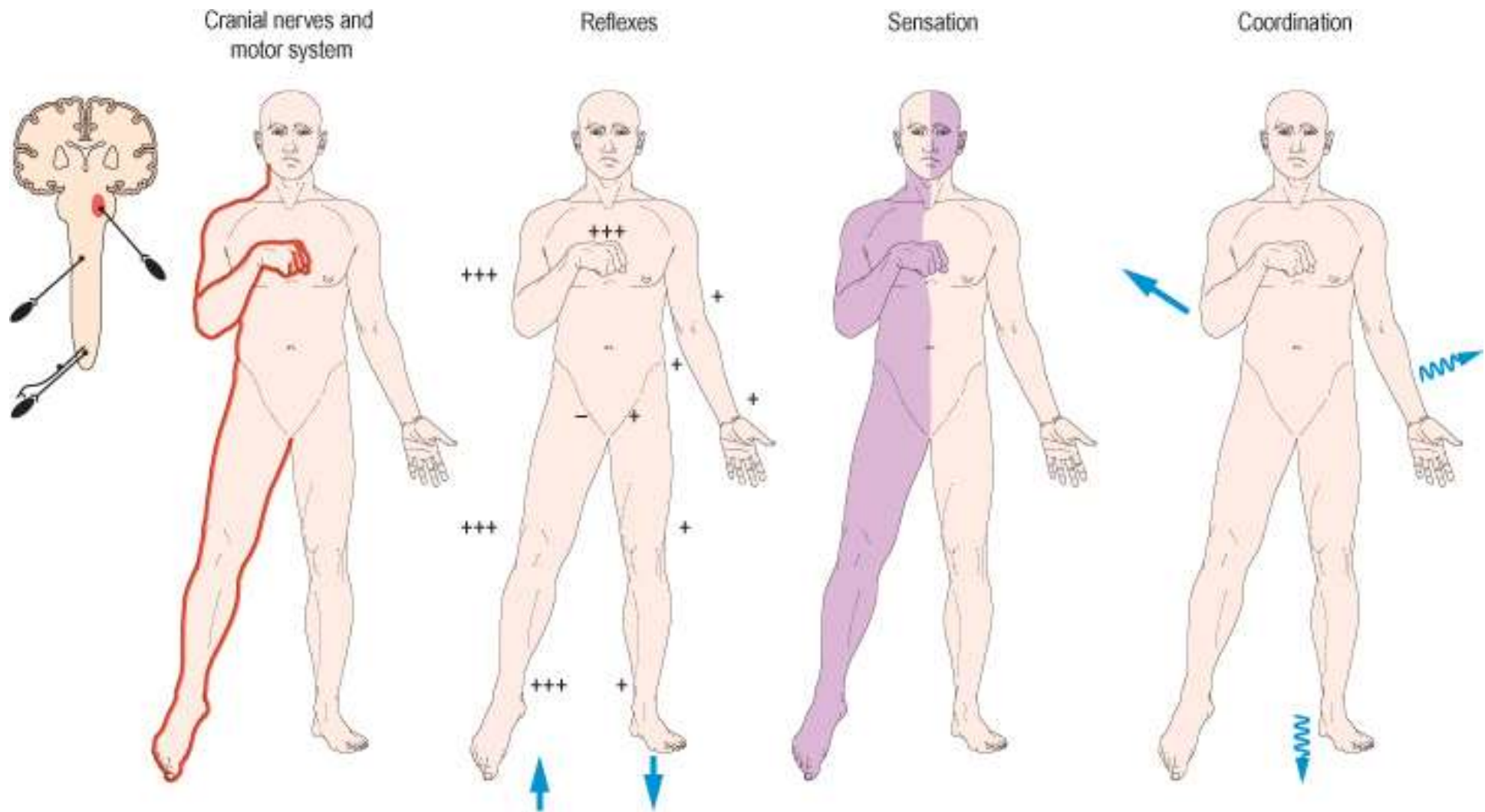
LESIONE DEL MIDOLLO SPINALE TORACICO



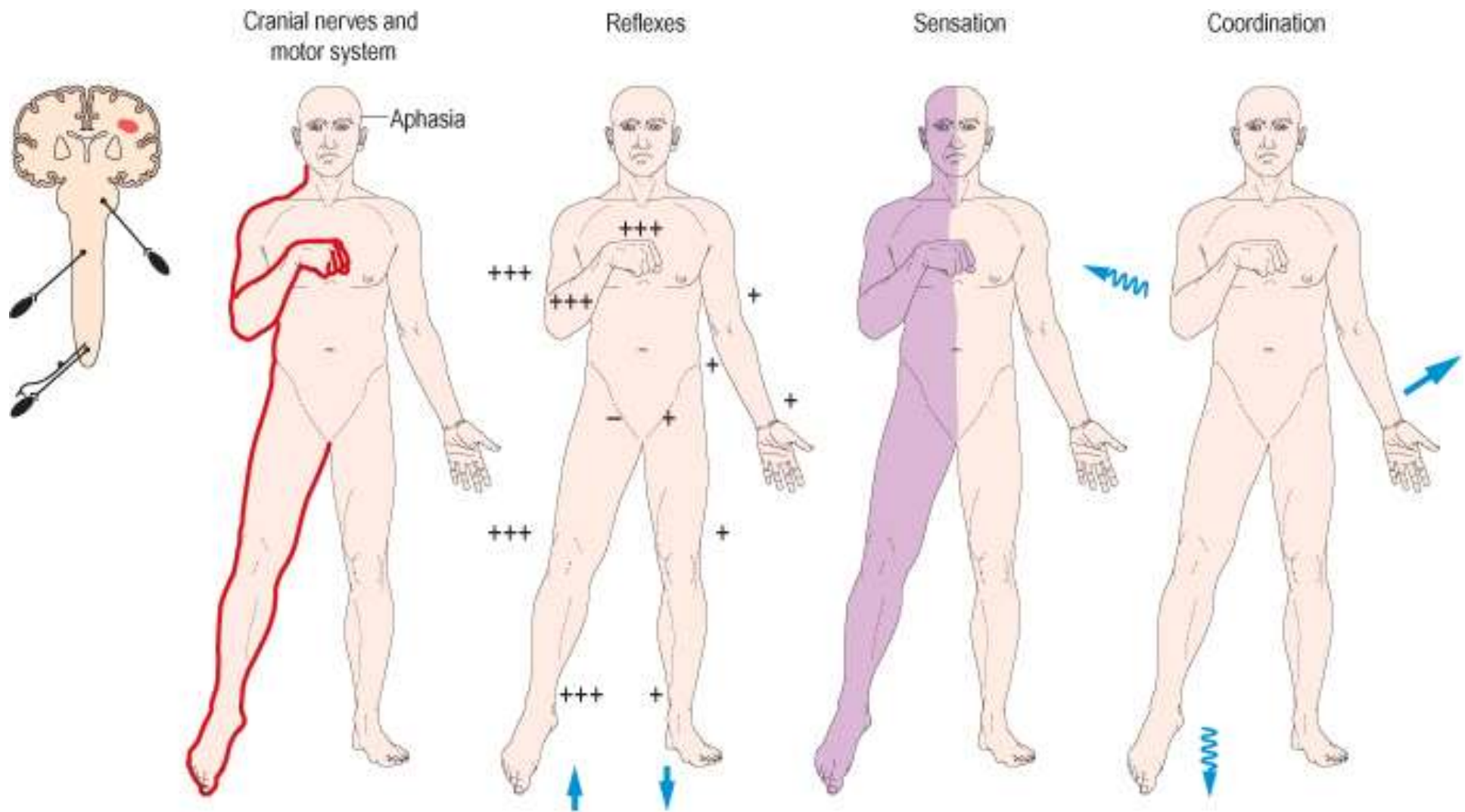
LESIONE DEL MIDOLLO SPINALE LOMBARE



SINDROME DI BROWN-SÉQUARD



LESIONE DEL TRONCO ENCEFALICO



LESIONE EMISFERICA CEREBRALE



Should the Babinski sign be part of the routine neurologic examination?

Timothy M. Miller, MD, PhD; and S. Claiborne Johnston, MD, PhD

Abstract—Background: The Babinski sign is a well-known sign of upper motor neuron dysfunction that is widely considered an essential element of a complete neurologic examination. Little is known about reliability and validity of this sign. A less well-known sign of upper motor neuron dysfunction, decreased speed of foot tapping, also has not been carefully evaluated. Scientific evaluation of findings of the physical examination is crucial in directing busy clinicians. **Methods:** Ten physicians (five neurologists and five non-specialists) examined each foot of 10 subjects, 8 of whom had known unilateral upper motor neuron weakness, 1 had bilateral leg weakness secondary to ALS, and 1 had no known neurologic deficits. Our main outcome measures were inter-rater reliability (kappa values) and accuracy (agreement with known upper motor neuron weakness). **Results:** The reliability of the Babinski sign was fair (kappa 0.30) and was substantial for foot tapping (kappa 0.73). Agreement with known weakness was 56% for Babinski sign and 85% for foot tapping. Reliability and accuracy for both tests were similar for neurologists and non-specialists. **Conclusions:** The interobserver reliability and validity of the Babinski sign for identifying upper motor neuron weakness are limited. Slowness of foot tapping may be a more useful sign.

NEUROLOGY 2005;65:1165–1168

Table Interobserver reliability and validity of the Babinski sign and foot tapping

	Overall	Neurologists	Non-neurologists
Babinski testing			
No. of evaluations	199	99	100
Kappa	0.30	0.28	0.36
Validity, %	56	58	54
Sensitivity, %	35	36	34
Specificity, %	77	80	74
Foot tapping			
No. of evaluations	198	98	100
Kappa	0.73	0.73	0.72
Validity, %	85	82	88
Sensitivity, %	86	86	86
Specificity, %	84	78	90



