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## Kronisk utmattelse/smerte

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«Mats»  
14 år

Photo by [Eduard Milovan](#) on [Unsplash](#)



## Disposisjon


1. Utmattelse
2. Kronisk utmattelsessyndrom
3. Smerte
4. Kronisk smerte
5. Likheter mellom Kronisk utmattelsessyndrom og kroniske smertetilstander
6. Hvordan vi forstår kroppen vår
7. Hvordan hjernen vår virker
8. Behandling

### 1. Utmattelse

-en følelse som er ment å beskytte deg



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Quimono

Oslo University Hospital

Vollmer-Conna U, et al. (2004) Psychol Med 34(7):1289-97.

This slide features a central microscopic image of a coronavirus particle, characterized by its spherical shape and numerous spike proteins extending from its surface. The image is set against a green background. The text 'UiO : Faculty of Medicine University of Oslo' is located in the top left corner. The word 'Quimono' is in the bottom right corner of the image area. The 'Oslo University Hospital' logo is in the bottom left corner, and the citation 'Vollmer-Conna U, et al. (2004) Psychol Med 34(7):1289-97.' is in the bottom right corner.

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Vollmer-Conna U, et al. (2004) Psychol Med 34(7):1289-97.  
Boksem MA, et al. (2008) Brain Res Rev 59:125-39.

This slide features a black silhouette illustration of a person sitting at a desk, leaning forward with their head resting on their hand, suggesting fatigue or stress. A tall stack of books is on the desk next to them. The text 'UiO : Faculty of Medicine University of Oslo' is in the top left corner. The 'Oslo University Hospital' logo is in the bottom left corner, and the citations 'Vollmer-Conna U, et al. (2004) Psychol Med 34(7):1289-97.' and 'Boksem MA, et al. (2008) Brain Res Rev 59:125-39.' are in the bottom right corner.

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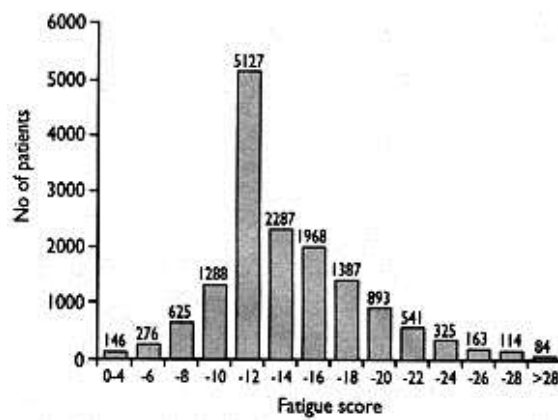
Photo by Ekaterina Bolovtseva on Pixels

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Boksem MA, et al. (2008) Brain Res Rev 59:125–39.

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## Distribusjon av graden av utmattelse



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Pawlikowska T, et al. (1994) BMJ 308(6931):763-766.

## 2. Kronisk Utmattelsessyndrom



Photo by Gregory Pappas on [Unsplash](#)

