SESSION IADE
CURARES

Physiologie de la jonction neuro-musculaire

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Hopital Huriez
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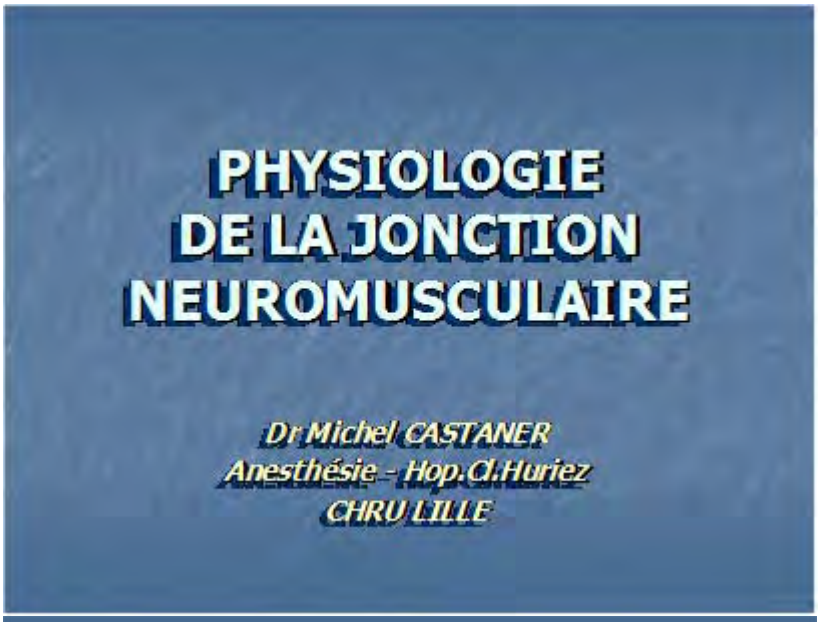
Diapositive 1



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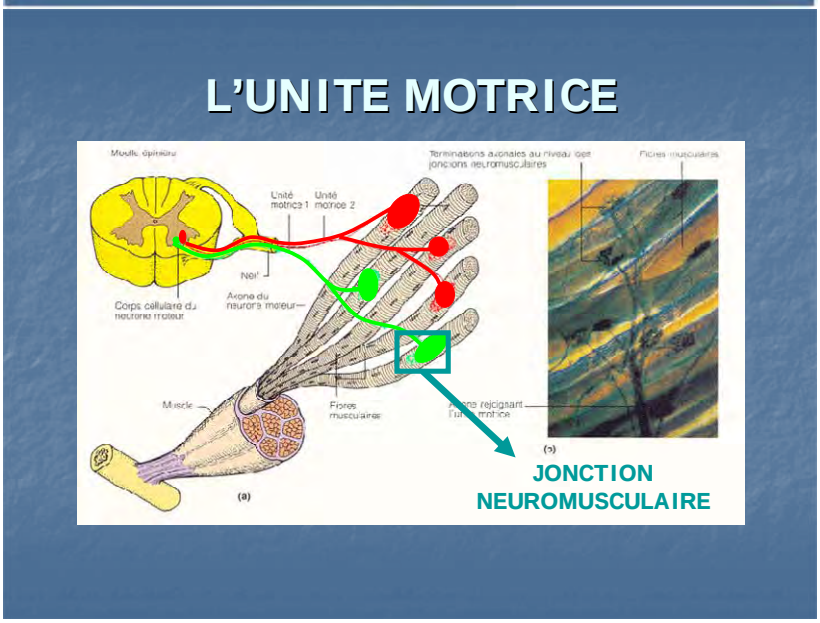

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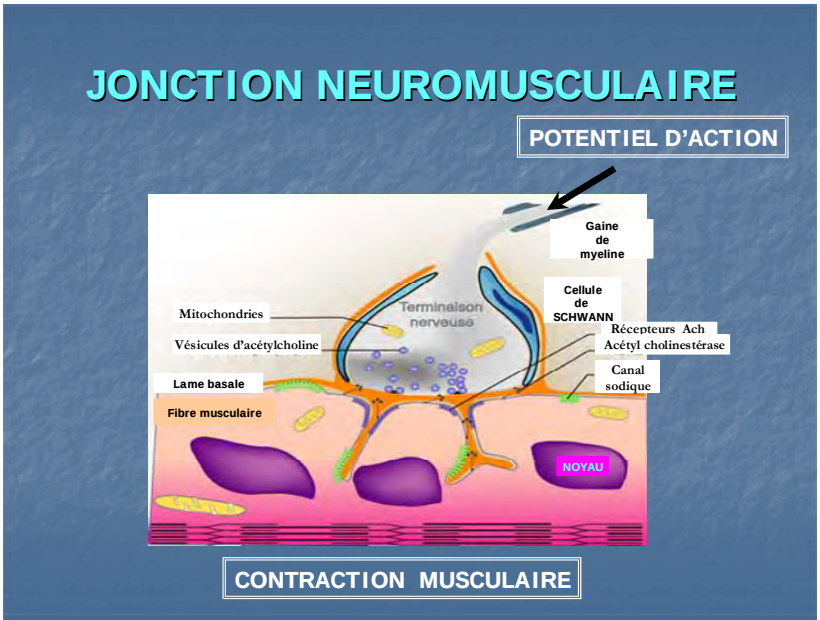

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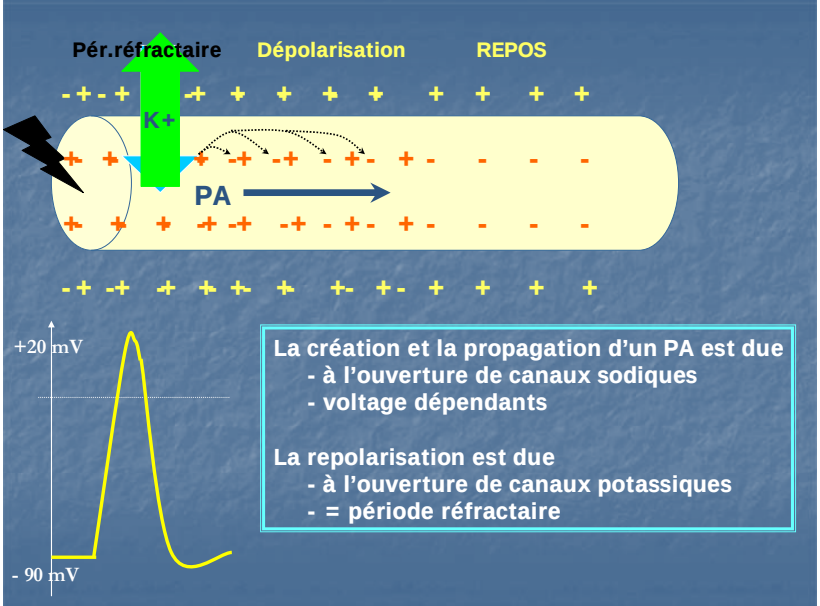
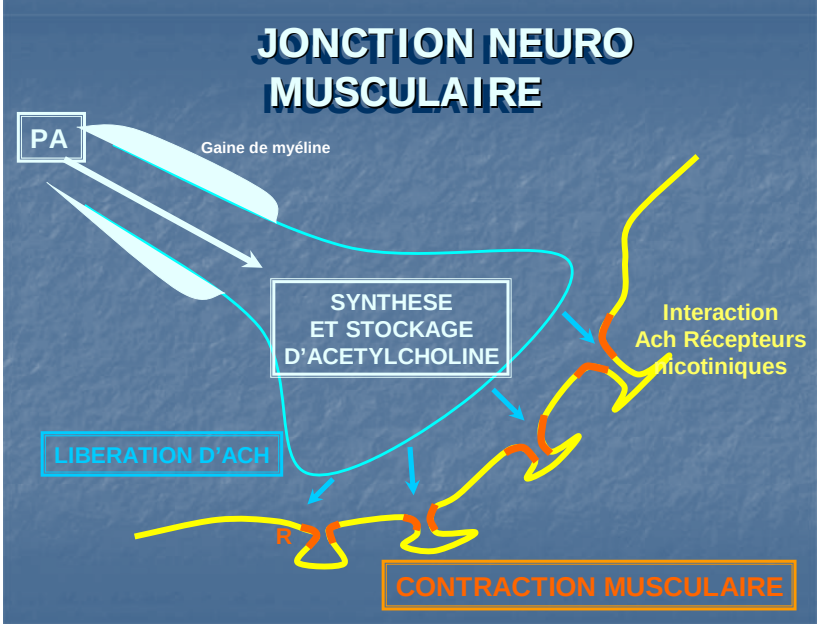