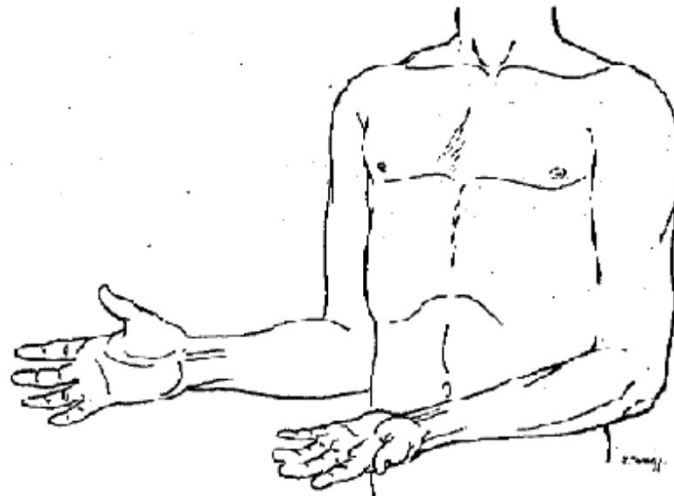
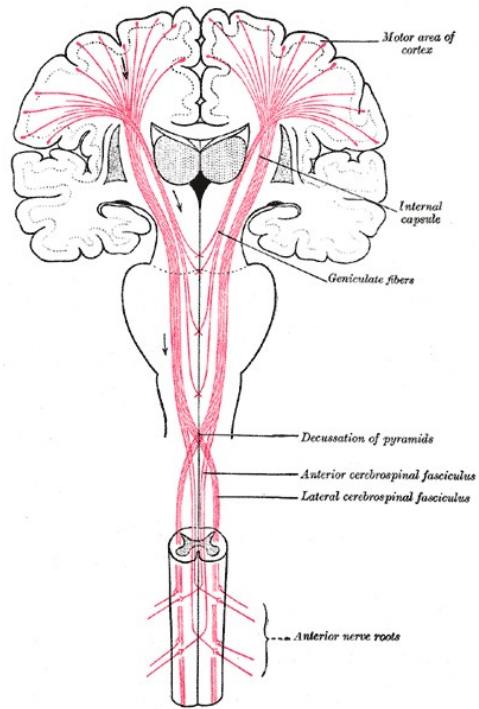
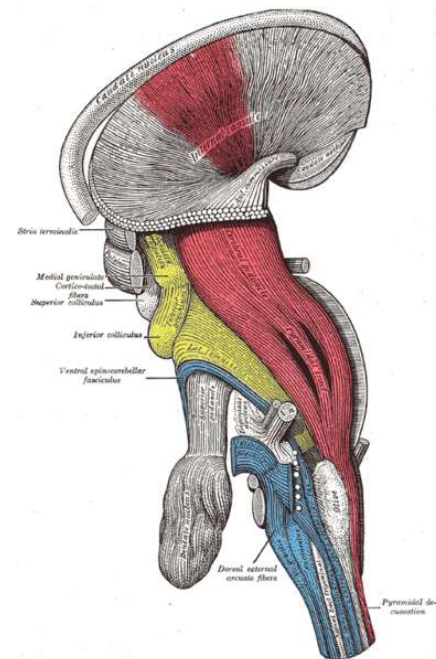


Fig. 1.



XXVIII.

Ueber das Tibialisphänomen und verwandte Muskel-synergien bei spastischen Paresen.

Von

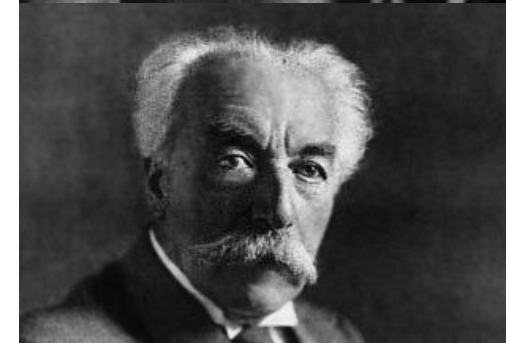
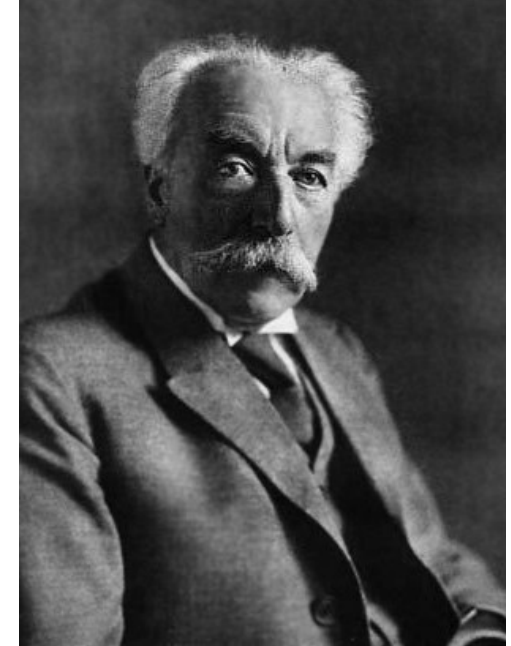
Prof. Dr. Adolf Strümpell in Erlangen.

Bereits vor 14 Jahren habe ich im Neurologischen Centralblatt (1887, Nr. 1) eine bei gewissen Nervenkranken sehr häufig zu beobachtende, ungemein charakteristische Form der „Mitbewegung“ beschrieben, bestehend in einer bei jedem Heranziehen des Beines an den Rumpf gleichzeitig stattfindenden, vom Kranken nicht zu unterdrückenden Anspannung des Musc. tibialis anticus. Meine damalige Mittheilung ist von den Neurologen fast ganz unbeachtet geblieben und nur vereinzelte bestätigende Aeusserungen sind mir bekannt geworden, so insbesondere von L. Mann in seiner Arbeit über die spinale Hemiplegie¹⁾. In den neuesten ausführlichen Darstellungen der Pathologie der Hemiplegie von P. Marie²⁾, Oppenheim³⁾ u. A. findet man die Erscheinung mit keiner Silbe erwähnt. Ich selbst habe das betreffende Symptom zwar oft genug von Neuem gesehen, bin aber doch erst wieder in der letzten Zeit in erhöhtem Maaße darauf aufmerksam geworden. Dabei

Quick description of the *Pronationsphaenomen* among “muscular synergies” arising from the lack of inhibition due to pyramidal tract lesion.

