

Ispitni stres



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Odjel za psihologiju
Sveučilište u Zadru

7. TJEDAN MOZGA



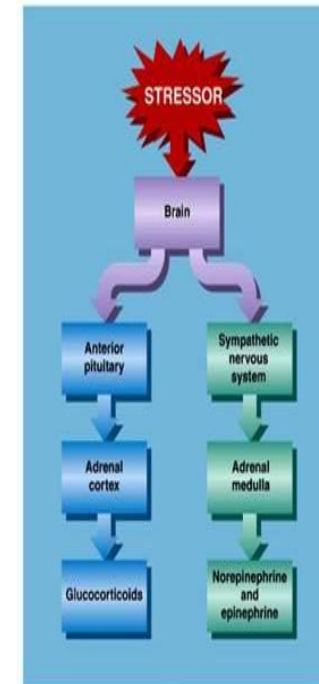
10.-16. ožujka 2008.

Odjel za psihologiju
Sveučilište u Zadru

Reakcije na stres

- Afektivne (emocionalne) reakcije
- Fiziološke reakcije
- Bihevioralne reakcije

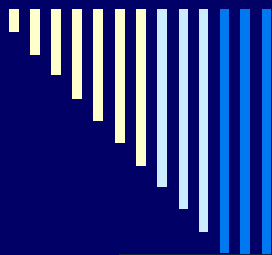
► Two-System View of Stress Response



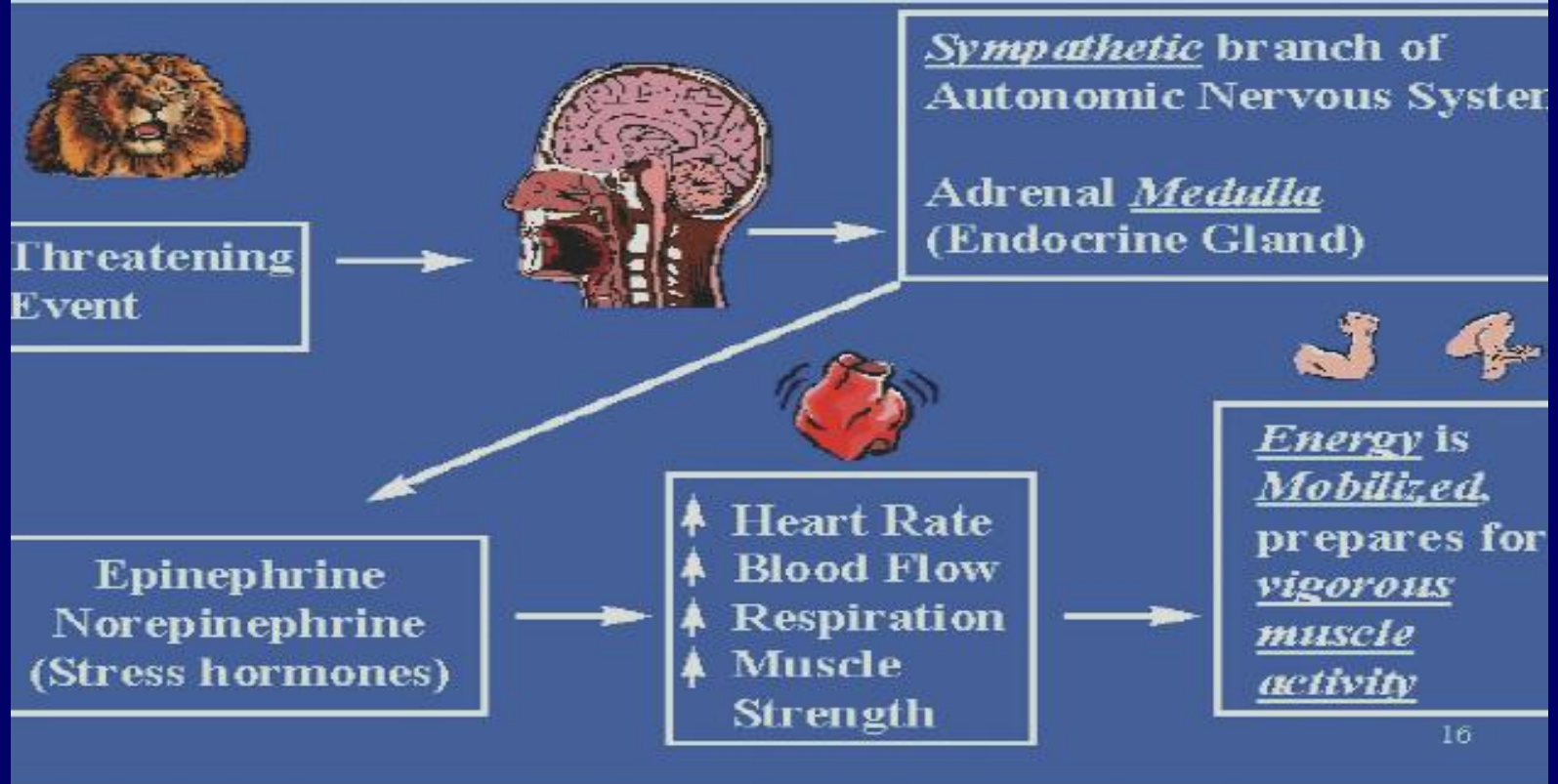
Izvori stresa

- Ispitivanje znanja
- Neuspjeh na ispitu
- Preveliki zahtjevi
- Sukobi s profesorima
- Nepravedno ocjenjivanje
- Loše ocjene
- Strah od neuspjeha



