

Date:

/ /



لجان الدفعات



تفريخ فسيولوجي



موضوع المحاضرة: sensation

رقم المحاضرة: 7

إعداد الصيدلانية: بيان



حساسات

SENSATION

✓ هو الإدراك الواعي أو غير الواعي
is the conscious or subconscious awareness of changes in the external or internal environment.

✓ The nature of the sensation and the type of reaction generated vary according to the ultimate destination of nerve impulses that convey sensory information to the CNS.

تختلف طبيعة الإحساس ودرجات الفعل

حيث أن مجموعة من الخلايا العصبية المختلفة

تستقبل الإحساسات وتنقل المعلومات إلى

(sensory)

سؤال ؟ (Perception) كيف يحسها
 Subconscious أو Conscious Neuron لا Sensory Neuron
 يتحول

Sensation ← Action ² graded

SENSATION

الإدراك / قشرة راعية من الوظيفة الأولية

✓ Perception is the conscious interpretation of sensations and is primarily a function of the cerebral cortex (the outer layer of neural tissue of the cerebrum of the brain in humans and other mammals).
 Cerebral cortex
 We have no perception of some sensory information because it never reaches the cerebral cortex.

action ² graded

SENSATION = Perception

من حيث مع دهر

Perception ← فاعلة الإدراك

2, 1 neuron
 دوائر الحواس 2, 1
 فاعلة الإدراك

SENSORY MODALITIES

types

- Each unique type of sensation—such as touch, pain, vision, or hearing—is called a **sensory modality**.
- A given sensory neuron carries information for only one sensory modality.

one sensory neuron

Sensory ~~receptor~~ ^{receptor}

dendrites

axon

one sensory modality

LOCATION OF RECEPTORS AND ORIGIN OF ACTIVATING STIMULI

1- Exteroceptors are located at or near the external surface of the body; they are sensitive to stimuli originating outside the body and provide information about the external environment.

External stimulus

استقبال و تنشيط

activation

①

②

عصبونات

2- Interoceptors: are located in blood vessels, visceral organs, muscles, and the nervous system and monitor conditions in the internal environment.

Internal stimulus

عصبونات

Stimulus

انواع، شدة

LOCATION OF RECEPTORS AND ORIGIN OF ACTIVATING STIMULI

3- **Proprioceptors:** are located in muscles, tendons, joints, and the inner ear. They provide information about body position, muscle length and tension, and the position and movement of your joints.

نوع، شدة / انواع امراض / Stimulus

TYPE OF STIMULUS DETECTED

1- **Mechanoreceptors:** are sensitive to mechanical stimuli.
 mechanical stress/pressure / activation / بصير الى / ميكانيكيا / gated / mechanically / ركون جيني / channel

2- **Thermoreceptors:** detect changes in temperature.
 / برد / بردشود

3- **Nociceptors:** respond to painful stimuli resulting from physical or chemical damage to tissue.

4- **Photoreceptors:** detect light that strikes the retina of the eye.
 / عنده تعريض للصوت / مرتبطة بالقدود

مرتبط بالانسان عند تعرضه للضوء

6- Osmoreceptors: detect the osmotic pressure of body fluids.

مرتبط بار
Hypo / Hyper
مرتبط اختلاف تركيز
الماء

SOMATIC SENSATIONS

2 / تقسم Sensations إلى موجود
skeletal muscles

اسم Receptor إلى موجود
skeletal muscles
proprioceptors
muscles

- They arise from stimulation of sensory receptors embedded in the skin or subcutaneous layer; in mucous membranes of the mouth, vagina, and anus; in muscles, tendons, and joints; and in the inner ear.

أوتار
أنسجة مخاطية

طبقة تحت الجلد

مواقع
أخرى

المستقبلات
الحسية
تكون في أماكن مختلفة
sensory receptors

TOUCH

1515 and 1516

Slowly as the

group and this is
the go to

action 2)

عنه ونشوة الأنسجة الدقيقة

۱۰۰٪

عبد المکی / زکون دل

تكون في هذه السنة

مسئلة اللوح

عشاء
التي هي
وضعت في سبيل

- The itch sensation results by certain chemicals, such as bradykinin or antigens in mosquito saliva injected from a bite, often because of a local inflammatory response.

↑
activation

حقائق و اسباب Stimulus

2. رضل انش موجود اى حواله بعد الفحص
لانه inflammatory بطول حوى يطالع فى جسم / فقره اطول
chemicals

TICKLE

اعداد receptor المسؤولة عن احساس الـ Tickle وطالفة بيت ناي

- This intriguing sensation typically arises only when someone else touches you, not when you touch yourself.

THERMAL SENSATIONS

- Two distinct thermal sensations—coldness and warmth—are detected by different receptors.

عن درجۃ حرارت جسم
سواء كانت درجۃ حرارت
جسمه ارفع من درجة

! ذات الجسم اقل من درجة

Thermal sensations
PAIN sensation

THERMAL SENSATIONS

- Cold and warm receptors both adapt rapidly at the onset of a stimulus, but they continue to generate impulses at a lower frequency throughout a prolonged stimulus.
- Temperatures below 10 Celsius and above 48 Celsius primarily stimulate pain receptors, rather than thermoreceptors, producing painful sensations.

(pain receptor)
2/ يصير تحفيز للمستقبلات الألم
(thermo receptor)
3/ لا يصير من مستقبلات حرارة
! ذاك إذا تجاوزت 48 إلى 10
يصير! شبيهة بفرح 2/ يصير
ألم بالآلام

PAIN SENSATIONS

- لا غنى عنه
- Pain is indispensable for survival.
 - It serves a protective function by signaling the presence of noxious, tissue-damaging conditions.
 - Subjective description and indication of the location of pain may help pinpoint the underlying cause of disease.
 - Pain may persist even after a pain-producing stimulus is removed because pain-mediating chemicals linger.

قد يمكن استمرار الألم بالآلام حتى بعد إزالة المحفز
لأنه المواد الكيميائية المتوسطة للألم باقية

TYPES OF PAIN

- Pain that arises from stimulation of receptors in the skin is called superficial somatic pain. *superficial*
- Stimulation of receptors in skeletal muscles, joints, tendons, and fascia causes deep somatic pain. *deep somatic*
- Visceral pain results from stimulation of receptors in visceral organs. *visceral*

add 121