Immunologiske

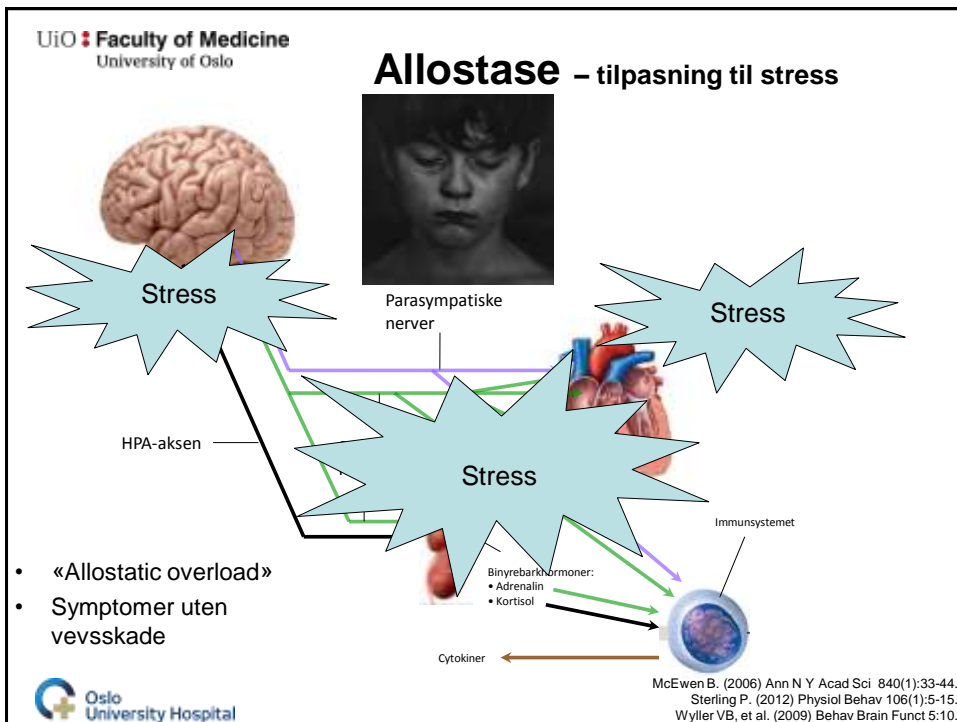
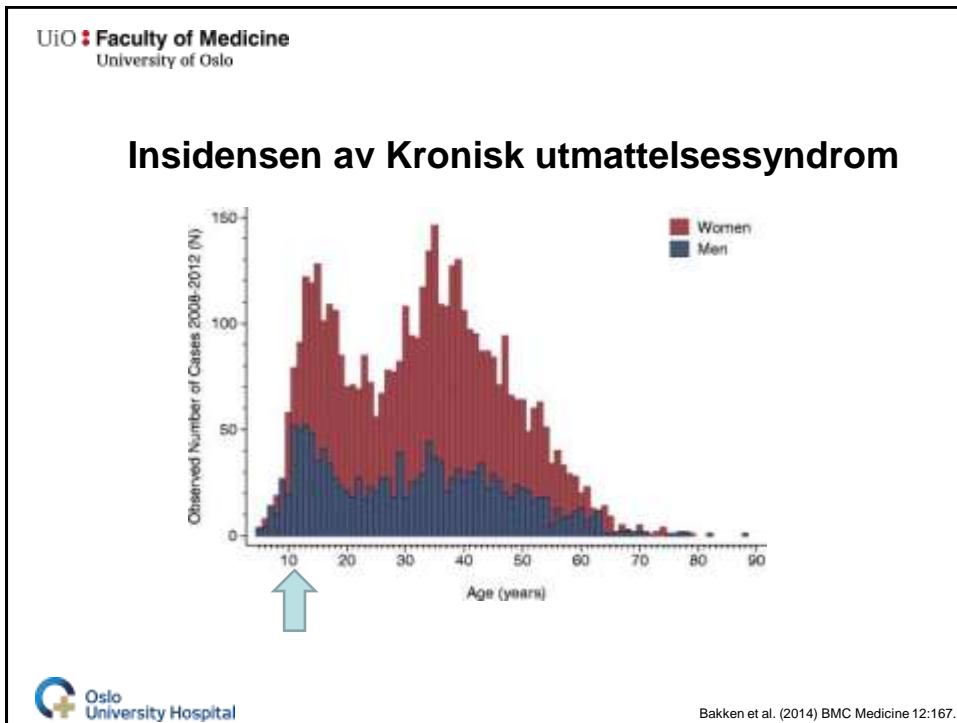
Nevrologiske

Autonome

Anstrengelsesutløst  
forverring (PEM)