Diapositive 5



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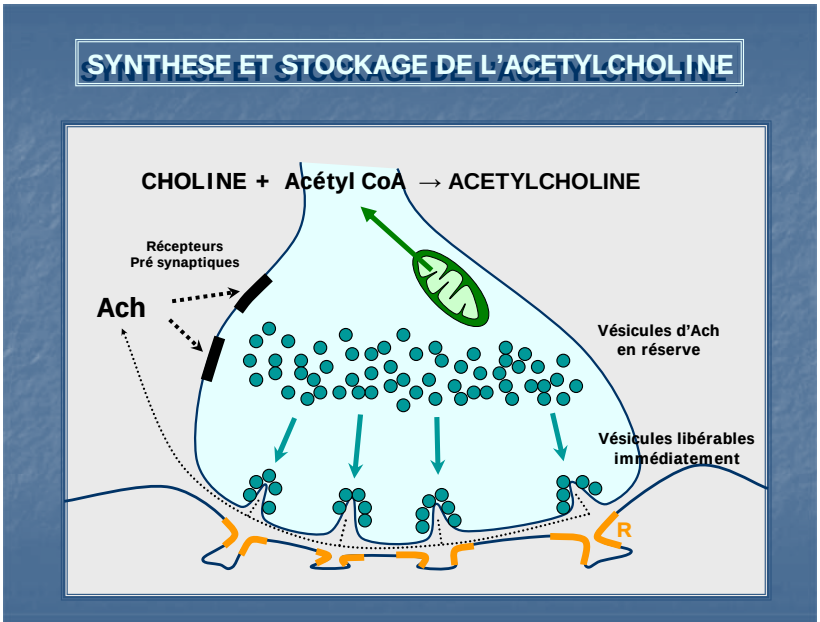

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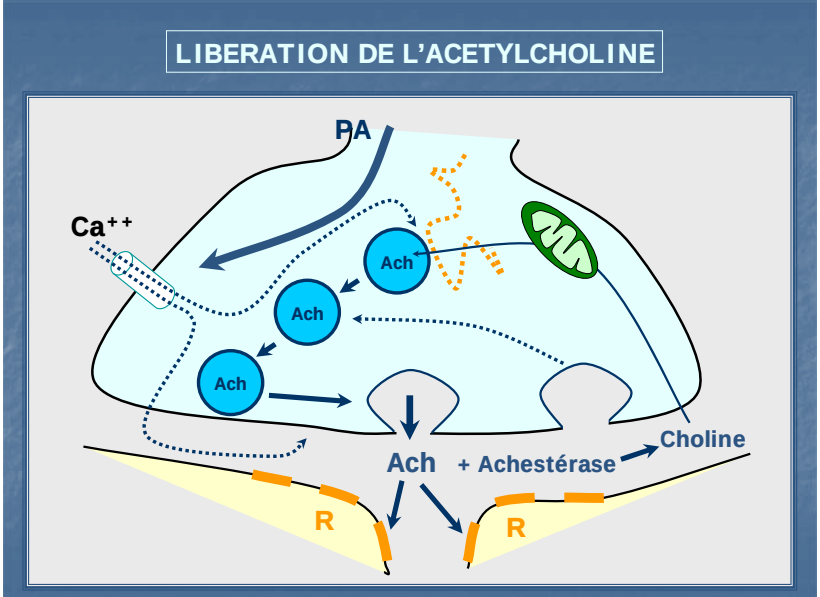

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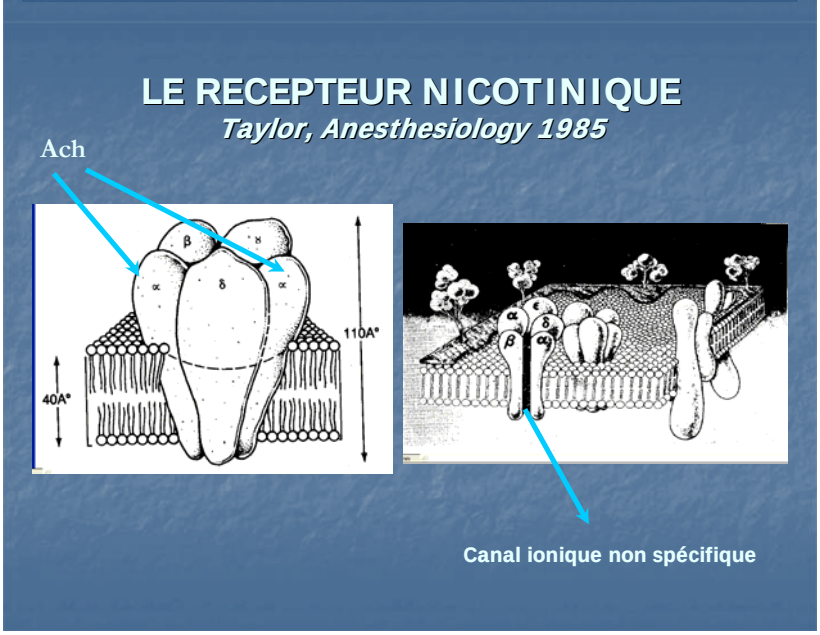
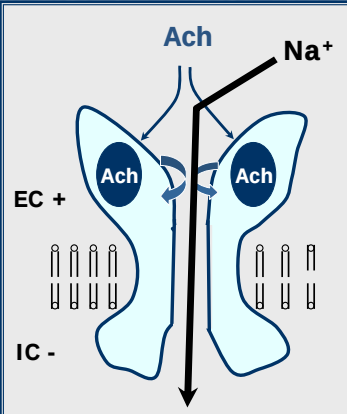


Diapositive 9

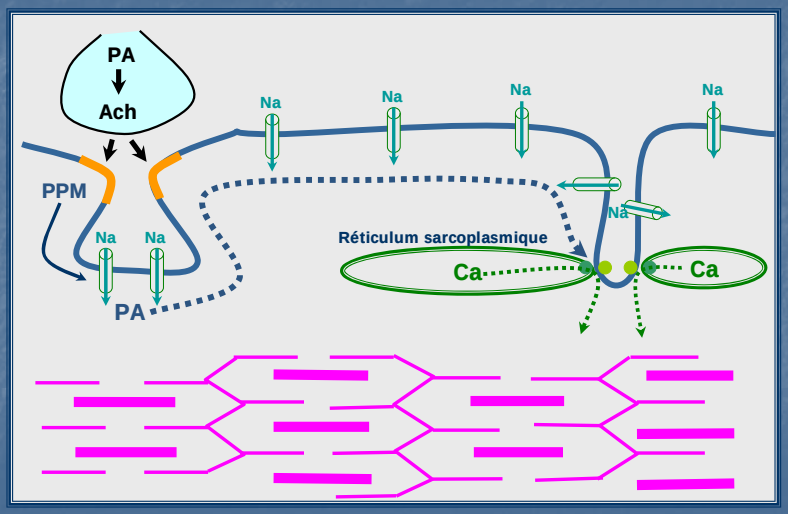
Interaction Ach – Récepteur nicotinique



- Potentiel de plaque motrice
  - 90 Mv à – 15 Mv
- Ne se propage pas
- Déclenche l'ouverture des canaux sodiques de la membrane musculaire