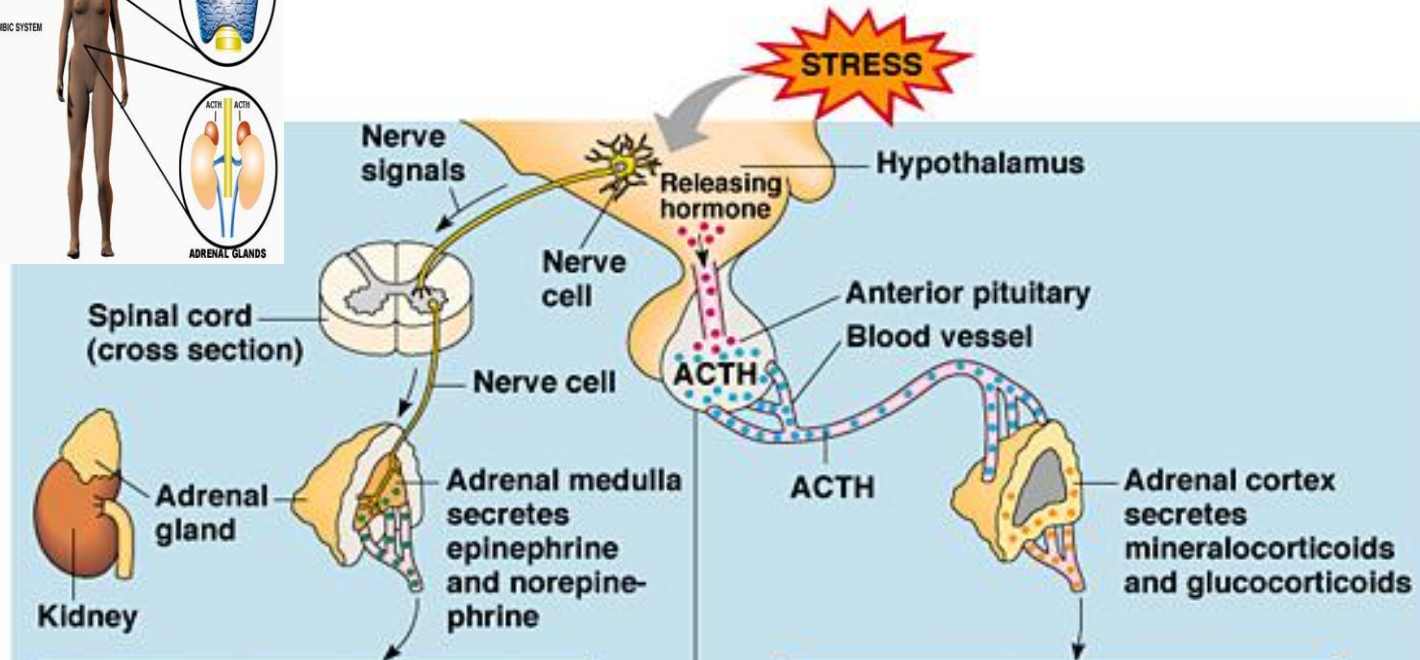
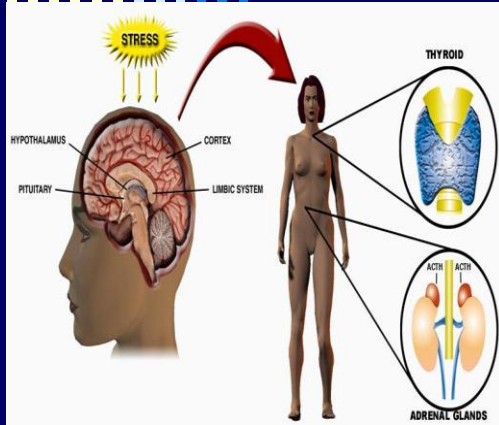


Walter Cannon: Homeostasis/Fight or Flight



Walter Cannon, 1914 – *fight or flight*

Reakcija "bori se ili bježi"



SHORT-TERM STRESS RESPONSE

Effects of epinephrine and norepinephrine:

1. Glycogen broken down to glucose; increased blood glucose
2. Increased blood pressure
3. Increased breathing rate
4. Increased metabolic rate
5. Change in blood flow patterns, leading to increased alertness and decreased digestive and kidney activity

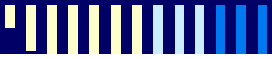
LONG-TERM STRESS RESPONSE

Effects of mineralocorticoids:

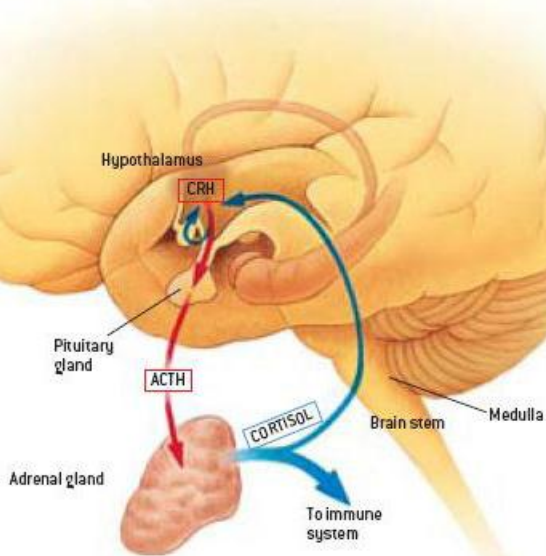
1. Retention of sodium ions and water by kidneys
2. Increased blood volume and blood pressure

Effects of glucocorticoids:

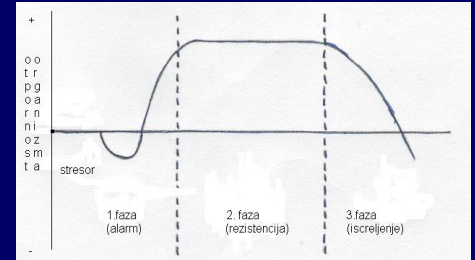
1. Proteins and fats broken down and converted to glucose, leading to increased blood glucose
2. Immune system may be suppressed



STRESS RESPONSE SYSTEM



Selye



Hans Selye's "General Adaptation Syndrome"

Stress is a biological response caused by all noxious stimuli (nonspecificity):

Alarm



Resistance



Exhaustion

Adrenal Cortex
(Endocrine Gland)



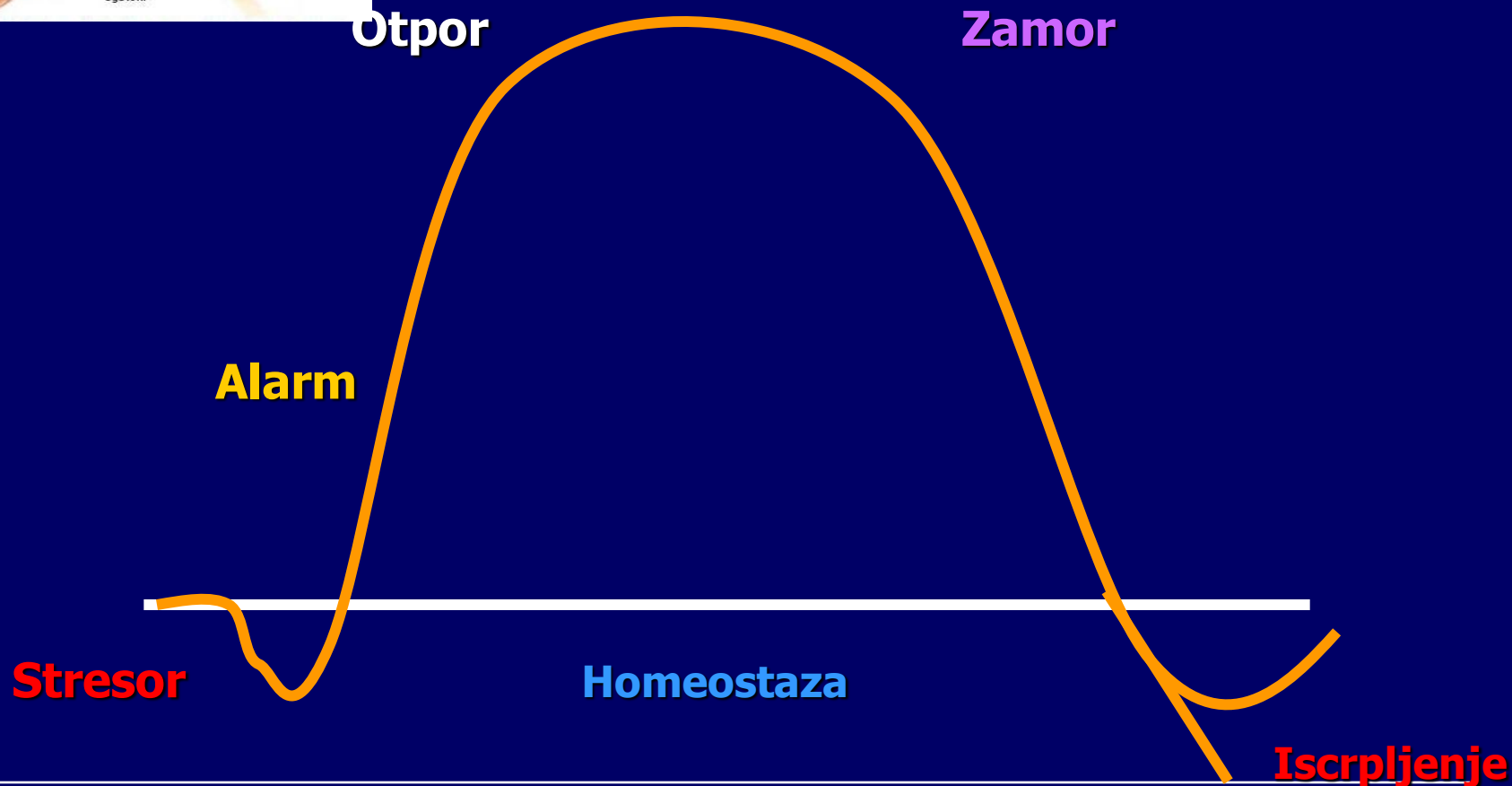
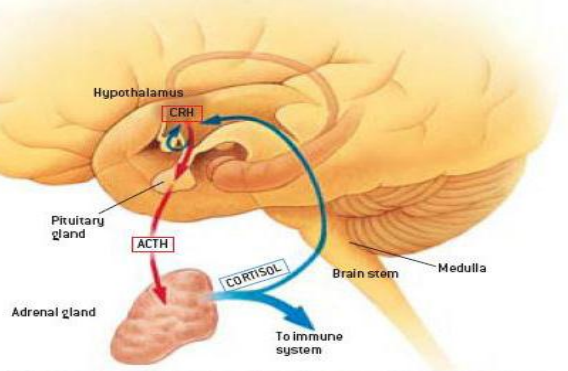
Cortisol
(Stress Hormone)