Gastrointestinale



### 3. Smerte

-en følelse som er ment å beskytte deg



Photo by John-Silver

### PHYSIOLOGY OF PAIN PERCEPTION

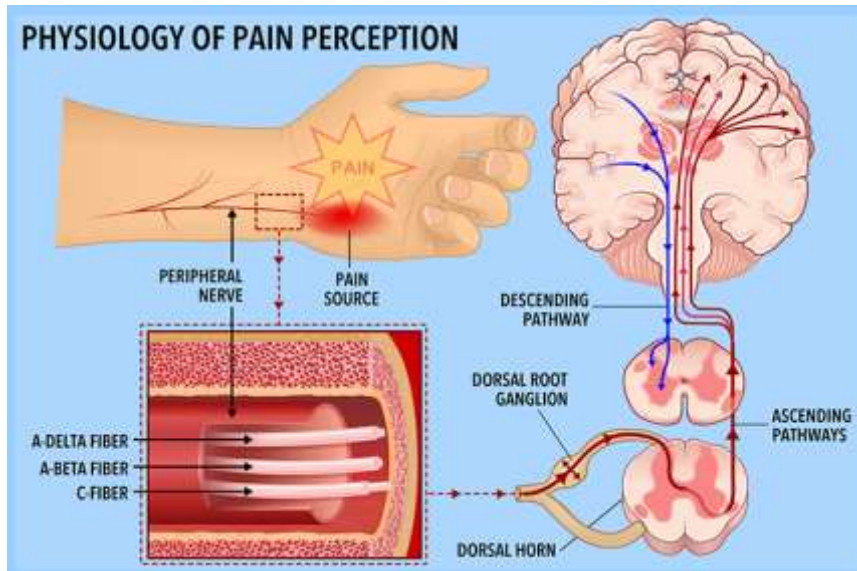
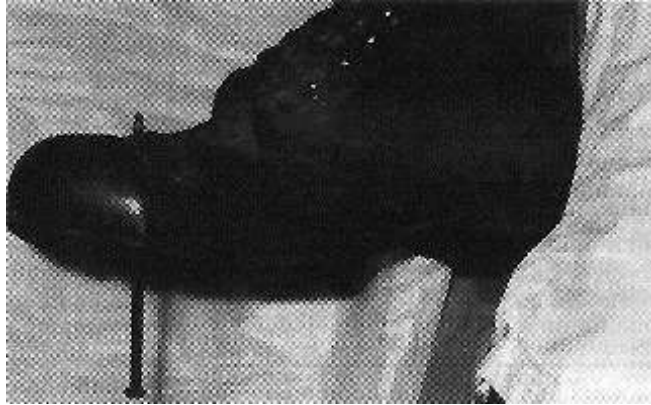


Illustration by Tim Grant



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En 29 år gammel håndverker hoppet ned på en 15 cm lang spiker.

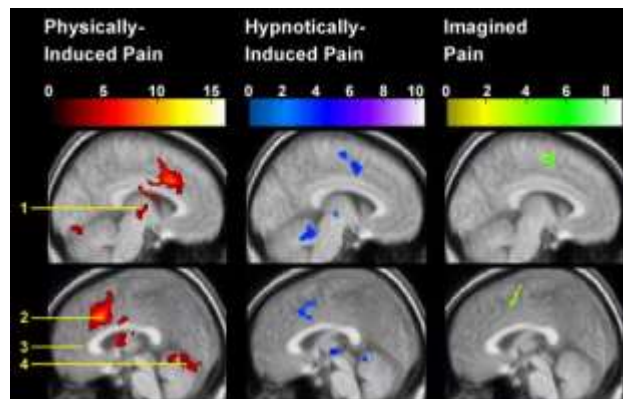


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J.P. Fisher et al. (1995) BMJ 310:70

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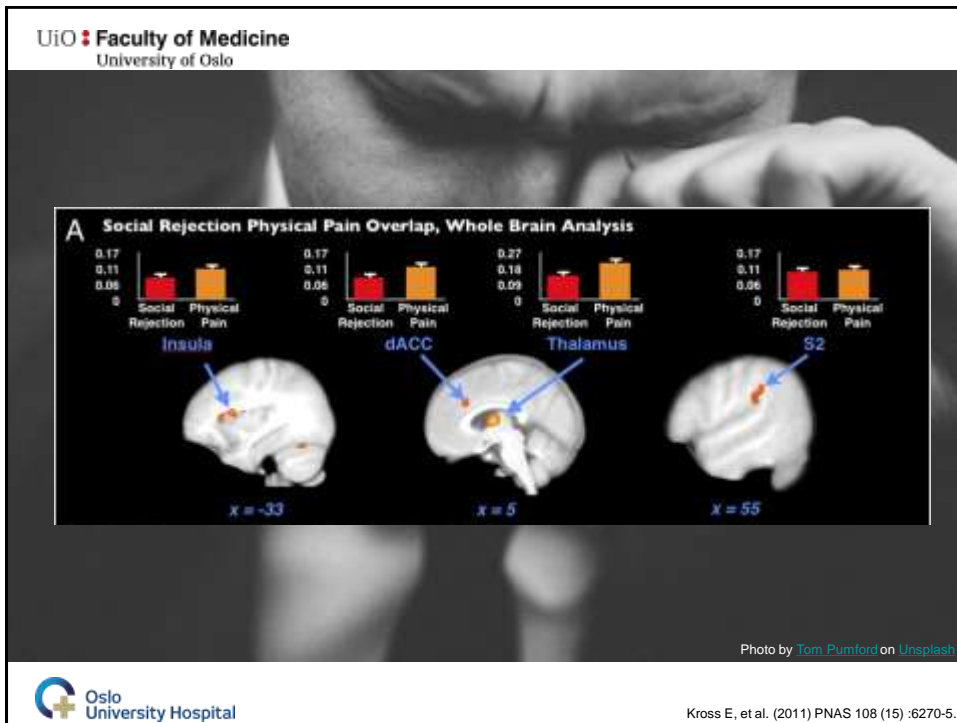
## Hjernen kan skape smerte