Diapositive 10

COUPLAGE EXCITATION -CONTRACTION



Diapositive 11

PA

↓

40 à 200 vésicules

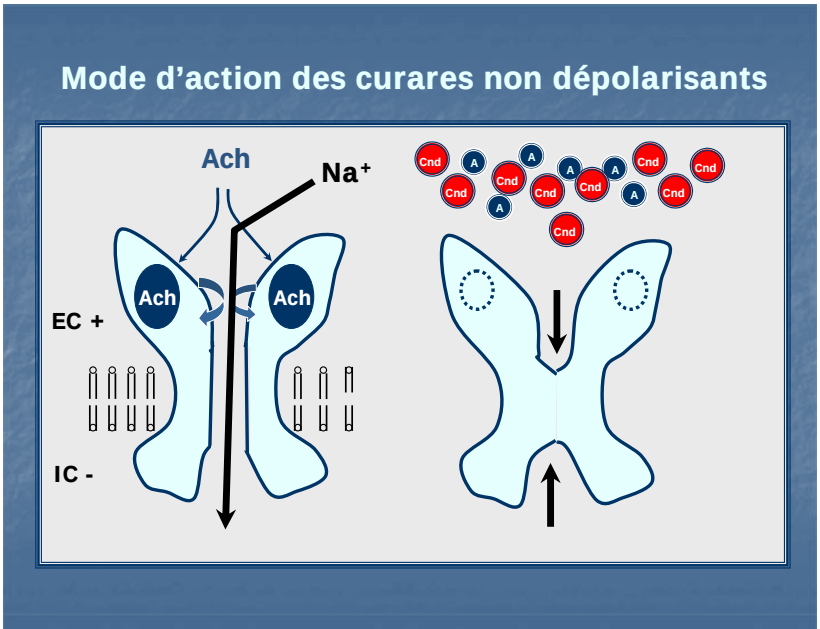
= 1 à 2 x 10^6 molécules d'Ach

⟺

10^7 Récepteurs nicotiniques / plaque motrice

Une occupation de 10 à 30 % des récepteurs suffit pour obtenir une réponse musculaire

Diapositive 12



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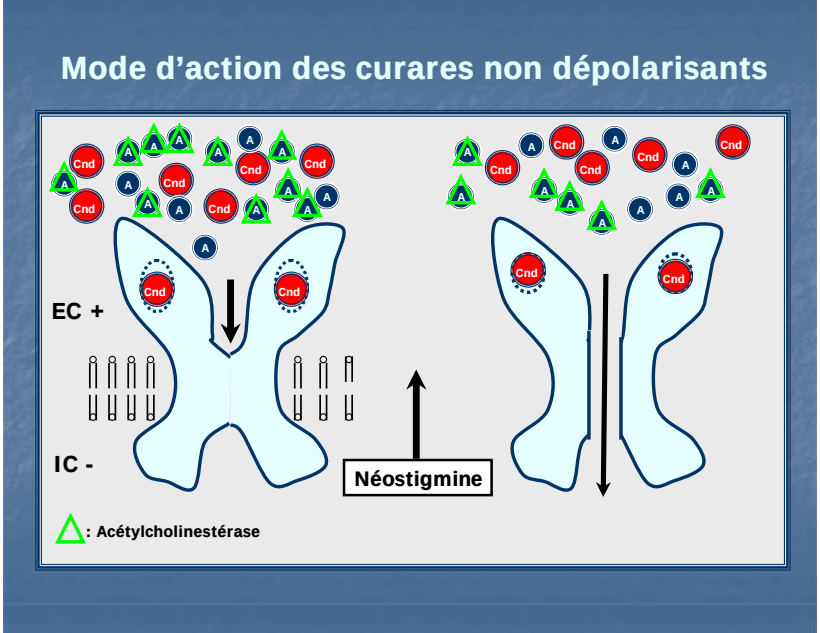

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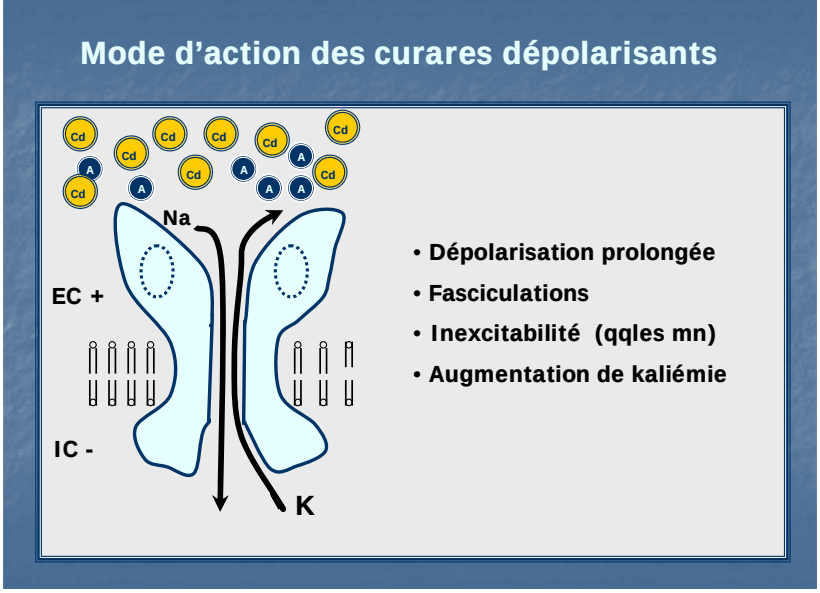
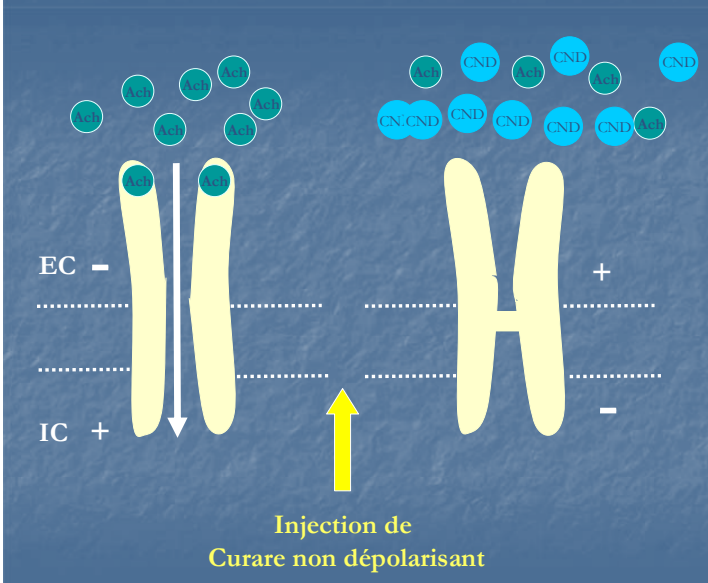