Triad of Changes:

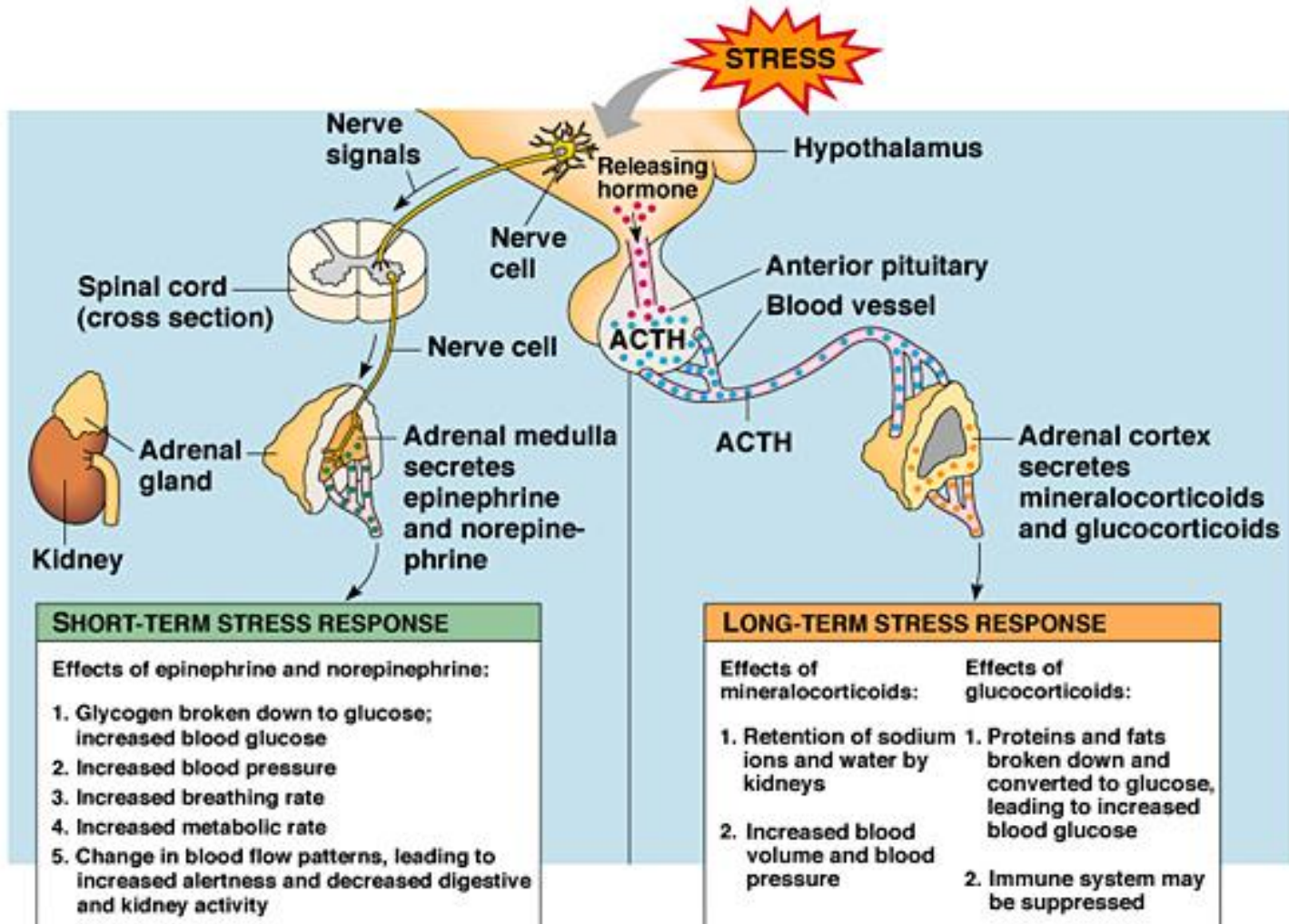
- Thymus
- Ulcers
- Adrenal Cortex

Faze stresnog odgovora



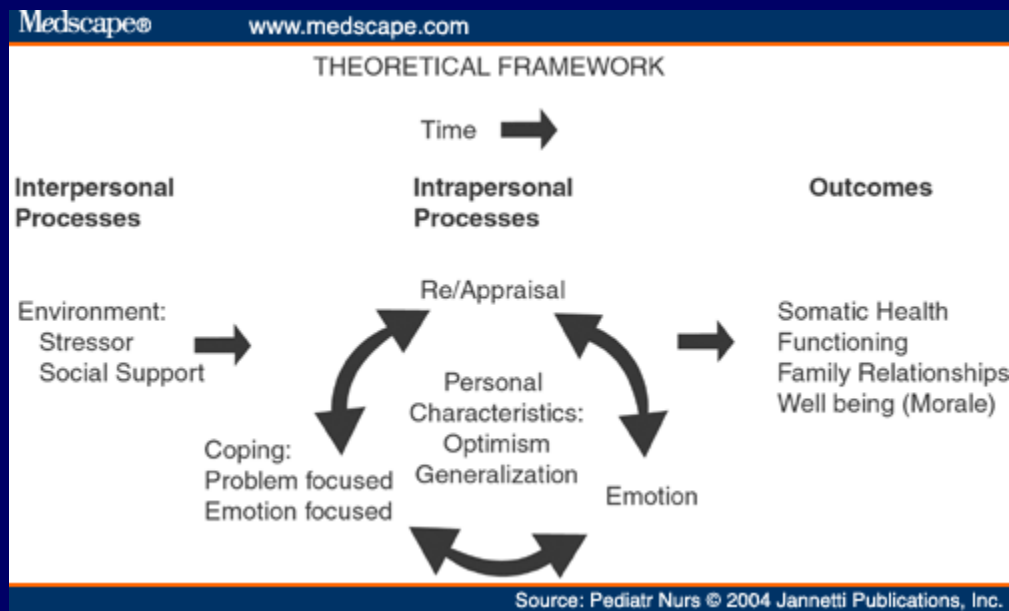
Simpatikus-srž nadbubrežne žlijezde

Hipotalamus-adenohipofiza-kora nadbubrežne žlijezde



Lazarusov model stresa

- Percepcija stresne situacije
- Načini suočavanja sa stresom



Suočavanje s ispitnim stresom

Coping with Stress




bild
publications



Suočavanje sa stresom

- Ličnost
- Situacija

Personality Type
**Based on the model of personality developed
by Jung and Briggs/Briggs Myers**



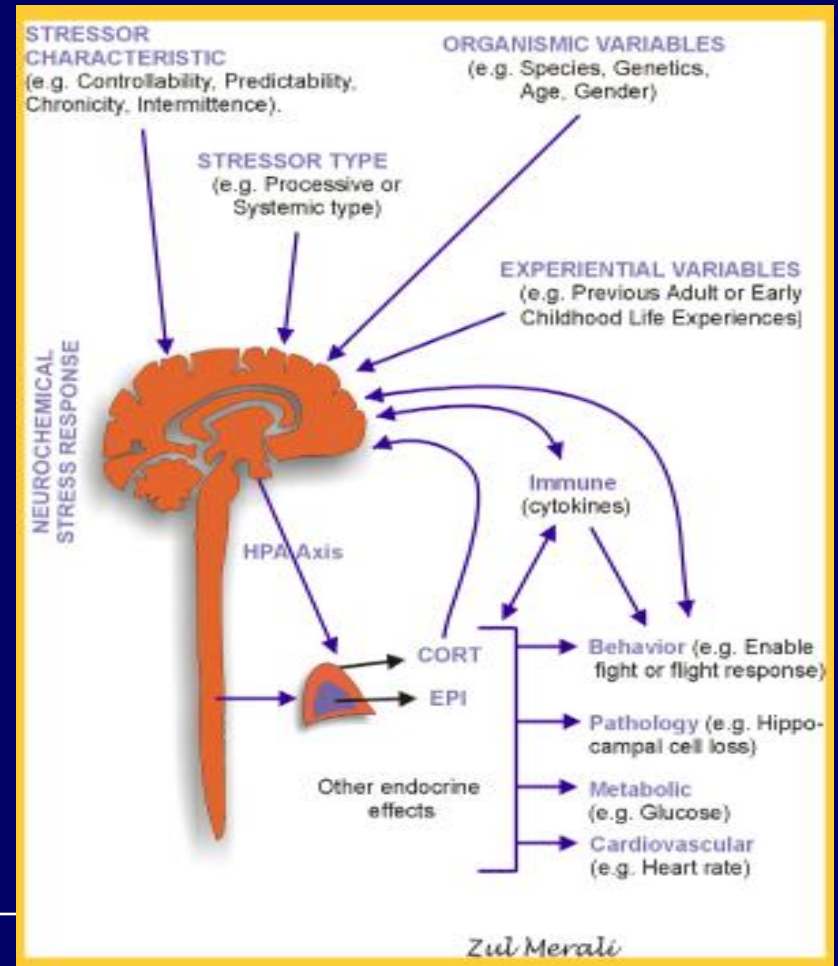
Starring "Dunstan"
and friends

© 1997 Team Technology