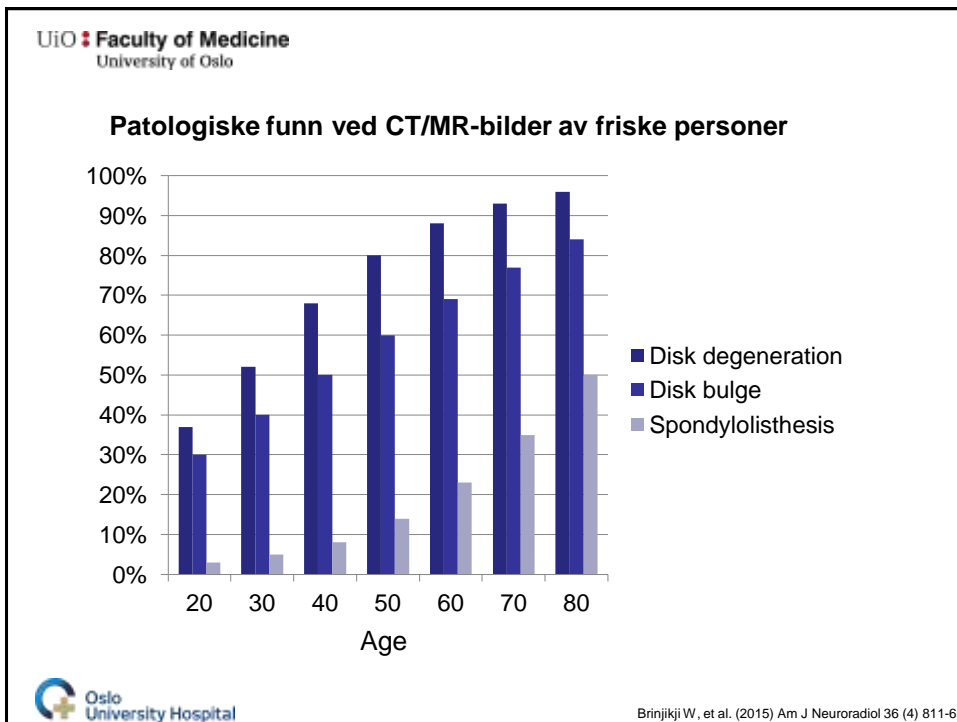
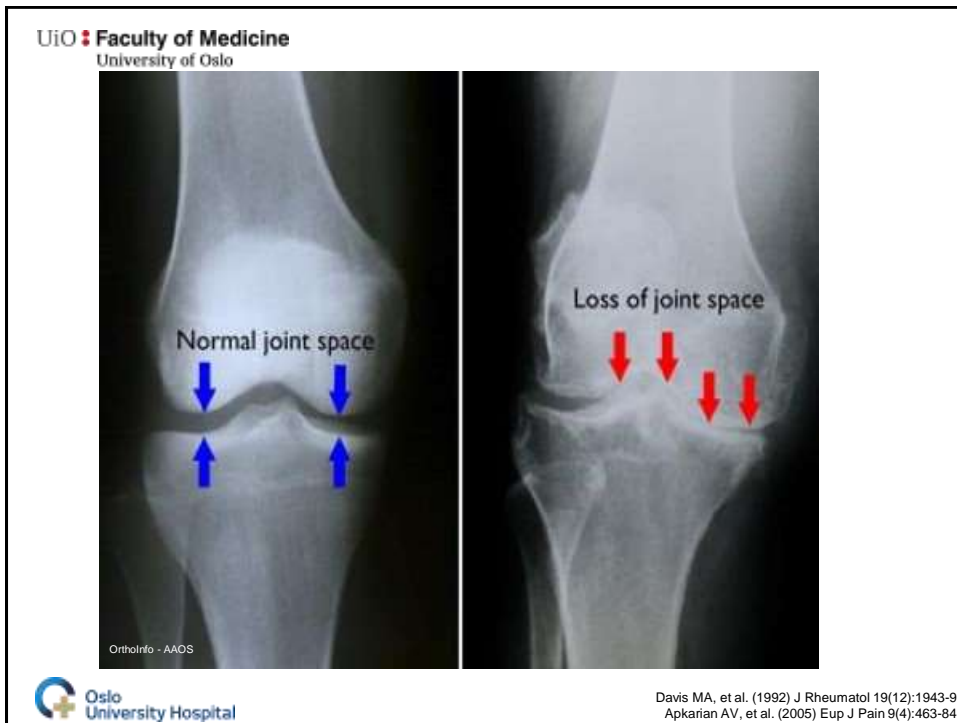