Diapositive 15

Diapositive 16



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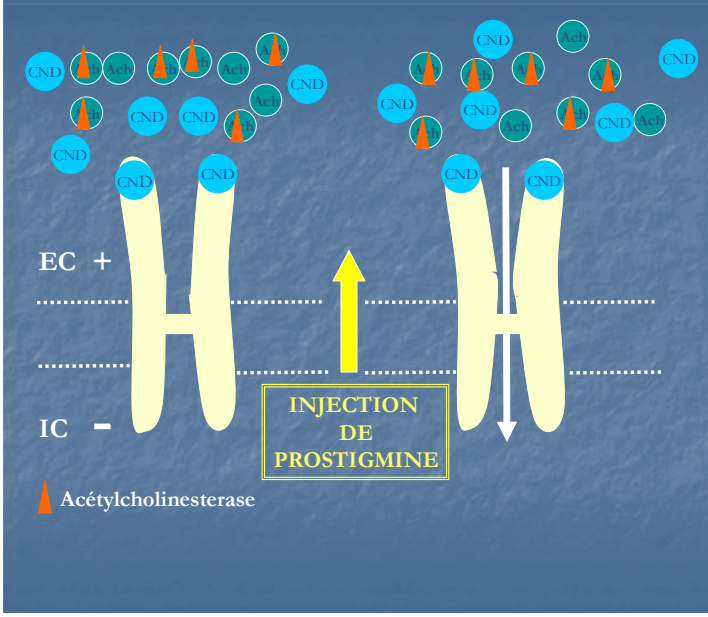
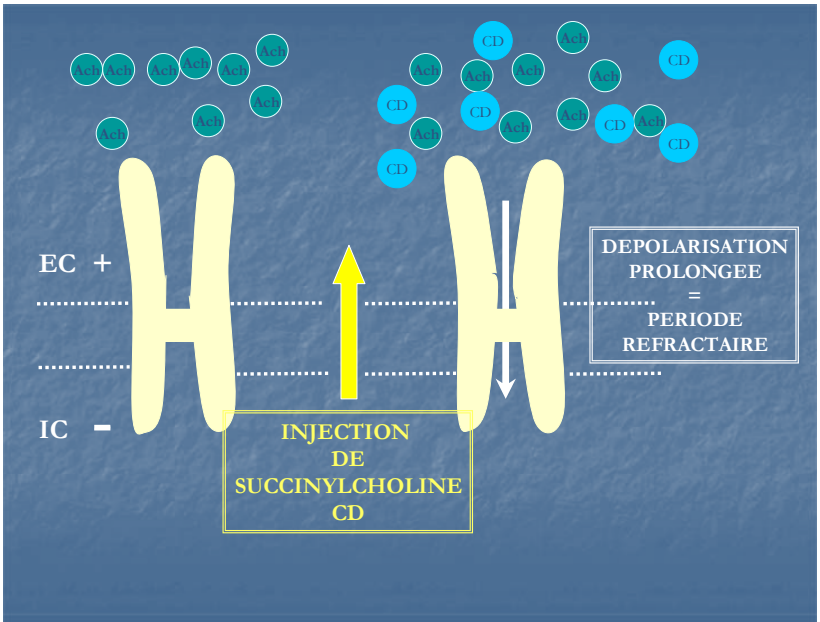
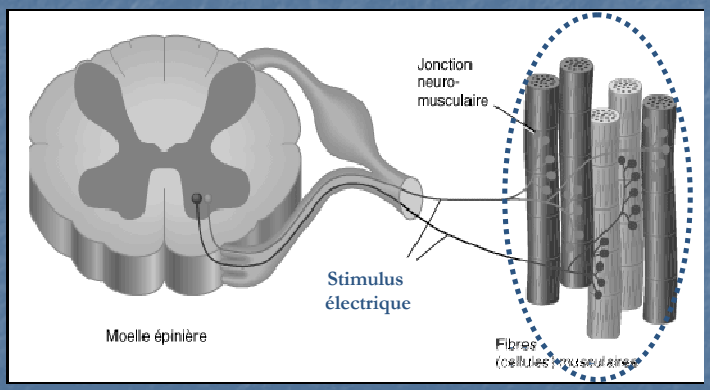


Diapositive 18



Diapositive 19

LA JONCTION NEUROMUSCULAIRE
MONITORAGE DE LA CURARISATION



Enregistrement de la réponse musculaire

Diapositive 20

LA JONCTION NEUROMUSCULAIRE
MONITORAGE DE LA CURARISATION

Quel nerf stimuler ?

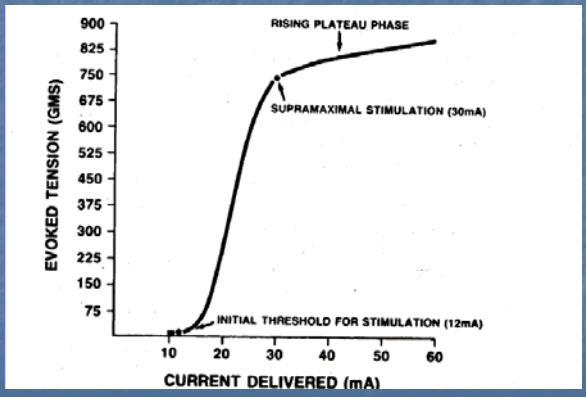
- **nerf ulnaire (cubital)**
  - **muscle adducteur du pouce**
- **nerf facial**
  - **muscle sourcilier**

Quelle intensité ?

- **loi du « tout ou rien » pour une fibre musculaire**
- **intensité permettant de recruter l'ensemble des fibres**
  - **= intensité supra maximale**

Diapositive 21

INTENSITE SUPRAMAXIMALE



Diapositive 22

LA JONCTION NEUROMUSCULAIRE
MONITORAGE DE LA CURARISATION

Quelles réponses musculaires ?

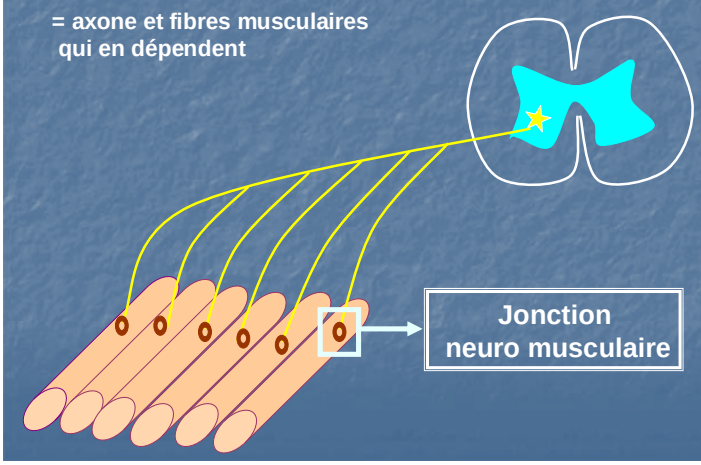
- **muscles sensibles aux curares**
  ADDUCTEUR DU POUCE

- **muscles résistants aux curares**
  DIAPHRAGME
  MUSCLES LARYNGES (GLOTTE)

Diapositive 23

L'UNITE MOTRICE

= axone et fibres musculaires qui en dépendent



Diapositive 24

LA JONCTION NEUROMUSCULAIRE

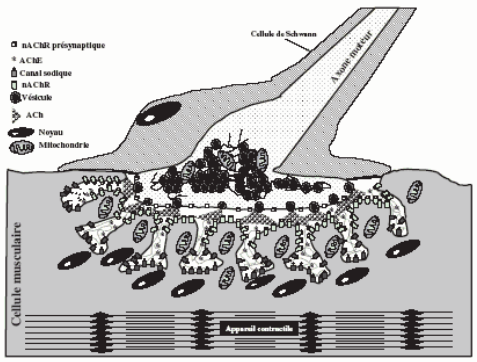


FIG. 1
La jonction neuromusculaire adulte.