First reflections on the ONTOGENY of this structure

...further studies are needed to completely understand this type of phenomenon and to elaborate its clinical significance



XI bis. De la Pronation de la Main dans l'Hémiplégie organique,
par M. J. BABINSKI.

Dans l'hémiplégie organique, avant même que la contracture se soit établie, il n'est pas rare d'observer que du côté paralysé la main se trouve en pronation et qu'elle reprend cette position lorsque après l'avoir portée en supination par un mouvement passif on l'abandonne à elle-même. C'est là un signe qui peut aider à distinguer l'hémiplégie organique de l'hémiplégie hystérique.

Voici un bon moyen de mettre ce phénomène en évidence : on recommande au malade de laisser inertes ses membres supérieurs; puis on place les avant-bras en supination, on les soutient en ses propres mains par leur face dorsale au niveau du poignet et on leur imprime plusieurs secousses successives; on voit alors la main du côté de l'hémiplégie se porter en pronation.

XI bis. Sur le Réflexe Cutané Plantaire (Différences dans les réactions correspondant avec des différences dans le siège de l'excitation), par M. J. BABINSKI.

J'ai déjà fait remarquer autrefois que, dans les cas de perturbation du système pyramidal, l'excitation de la plante du pied produisait parfois des réactions motrices différentes suivant qu'elle portait sur la partie externe ou sur la partie interne du pied: on observe chez certains sujets une extension du gros orteil en excitant le côté externe et une flexion quand on excite le côté interne. Il en est d'autres, parmi lesquels les malades que je présente aujourd'hui, qui ont une simple extension du gros orteil sous l'influence de l'excitation de la partie interne et chez lesquels l'excitation du bord externe provoque une extension associée à une abduction des orteils. Ces caractères, joints à divers autres que j'ai déjà fait connaître (1), pourraient, dans certains cas, permettre de distinguer le phénomène des orteils légitime du phénomène des orteils suggéré ou simulé.

XII. Un cas de Syringomyélie avec Chiromégalie suivi d'autopsie,
par MM. LIEBOWITZ et ANTON.

Le malade atteint d'hypertrophie de la main et de l'avant-bras droits succomba à l'âge de 34 ans à une broncho-pneumonie. L'autopsie permit de constater l'existence d'une cavité syringomyélique étendue du IV^e segment cervical au IX^e segment dorsal. Les méninges étaient épaissies. La main hypertrophiée ne présentait aucune déformation, hypertrophie ou atrophie du squelette; les muscles étaient en voie d'atrophie et infiltrés de graisse; les nerfs de la main présentaient les altérations décrites en pleine activité. En définitive l'au-



23. Gierlich (Wiesbaden):

**Über das Pronationsphänomen der Hand
als frühes Kennzeichen einer Läsion der Pyramidenbahn.**

Es kommen fast täglich Kranke in unsere Behandlung, bei denen eine Entscheidung darüber getroffen werden muß, ob die vorgebrachten Klagen rein funktioneller Natur sind, oder aber eine Läsion der Pyramidenbahn zugrunde liegt. Prognose und Therapie werden wesentlich von diesem Gesichtspunkt beeinflusst. Speziell die Lazaretttätigkeit verlangte von uns dauernd wichtige Entscheidungen in dieser Hinsicht.

Wenn nun auch ausgeprägtere Störungen in der Funktion der Pyramidenbahn an dem bekannten Trias der Symptome: Hypertonie der Muskulatur, Prädilektionstyp der Lähmung und Mit-

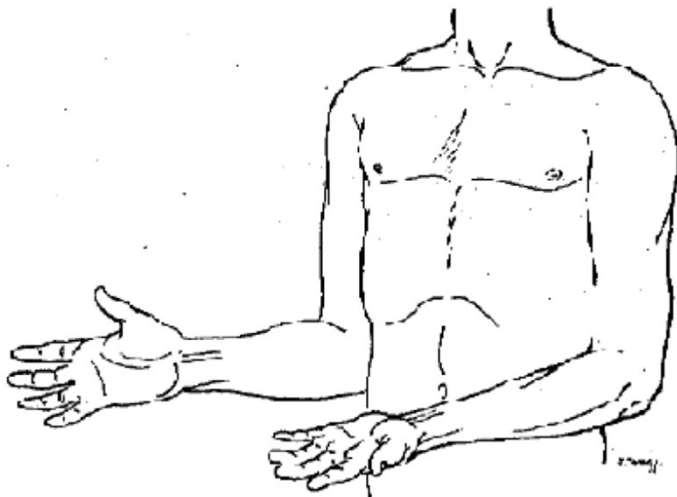
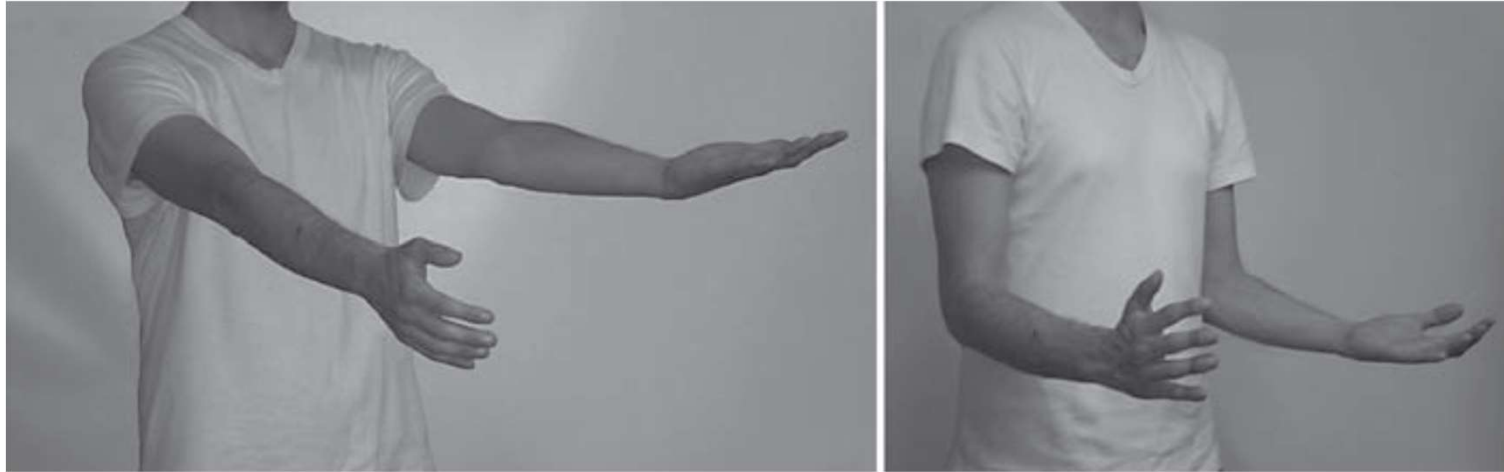