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Stuart WG, et al. (2004) Neuroimage 23(1):392-401.







5. Likheter mellom

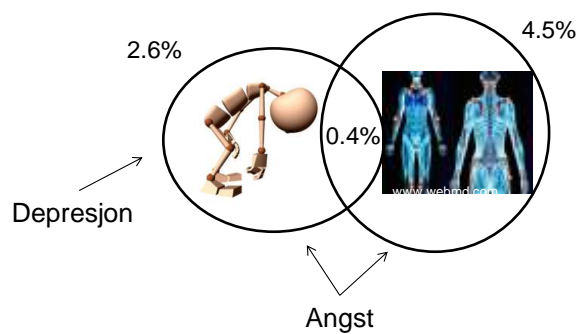
**Kronisk  
utmattelsessyndrom**

og

**kroniske  
smertetilstander**



**Kronisk utmattelsessyndrom**  
og  
**kronisk utbredt smerte**



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	Fibromyalgia	Chronic Fatigue Syndrome
Definition	Diffuse, widespread pain Presence of tender points	Severe fatigue plus 4 of 8 symptoms: Pain in muscles, joints, throat or neck, cognitive difficulties, headache, post-exertional malaise, sleep disturbances
Nondefining symptoms	Severe fatigue, hypersensitivity, headaches, IBS, cognitive difficulties, sleep disturbances, anxiety/depression	Hypersensitivity, IBS, anxiety/depression
Male:Female	1:2-3	1:2-3
Epidemiology	2-5% of population	0.5-2% of population
Proposed triggers	Physical or emotional triggers Infections Immune activation	Physical or emotional triggers Infections Immune activation

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Clauw DJ and Chrousos GP. (1997) Neuroimmunomodulation 4:134-53.

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	Chronic pain	Chronic Fatigue Syndrome
Family aggregation	yes	yes
Negative emotions	yes	yes
Emotional awareness	reduced	reduced
Cognitive dysfunction	yes	yes
Autonomic dysfunction	yes	yes
HPA axis dysregulation	yes, blunted	yes, blunted
Central sensitization	yes	yes
Low grade inflammation	yes	yes
Negative, stressful life events	yes	yes

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Wyller VBB. (2019) Scand J Pain 19(1):5-8.  
Lumley MA, et al. (2017) Pain 158(12):2354-63.  
Clauw DJ and Chrousos GP. (1997) Neuroimmunomodulation 4:134-53.

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6. Hvordan vi forstår

# kroppen

vår



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René Descartes (1596-1650)