Diapositive 25

SYNTHESE D'ACETYLCHOLINE

FOIE

CHOLINE + Acétyl Co A → ACETYLCHOLINE

Choline O acétyl transferase

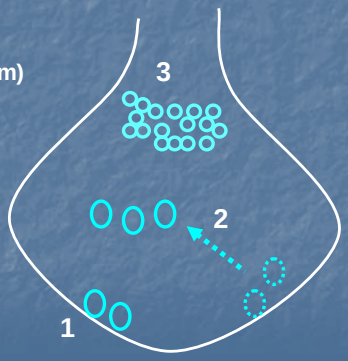
Hydrolyse de l'Ach

3 populations de vésicules:(quantum)

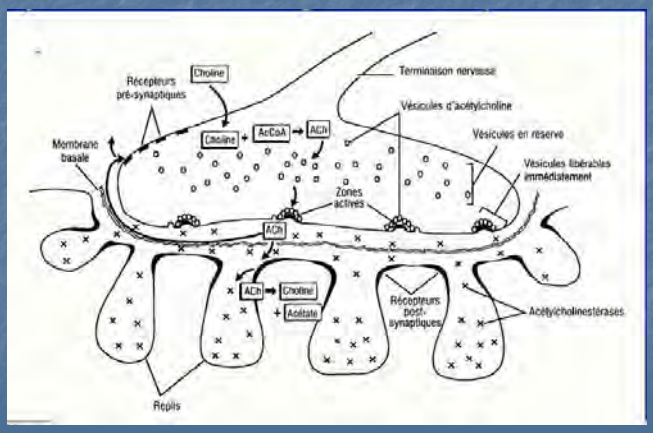
1 - prêtes à être libérées 1% mobilisable en < 1 sec

2- recyclées 10 à 15% mobilisable en qqles sec

3- stock de réserve 80 à 90% mobilisable en 5 à 10 sec



Diapositive 26



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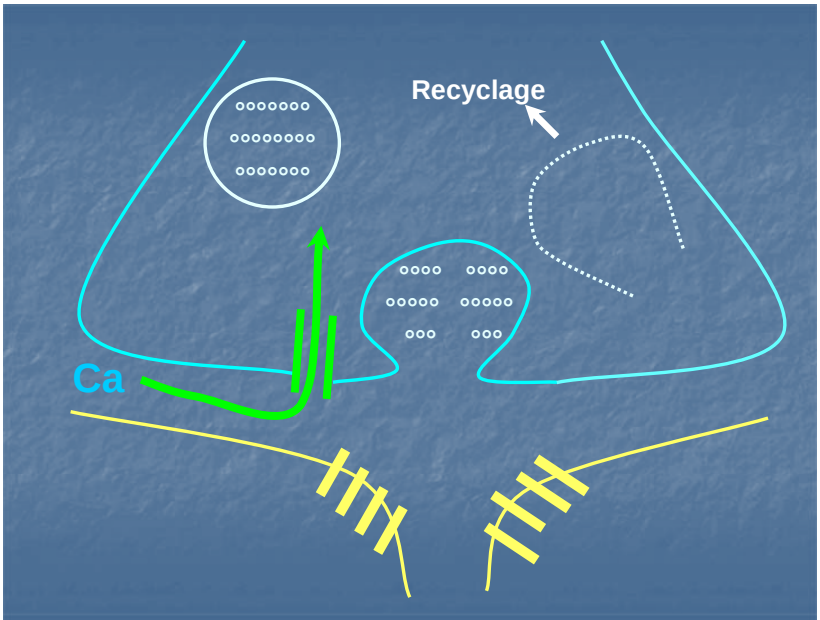

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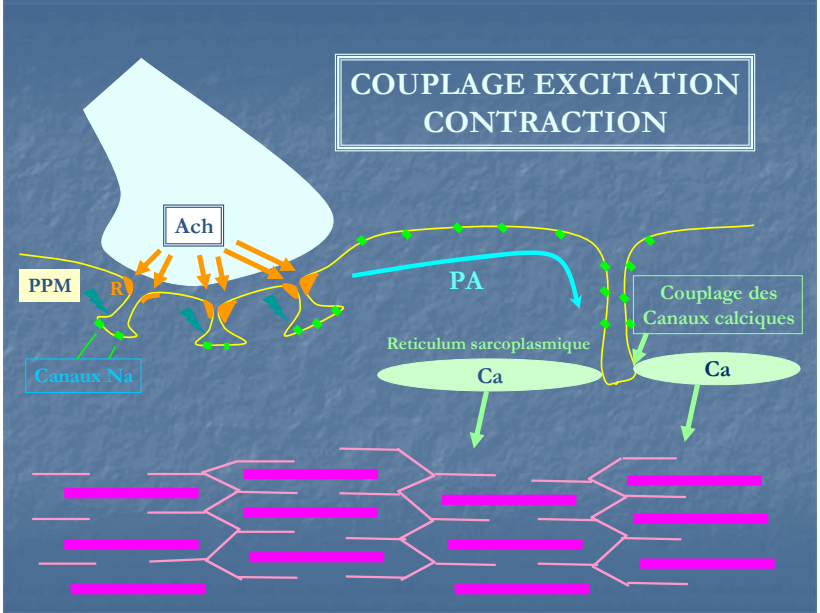

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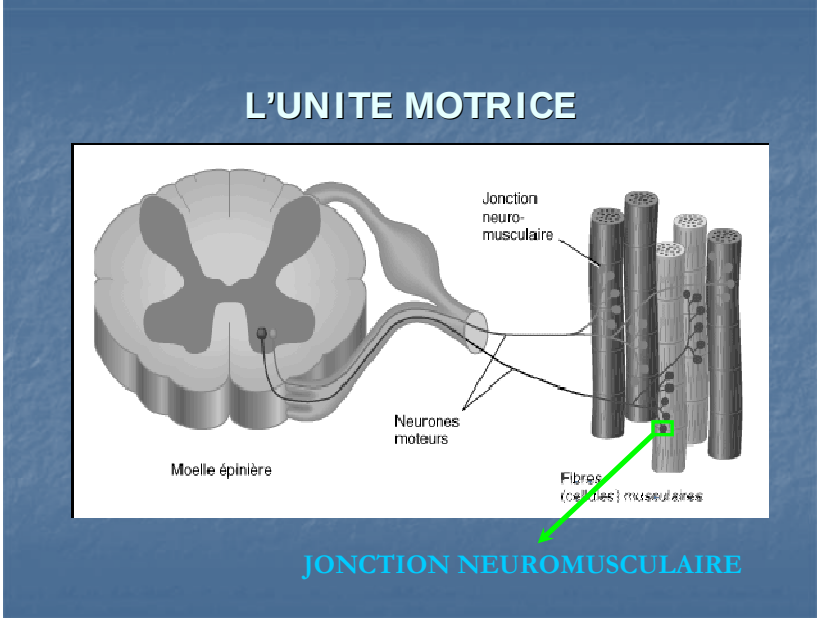