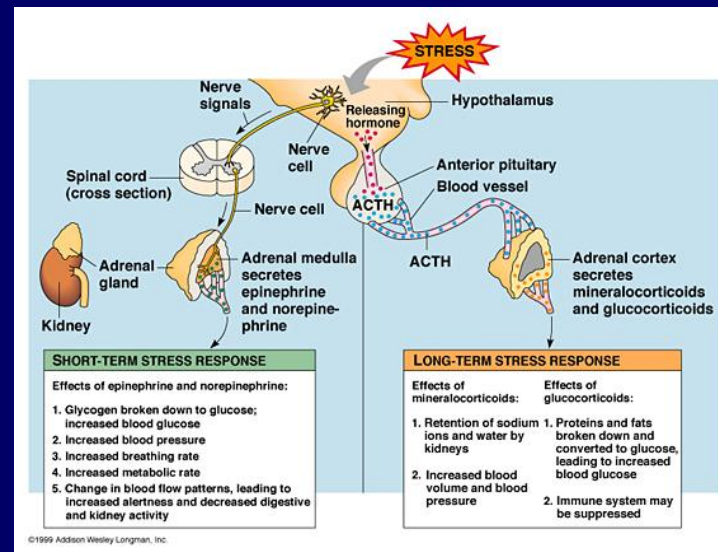
Reakcije na stres

- Intenzitet, trajanje i priroda stresora
- Osobine ličnosti
- Suočavanje sa stresom
- Percepcija stresne situacije
- Socijalna podrška
- Prethodna iskustva



Ispitni stres

- Kardiovaskularni sustav
- Sustav hipotalamus –hipofiza-kora nadbubrežnih žlijezda
- Imunološki sustav



Ispitni period

- Negativna emocionalna stanja
- (anksioznost, depresivnost, umor, i sl.)

(Steptoe et al., 1996; Pollard et al., 1995; Evans et al., 1994; Gilbert et al., 1996; Matalka i Sidki, 1998; Ogden i Mtandabari, 1997; Bristow i Evans, 1997, *Lucini et al., 2002; Koh and Chia, 2003*).