Fig. 1.





Hand pronation phenomenon or hand pronation drift

Strumpell's original description

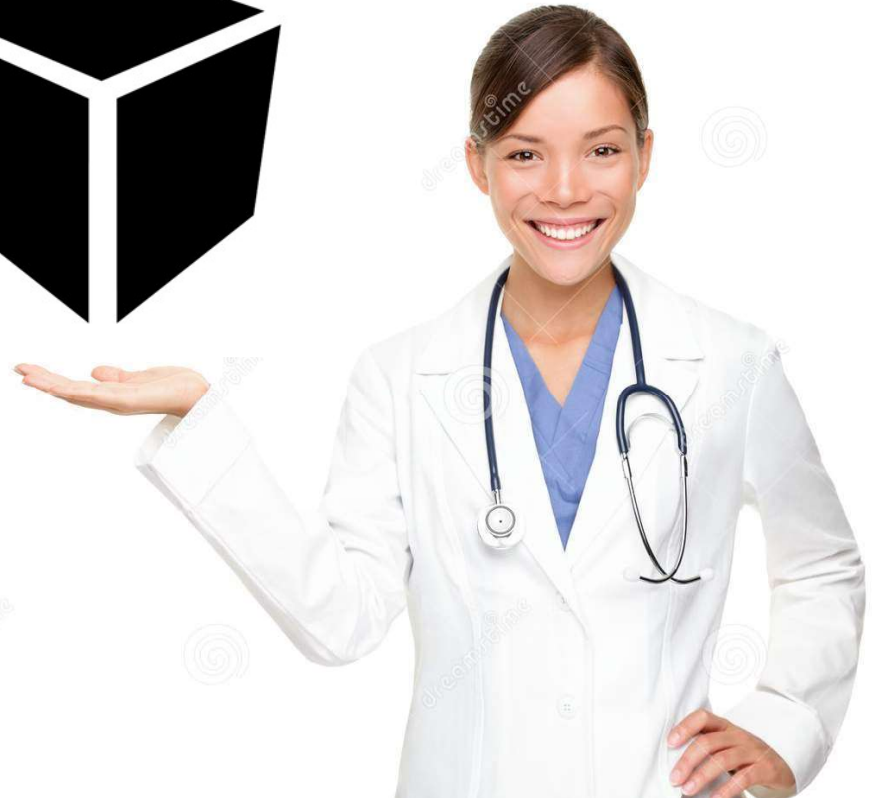
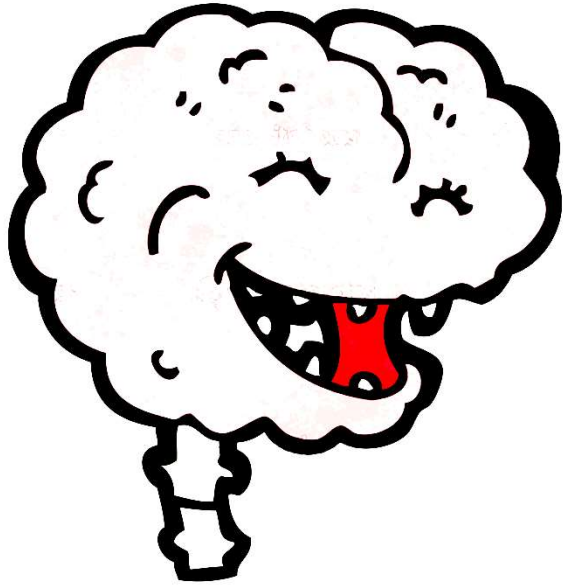
Babinski & hysteria differentiation

Gierlich phylogenetic reading

Wilson's little sign of chorea

Milano's neurological school: "*Gierlich's sign*"