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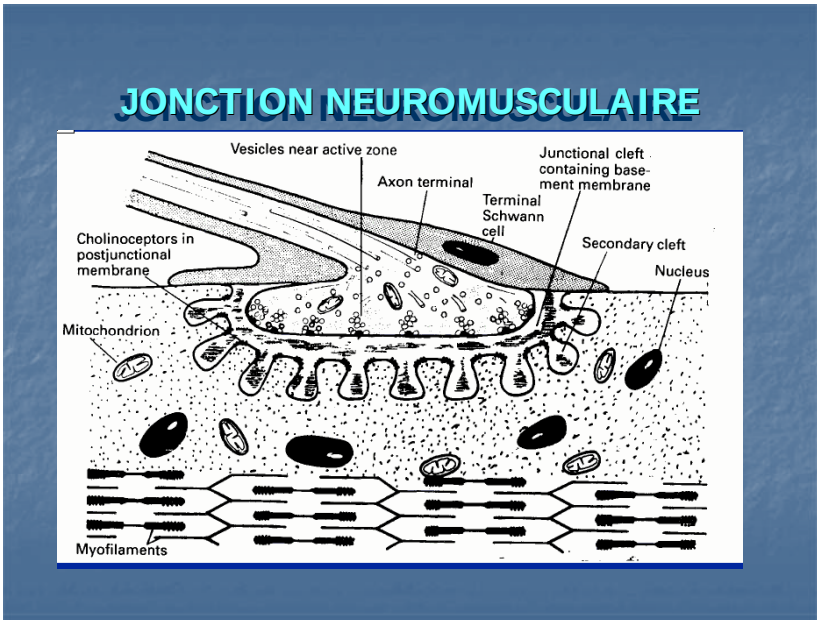

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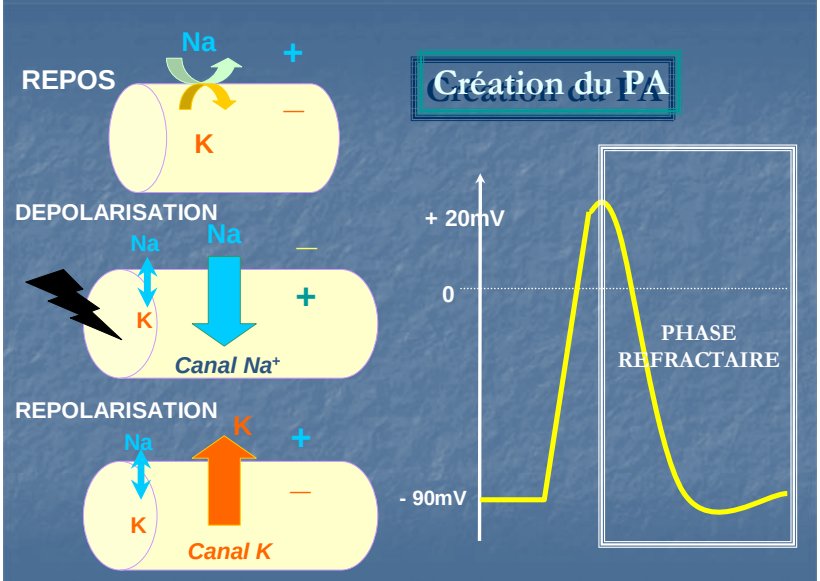

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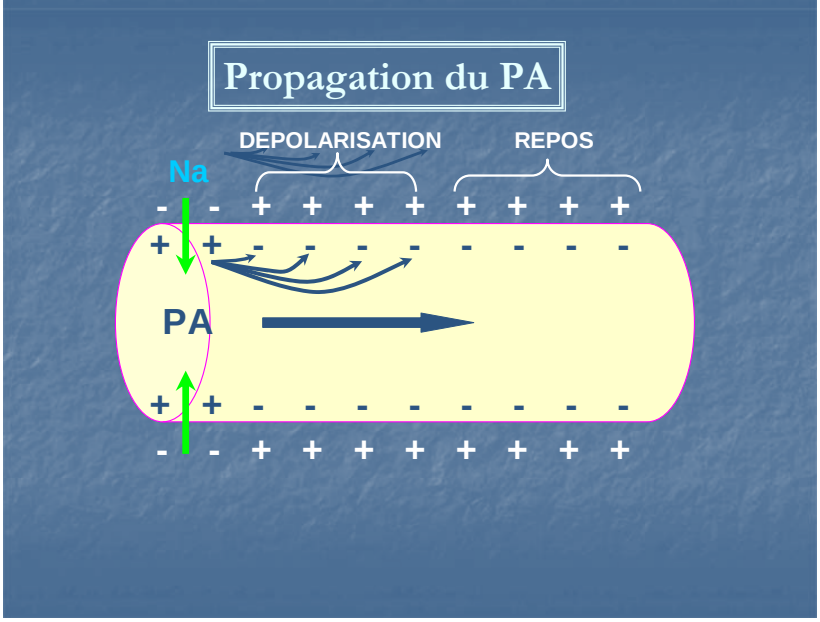
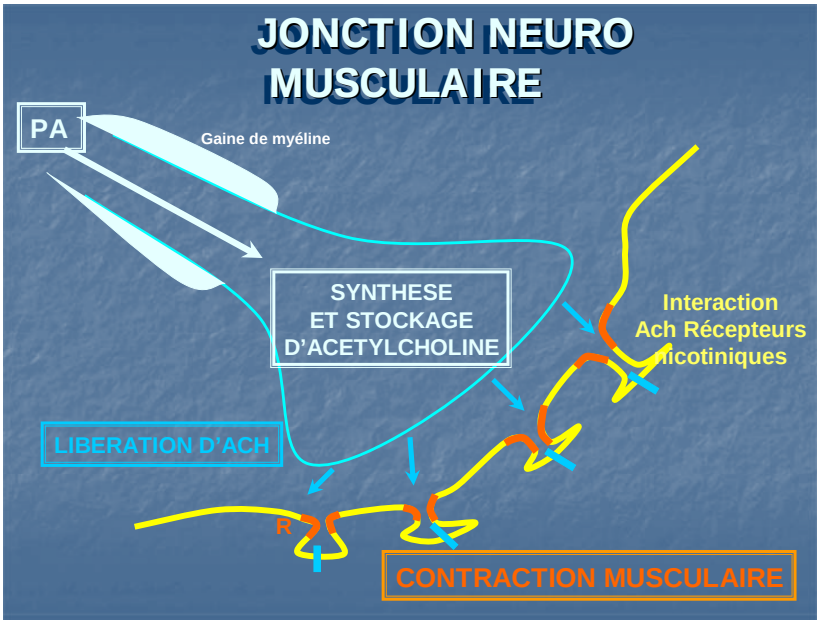


Diapositive 33



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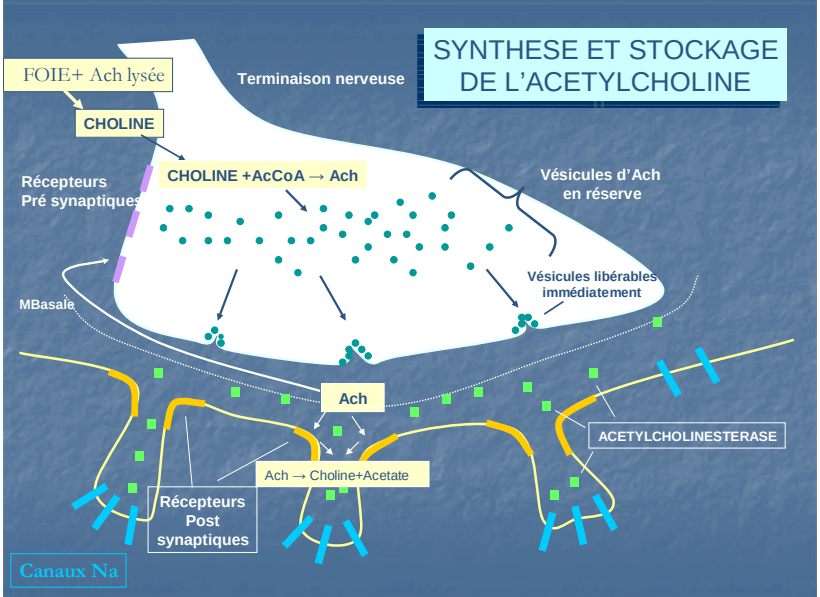