Ispitna anksioznost

- Crta ličnosti
- Niži socioekonomski status
- spol



Suočavanje s ispitnim stresom

Coping with Stress

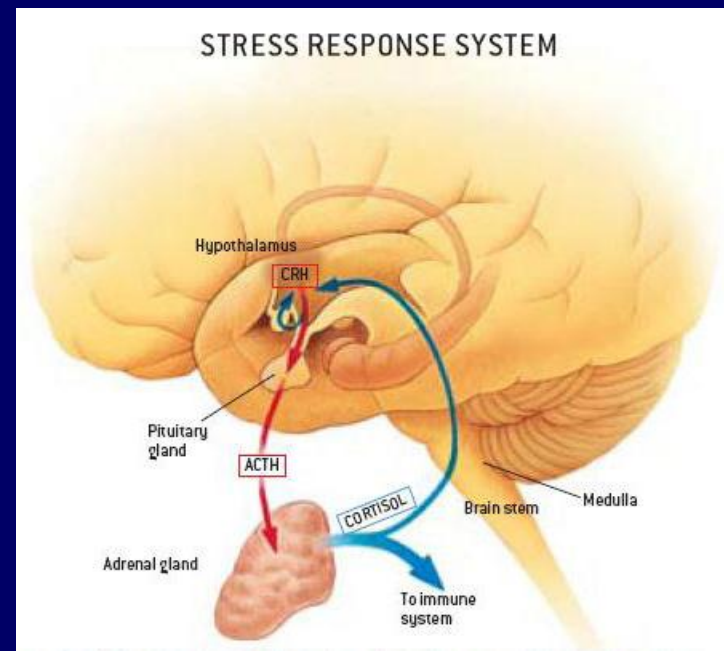
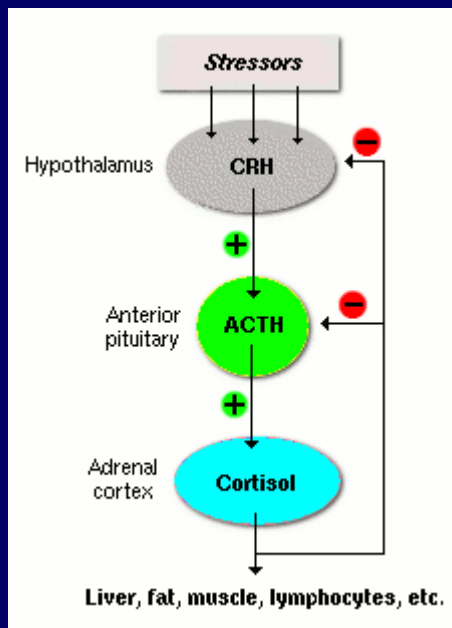


bild
publications



Ispitni period

- Povećano izlučivanje kortizola



Javni nastup + zadatak mentalne aritmetike

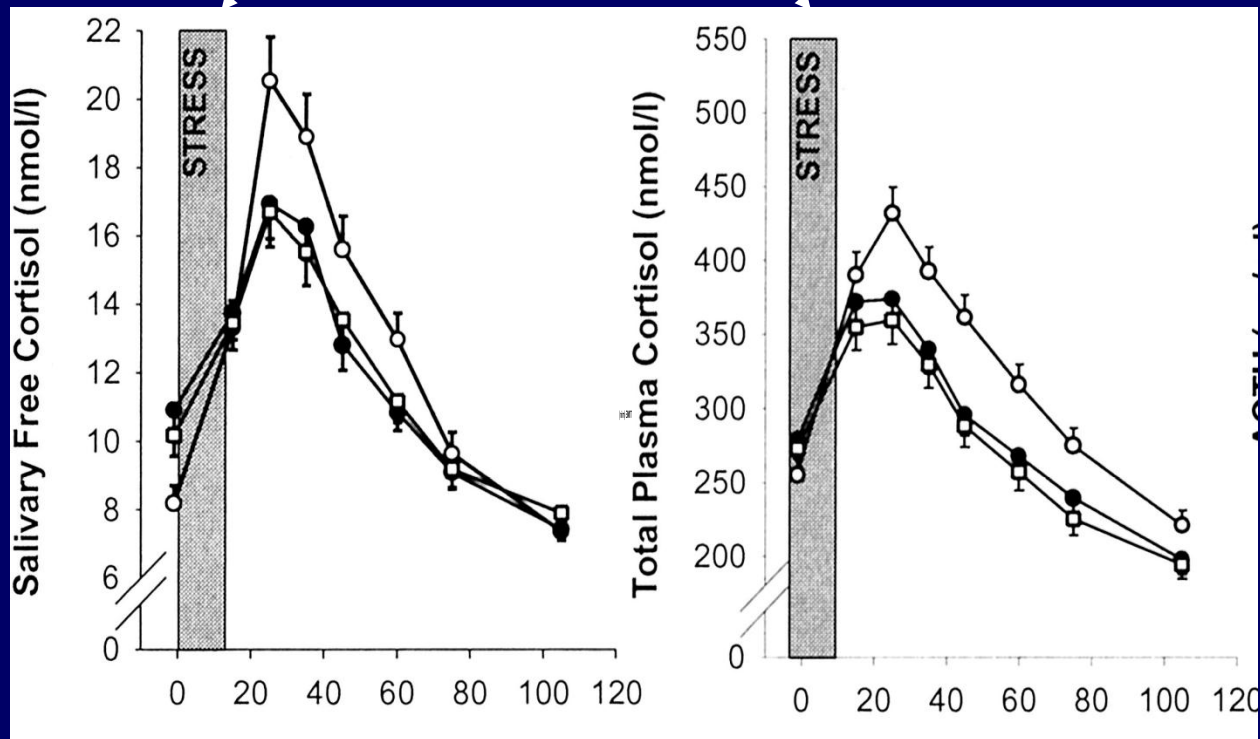


□ Schommer et al. (2003)

- TSST 1
- TSST 2
- TSST 3

Laboratorijski stresori

javni nastup + **mentalna** aritmetika

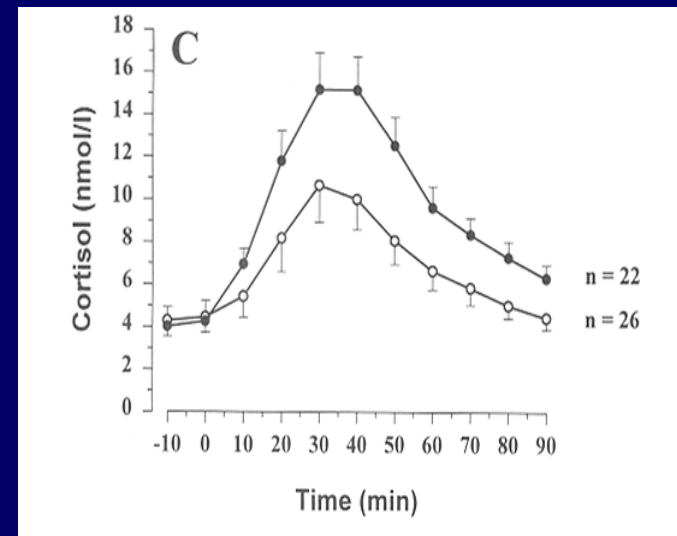
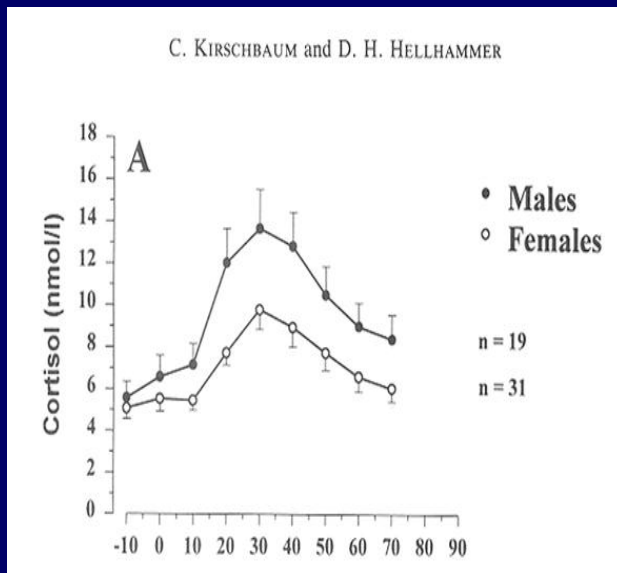


Schommer et al. (2003)