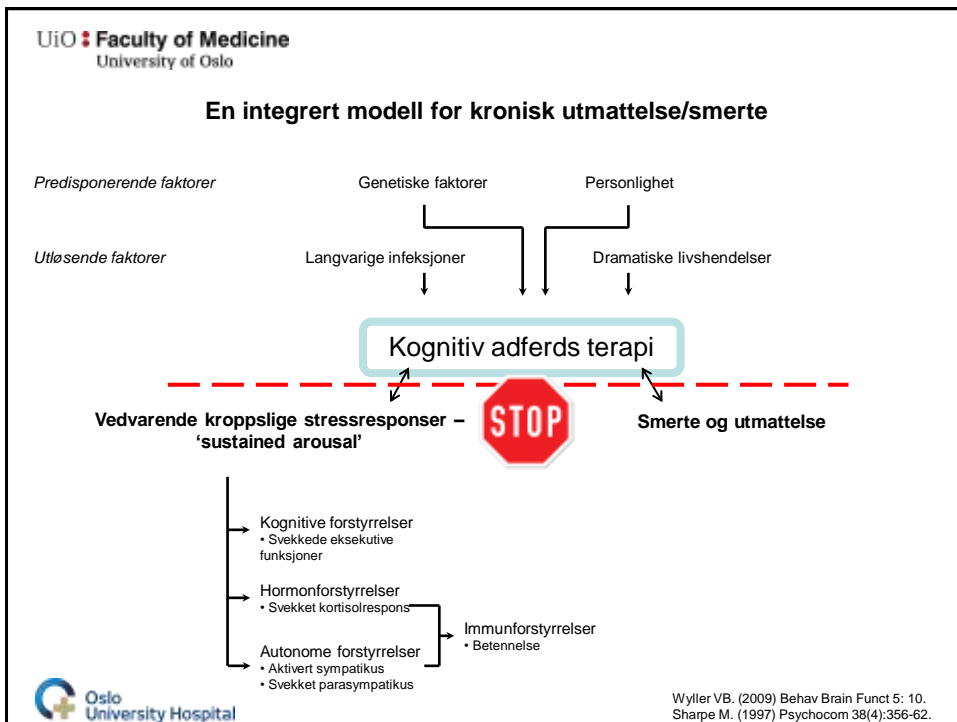
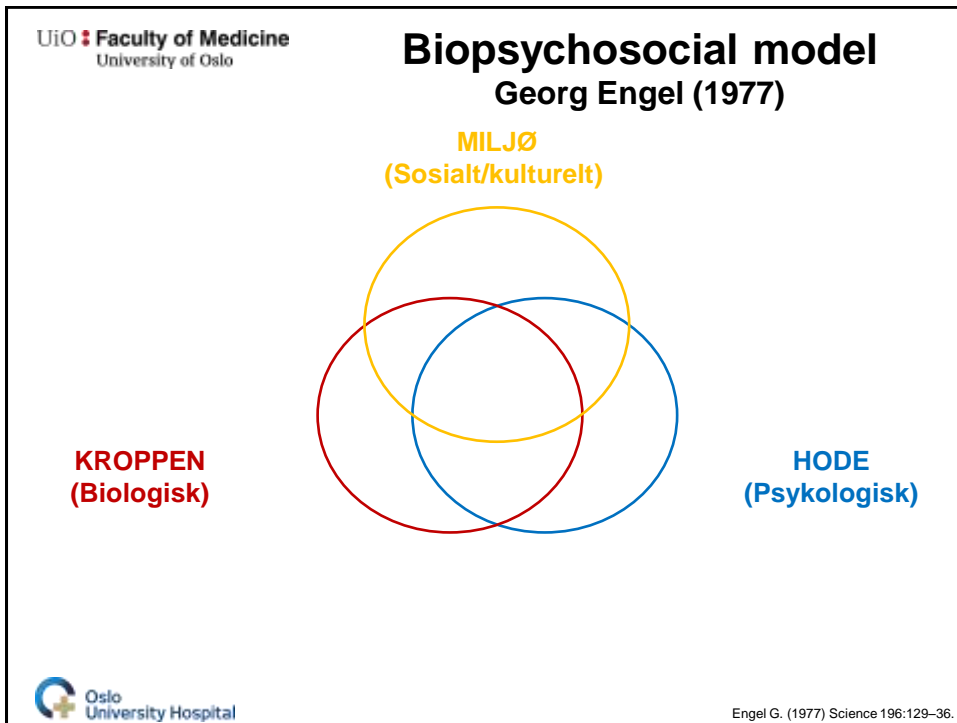
“Jeg tenker, derfor er jeg”