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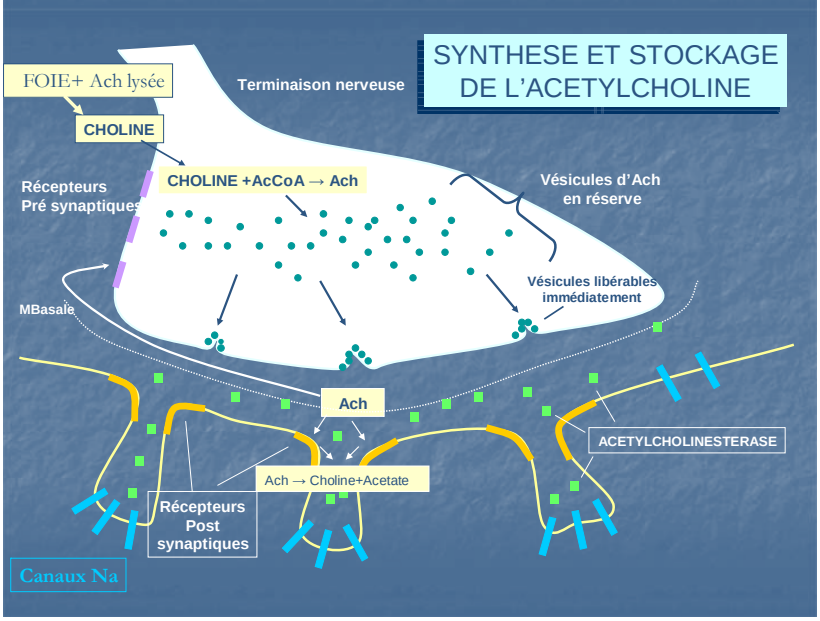

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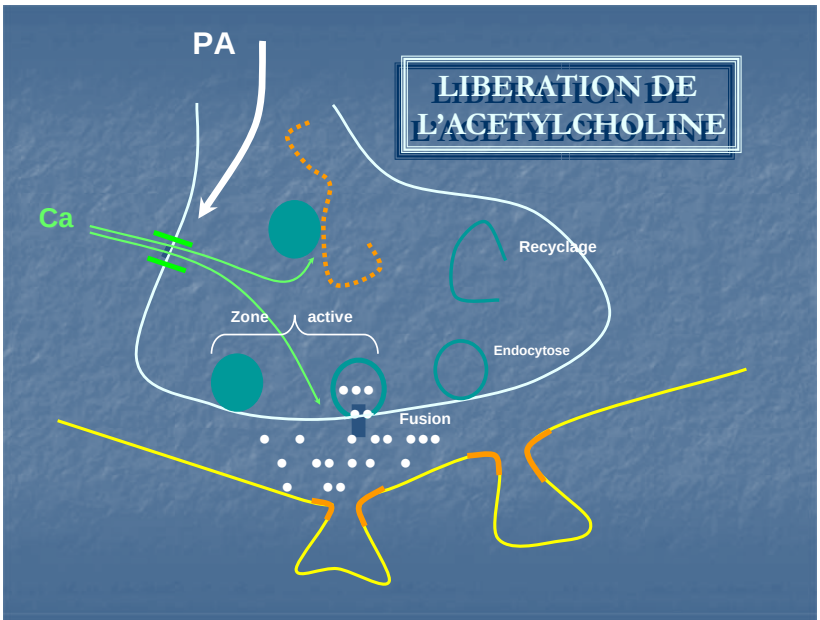
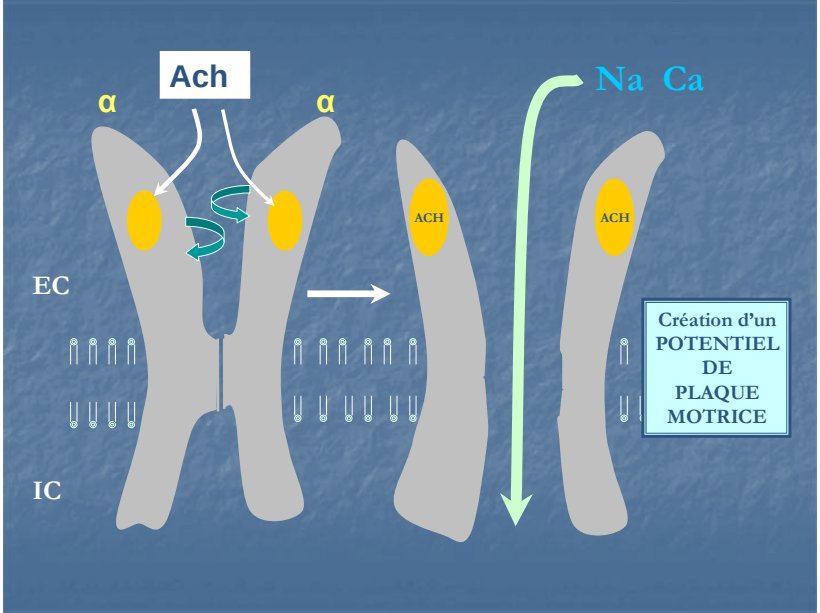


Diapositive 37



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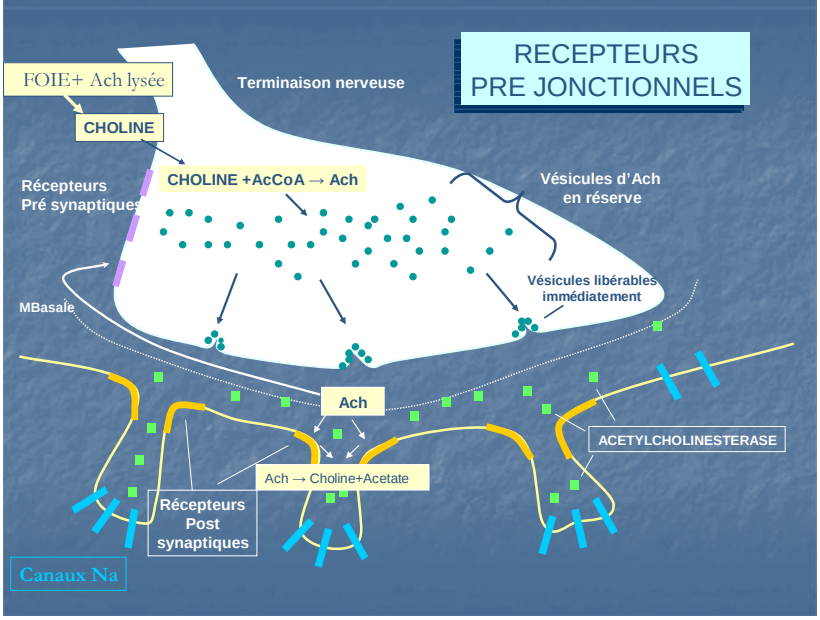