- TSST 1
- TSST 2
- TSST 3

Mentalna aritmetika

Javni nastup

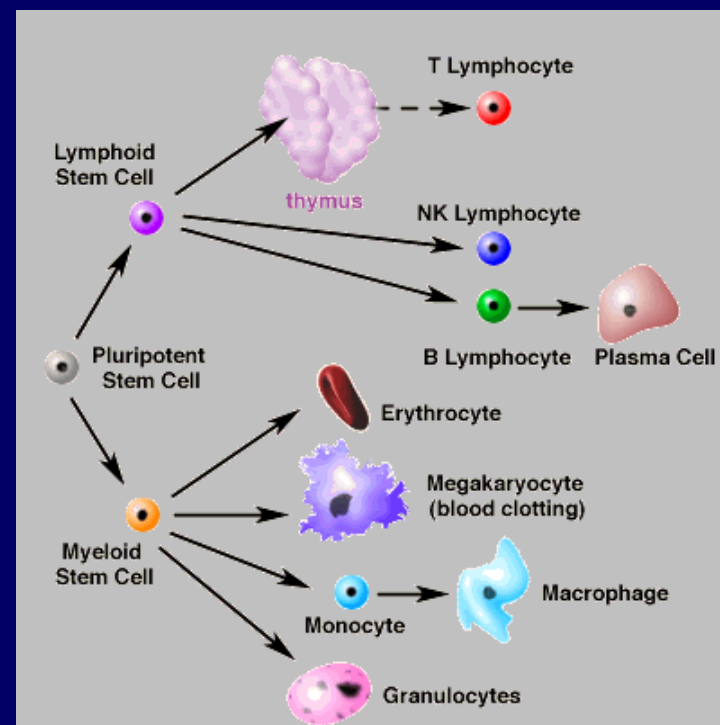


□ Kirschbaum and Hellhammer (1994)

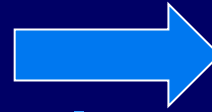
Ispitni period

- Narušavanje funkcija imunološkog sustava

(Glaser et al., 1985a;
Glaser et al., 1985b,
Glaser et al., 1986;
Glaser et al., 1997;
Esterling et al., 1993;
Marshall et al., 1998,
itd).



Psihoneuroimunologija

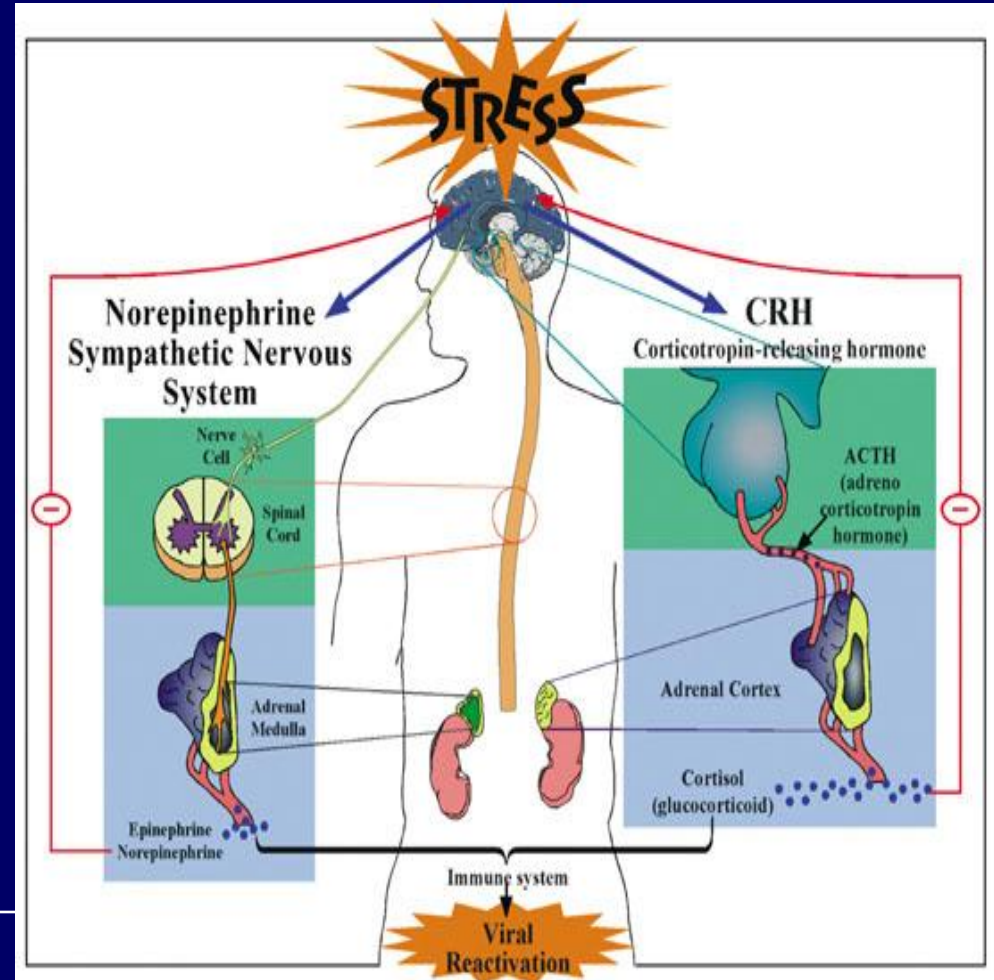


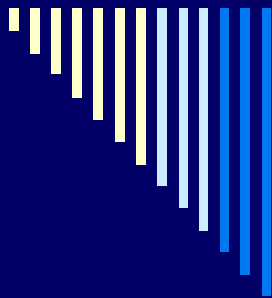
Kronični stres

hipotalamus-adenohipofiza -

kora nadbubrežne žlijezde

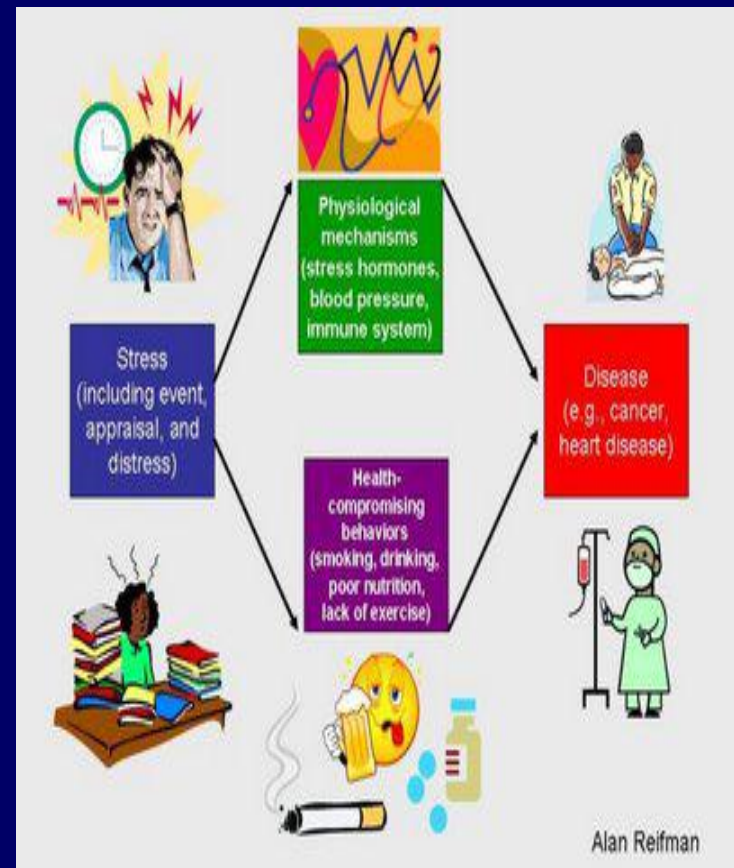
- Imunološke stanice (T i B limfociti) posjeduju glukokortikoidne receptore (Weisse et al., 1998)





Povećana incidencija:

- respiratornih infekcija (Glaser et al., 1987; Deinzer i Schuller, 1998)
- abdominalnih bolova (Harris i Martin, 1994)
- Prisustvo psihosomatskih simptoma (Kosmala-Anderson i Wallace, 2007).