Other Italian's neurological school: "*Strumpell's sign*"



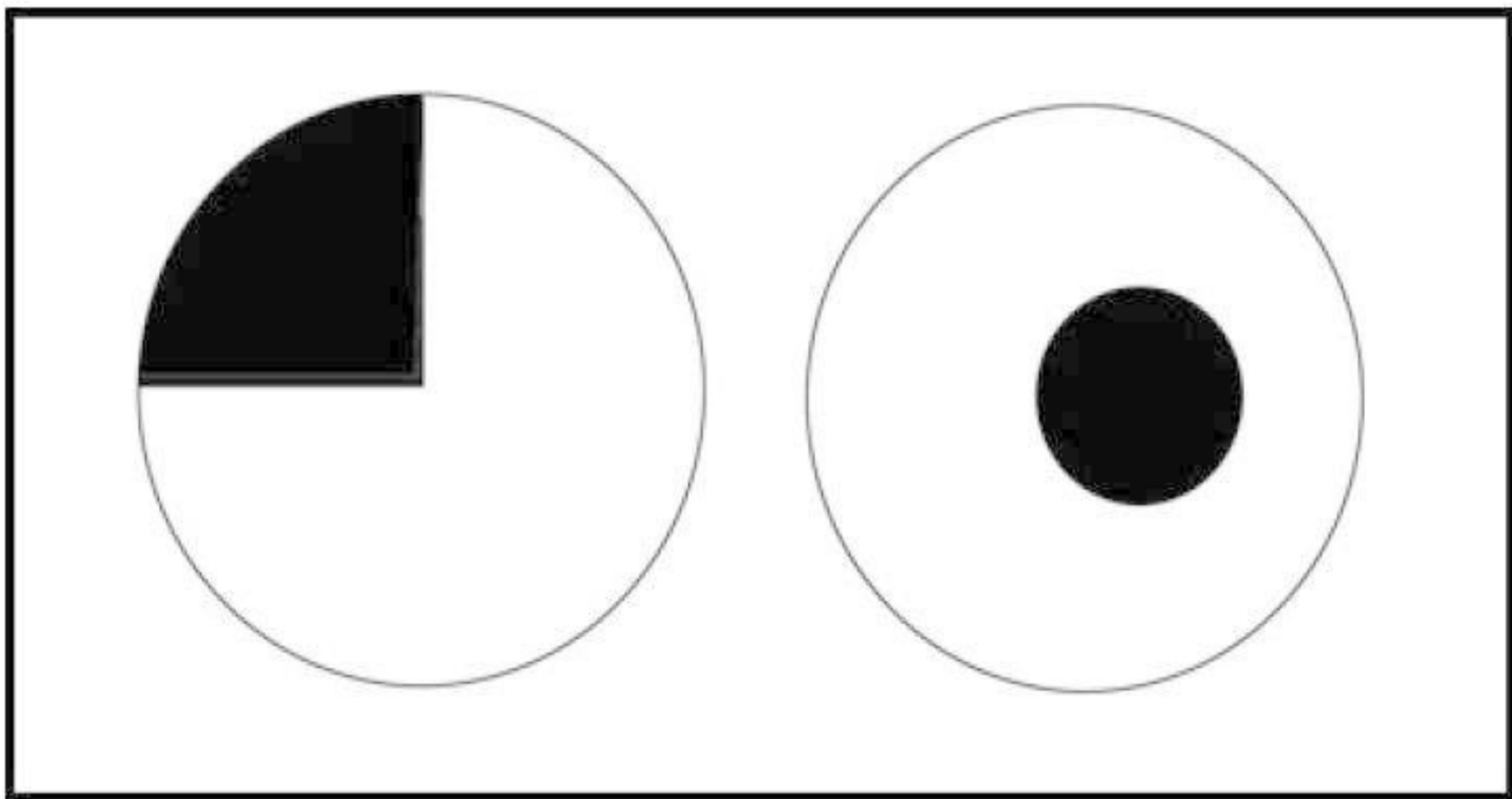
FALSI SEGNI LOCALIZZATORI

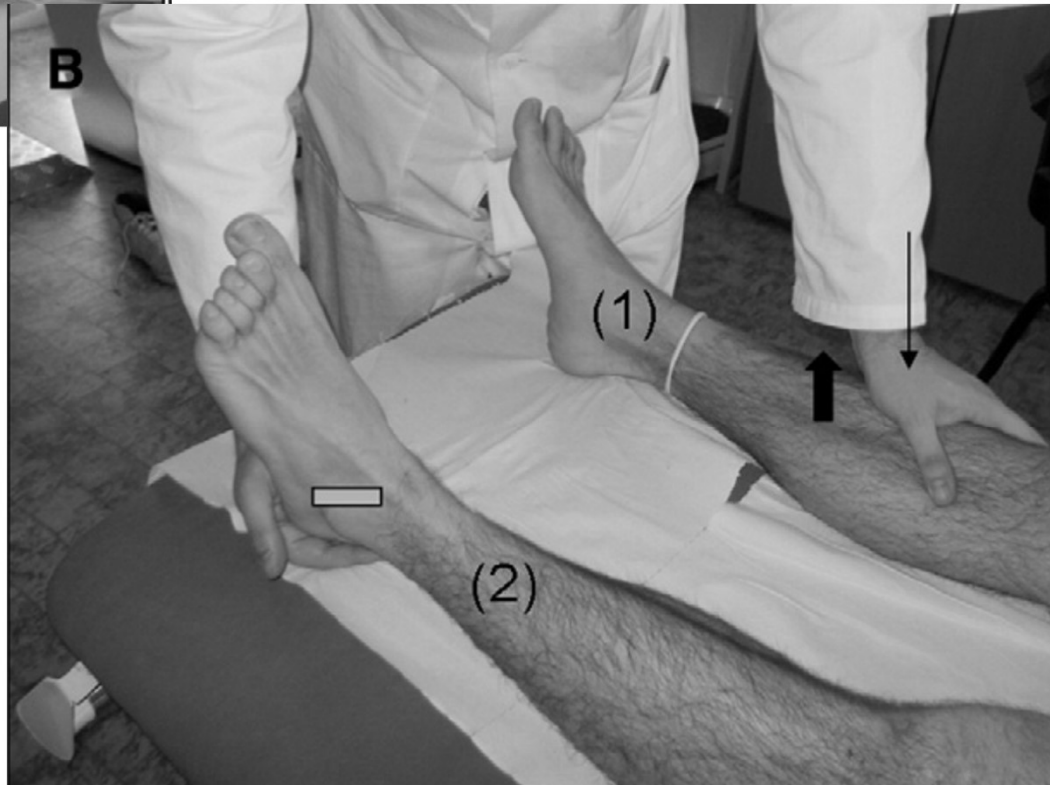
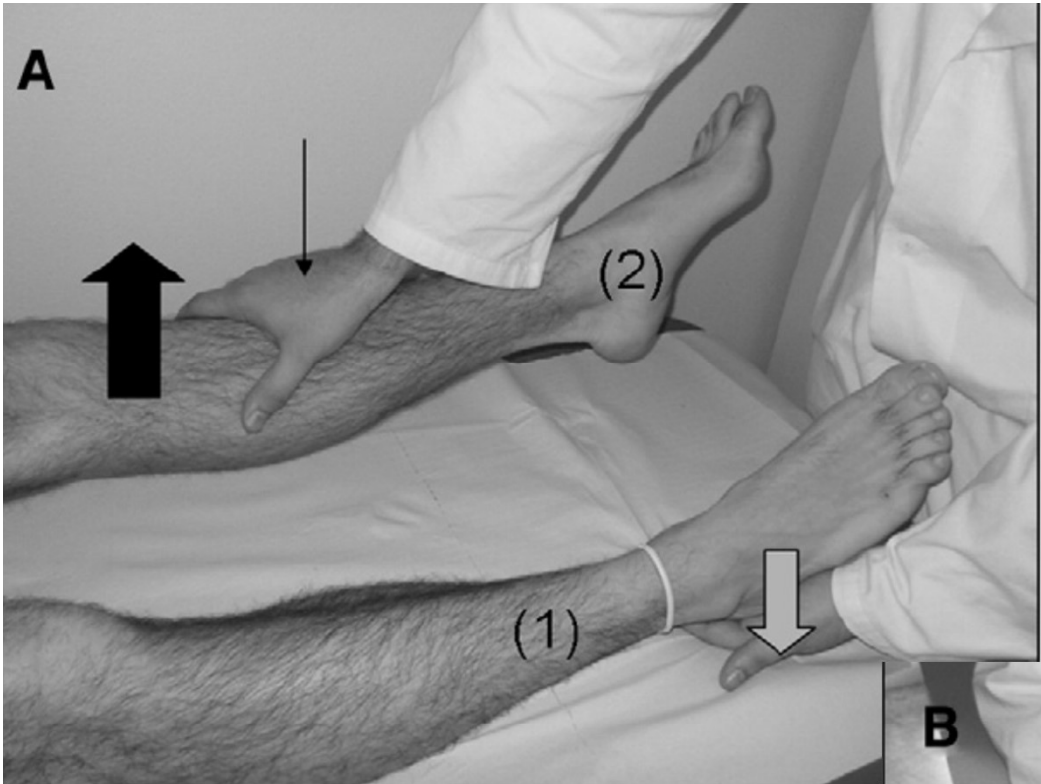
The notion of “false localising signs” was first elucidated by James Collier in 1904: on the basis of clinical examination during life and subsequent postmortem studies, he noted false localising signs in 20 of 161 consecutive cases of intracranial tumour examined pathologically, most occurring in patients with supratentorial lesions. Despite this high frequency (12.4%), Collier felt false localising signs were being observed less frequently because of the earlier diagnosis of tumours, a theme reiterated by later authors, implying that such signs are a late feature in the natural history of tumours.

Gassel noted false localising signs to be more common in patients with raised intracranial pressure.

Collier J. The false localising signs of intracranial tumour. *Brain*1904;27:490–508.

Gassel MM. False localizing signs. A review of the concept and analysis of the occurrence in 250 cases of intracranial meningioma. *Arch Neurol*1961;4:526–54.