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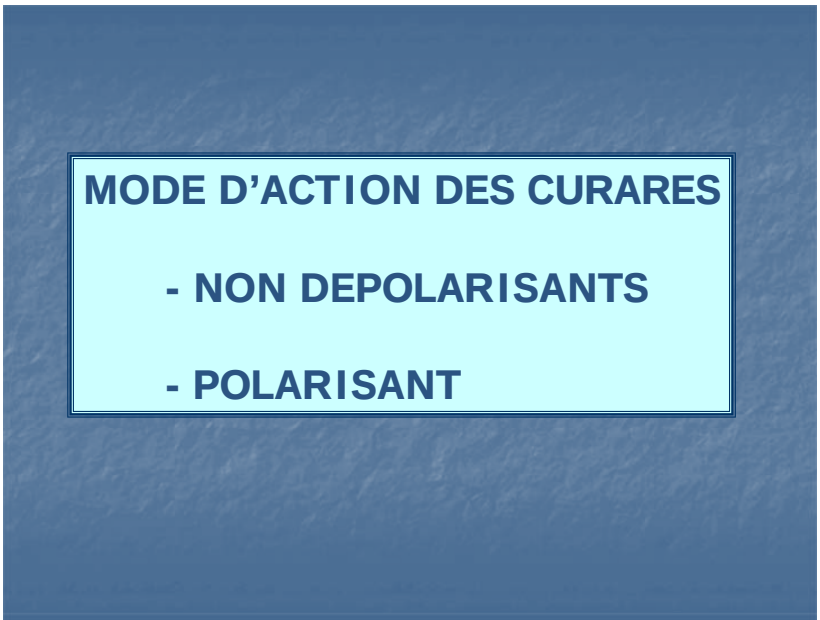

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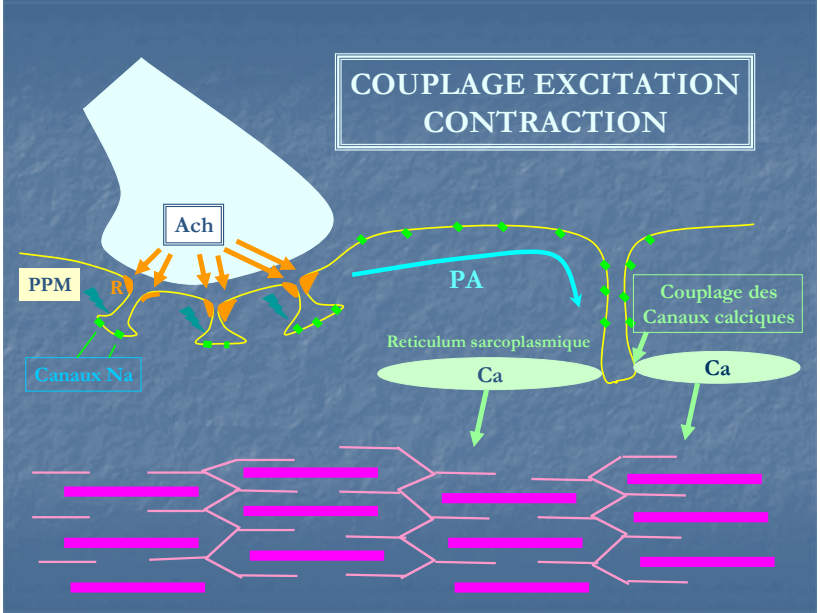

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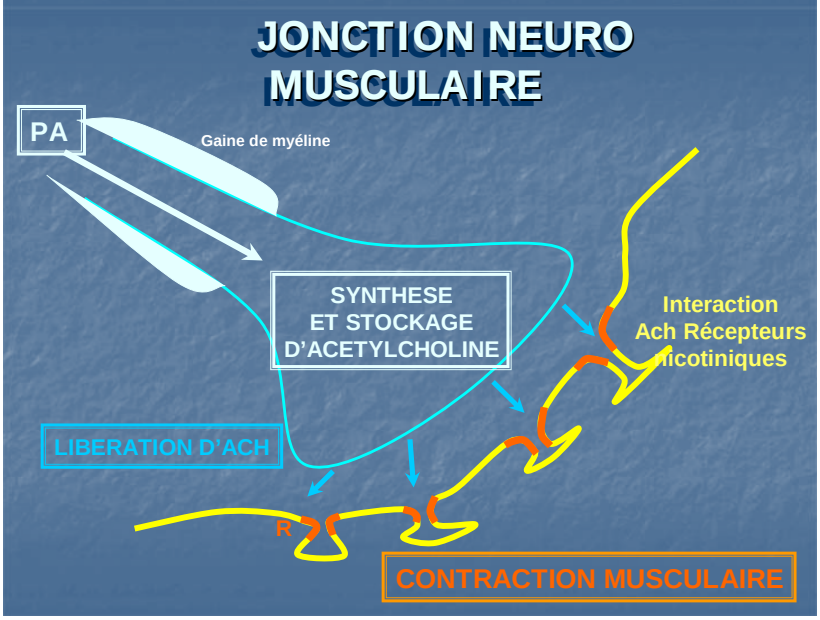


Diapositive 42

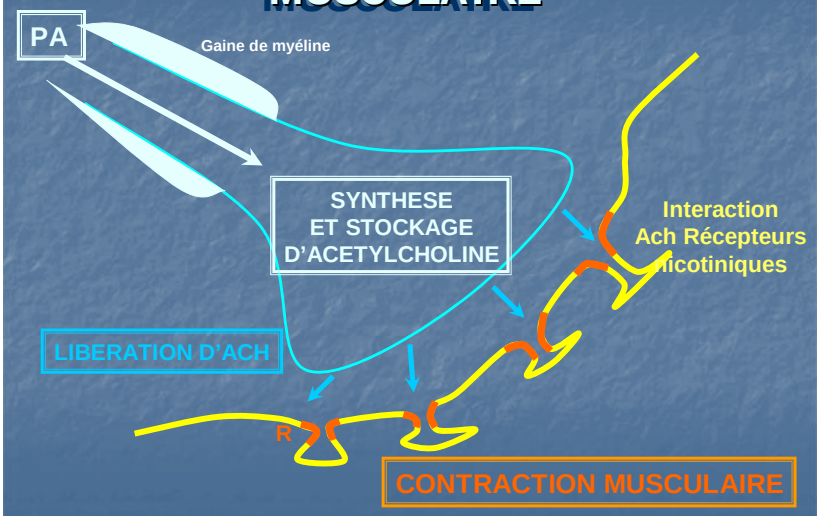
MODE D'ACTION DES CURARES (ABNM)

Deux types de curares:

- les curares non dépolarisants (ABNMND)
- les curares dépolarisants (ABNMD)

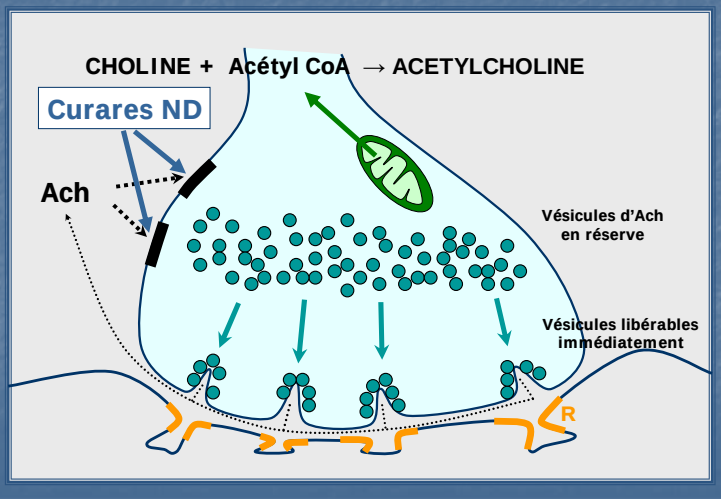
Diapositive 43

JONCTION NEURO MUSCULAIRE



Diapositive 44

Action présynaptique des curares non dépolarisants



Diapositive 45

Curares non dépolarisants:

- Bloc par compétition
- Fatigabilité
- « antagonisés » par les anticholinestérases