Psihoneuroimunologija



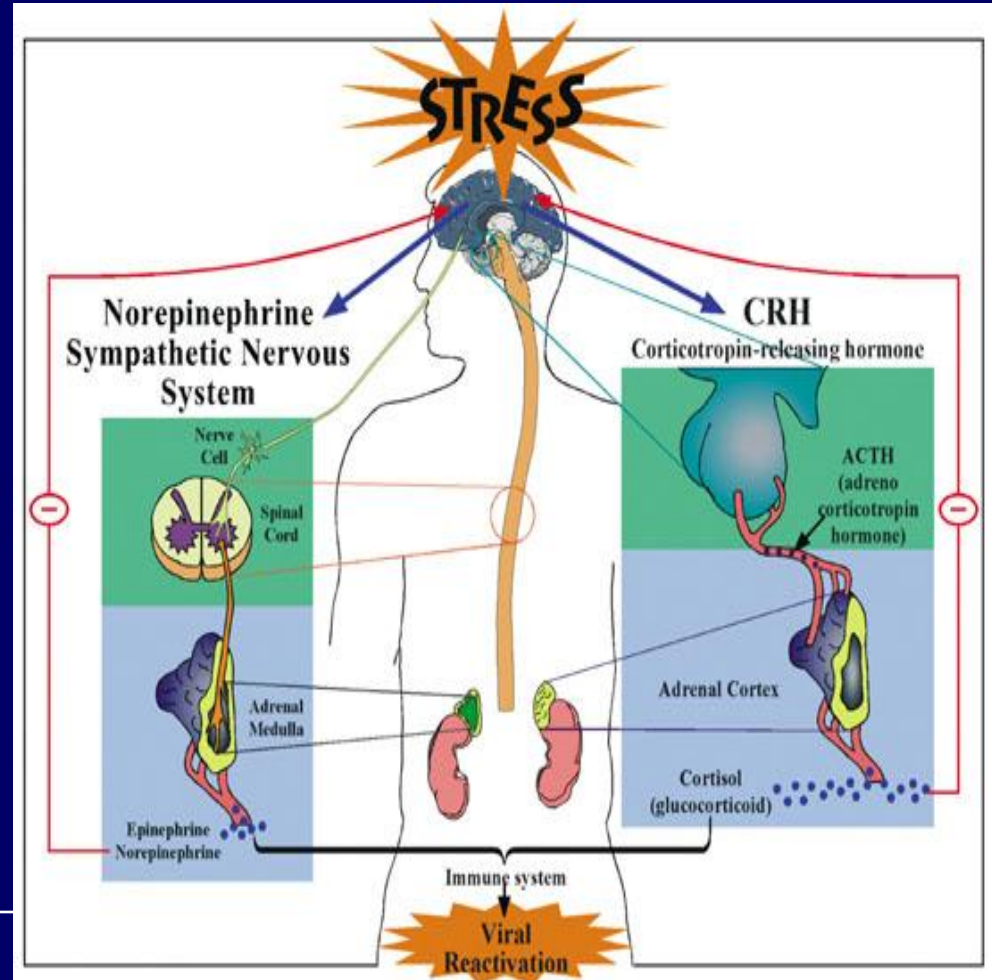
Kronični stres

hipotalamus-adenonohipofiza

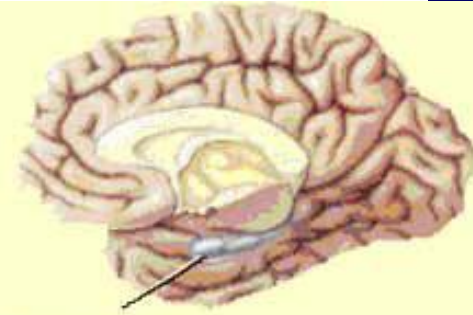
-kora nadbubrežne žlijezde

- Imunološke stanice (T i B limfociti) posjeduju glukokortikoidne receptore

(Weisse et al., 1998)



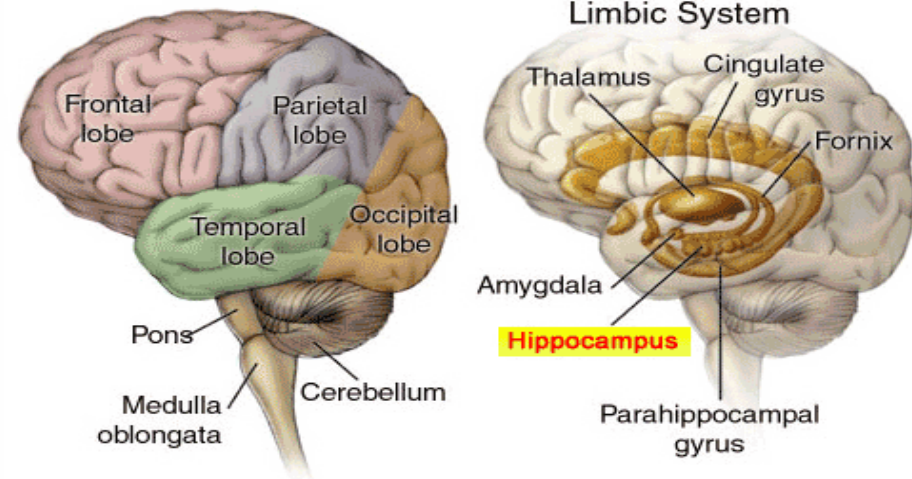
Utjecaj kortizola na neurone hipocampusa