**KROPPEN**  
(biologisk)


**HODE**  
(psykologisk)

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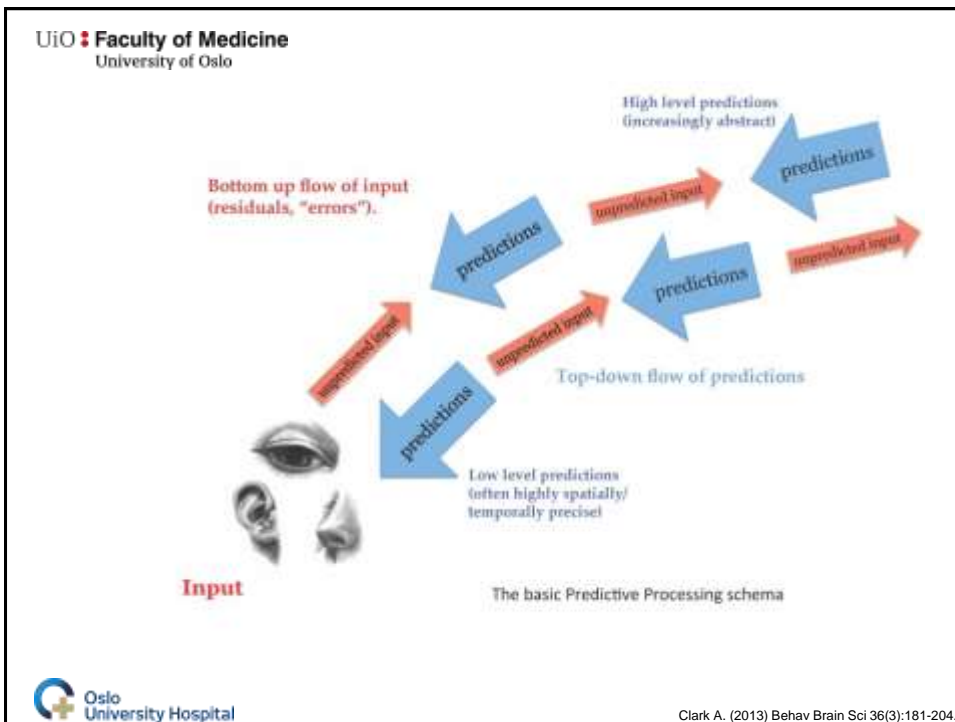
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# 7. Hvordan hjernen vår virker



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Photo by Jack Antai on Unsplash



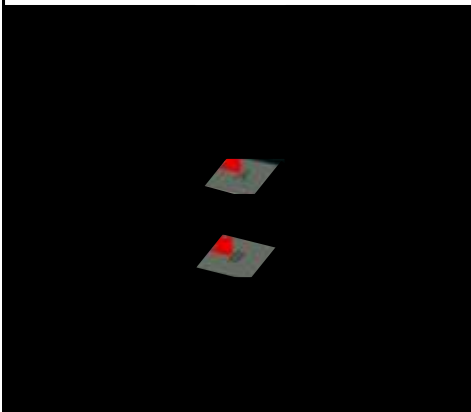


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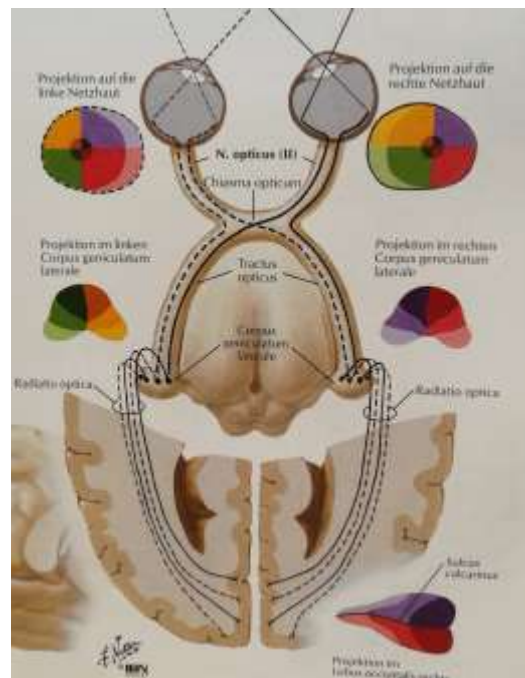