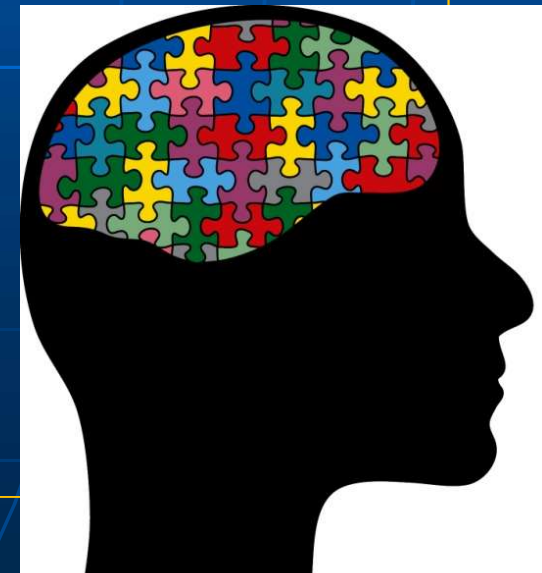
NSS, neurological soft signs

➤ **DEFINIZIONE:** I Segni Neurologici “Soft” (NSS) sono lievi anomalie semeiologiche della sfera neurologica, indicative di una disfunzione diffusa del SNC. Per evidenziare gli NSS si utilizzano apposite scale valutative, che si differenziano dalle manovre dell'esame obiettivo standard.

➤ **EZIOPATOGENESI:** alterazione dei sistemi di integrazione sensoriale e motoria associata a disfunzione delle strutture di connessione corticale - sottocorticale.

➤ **LETTERATURA:** dagli anni '70 in poi applicati estensivamente nell'ambito delle patologie neurologico - psichiatriche:

- Schizofrenia
- Disturbi dell'umore
- Disturbi d'ansia
- Terapie con neurolettici
- ADHD
- Addiction (gioco d'azzardo e cannabis)
- MCI - Alzheimer



Primitive Reflexes

① - ⑥ : frontal release signs.

1. Glabellar Reflex

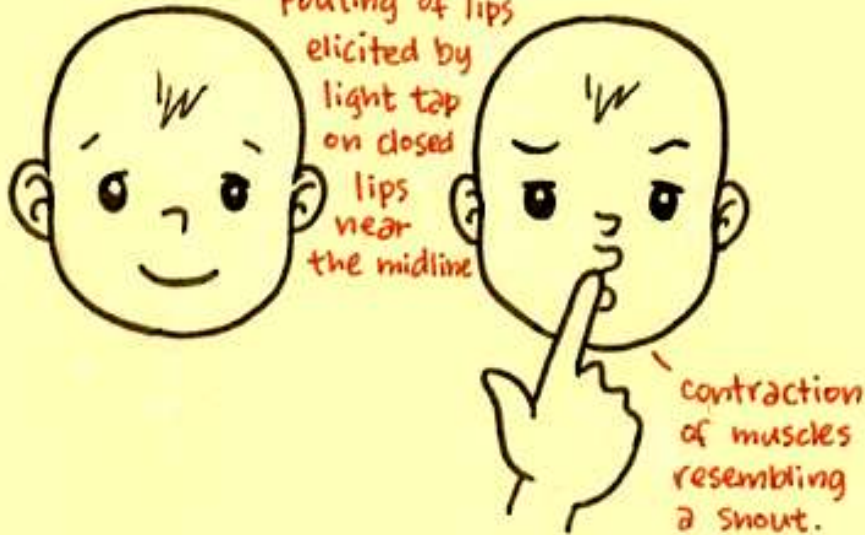
A blink response upon gentle tapping above the nasal bridge.



blinking persists upon repetitive tapping

2. Snout Reflex

Pouting of lips elicited by light tap on closed lips near the midline



contraction of muscles resembling a snout.

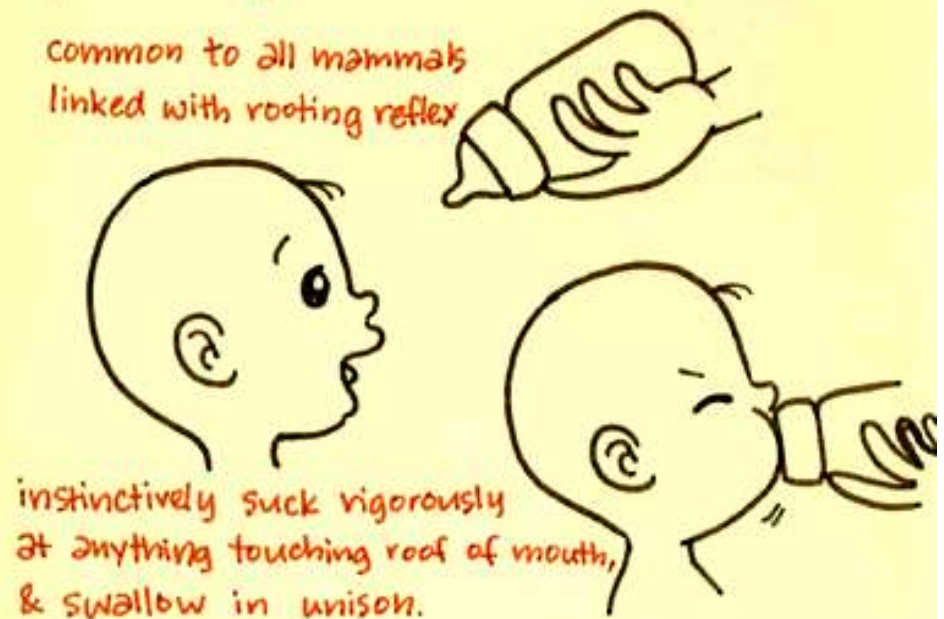
3. Rooting Reflex

Turning head & mouth towards finger stroking the cheeks laterally



4. Sucking Reflex

common to all mammals linked with rooting reflex



instinctively suck vigorously at anything touching roof of mouth, & swallow in unison.