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## Visuelle Cortex

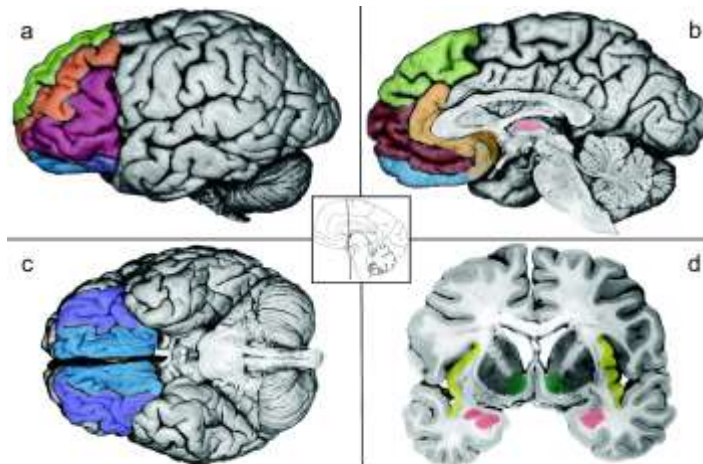
- 10% fra øynene
- 90% fra resten av hjernen



Netter FH (2003) Atlas der Anatomie des Menschen

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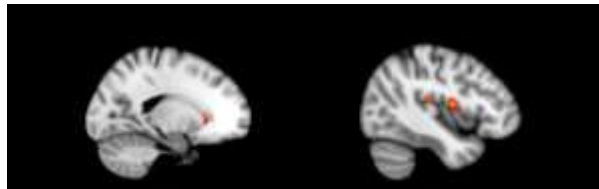
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Barrett LF, et al. 2007.  
Annu. Rev. Psychol. 58:373-403

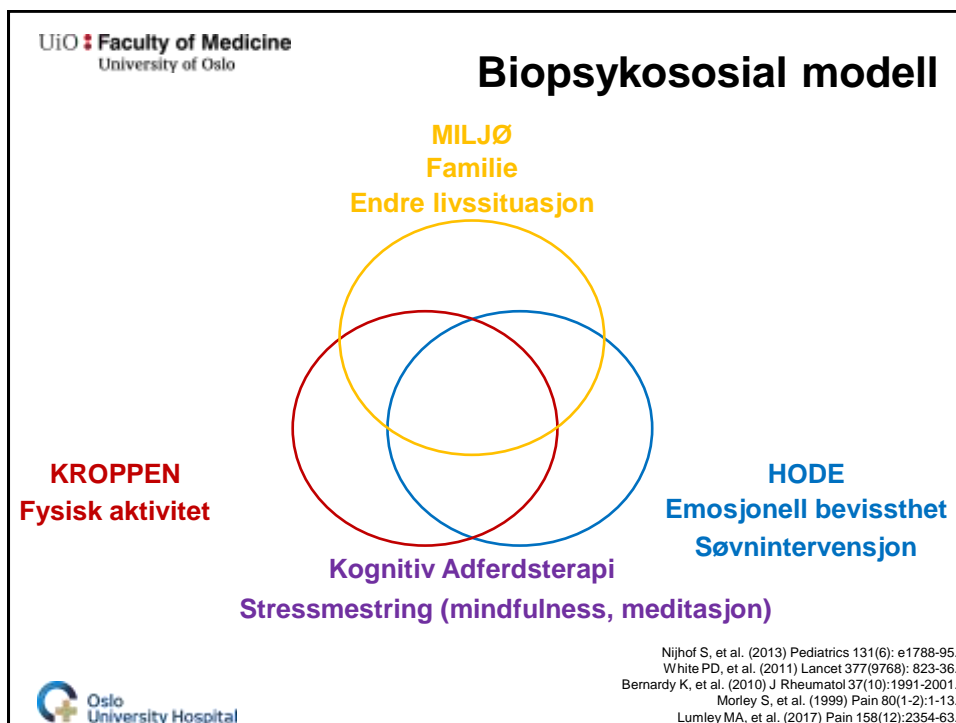
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## Så, hva med hjerneområdene for utmattelse og smerte?



## 8. Behandling





- **All utmattelse og smerte er like ekte** – om det er indusert av perifert vev eller hjernen alene
- Pasienter med Kronisk utmattelsessyndrom og pasienter med kronisk smerte har mange av de samme **symptomene** og presenterer mange av de samme **patofysiologiske funnene**.
- Ved å kombinere vår kunnskap om den **predikerende hjerne** og hvordan vi blir bevisst, kan vi, med en **holistisk fremgangsmåte**, tilby **effektiv behandling**
- Kronisk utmattelsessyndrom og kronisk smerte er sterkt assosiert med **dårlig livskvalitet** – dette understreker viktigheten av å gi disse pasientene god behandling

*Takk så hemskt mycket*