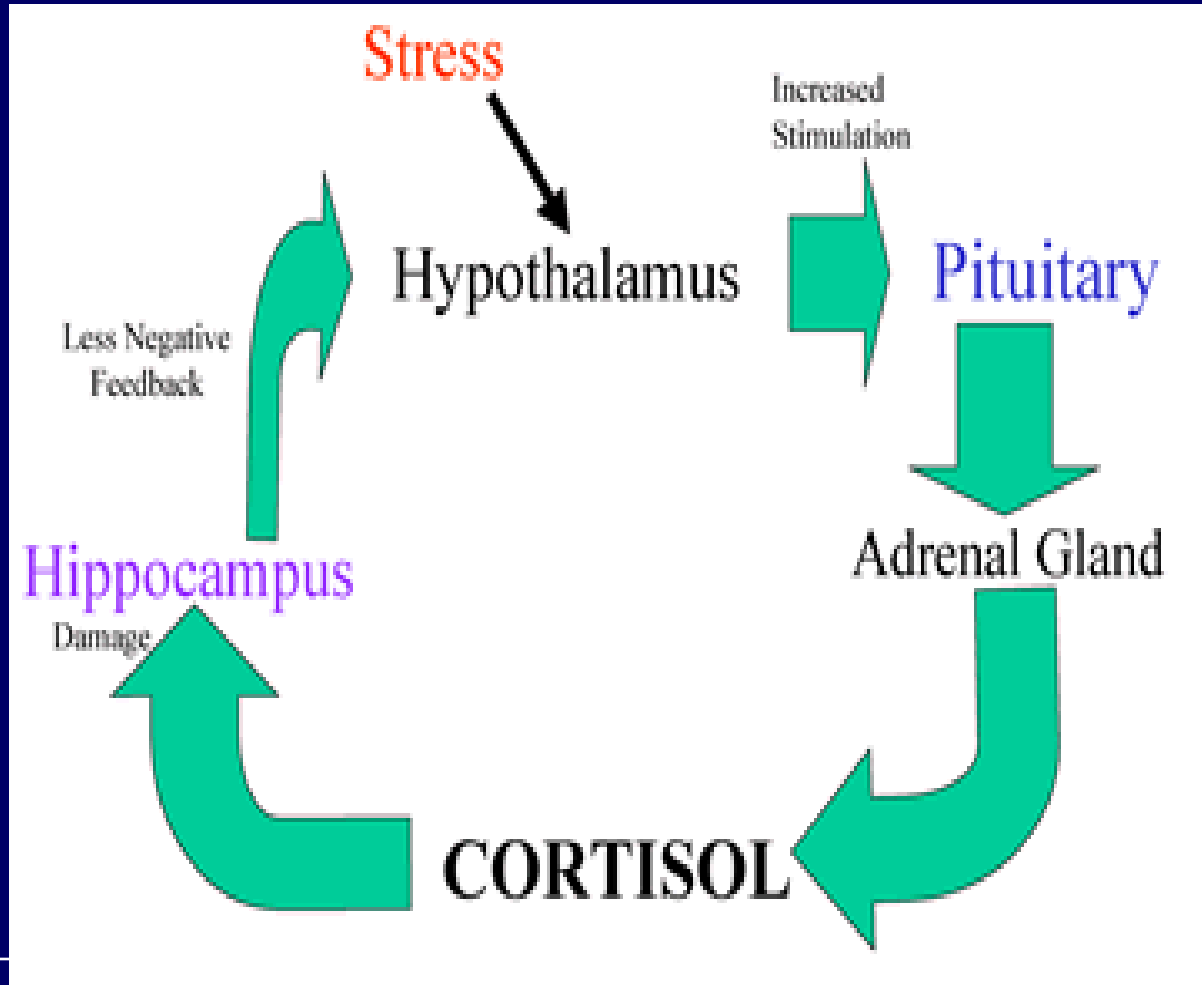
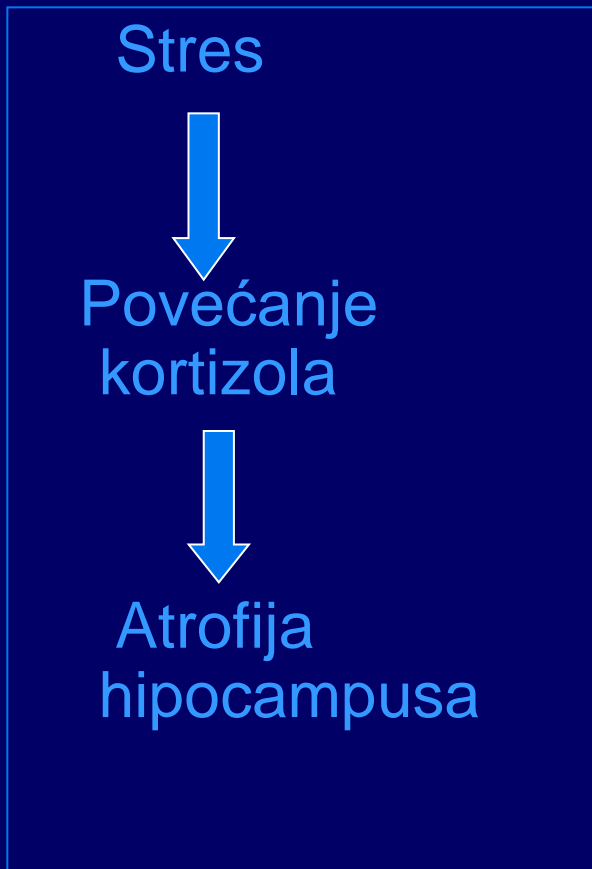
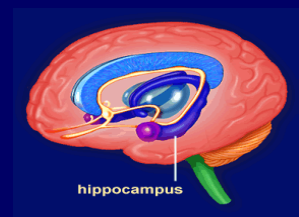
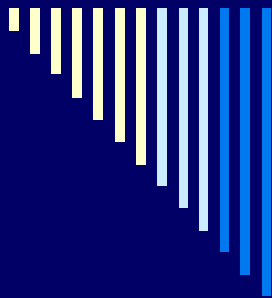


Hippocampus

- Brojni receptori za glukokortikoide
- Emocije
- Eksplicitno pamćenje (epizodično, semantičko)
- PET i MR studije, lezije hipocampusa

Anatomy of the Brain

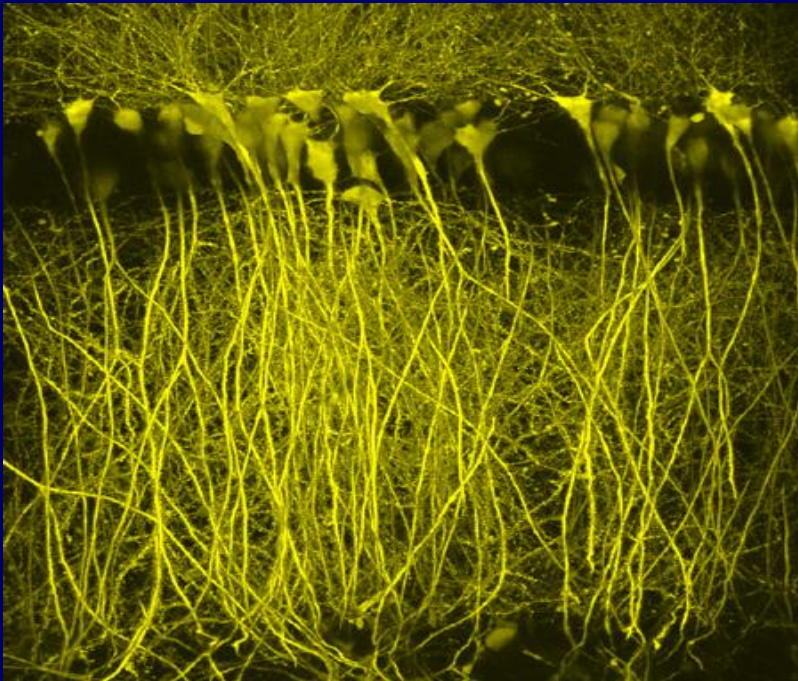




Pokusi na štakorima

Piramidalni neuroni

(Brojni receptori za glukokortikoide u hipocampusu)



Visoke razine kortikosterona



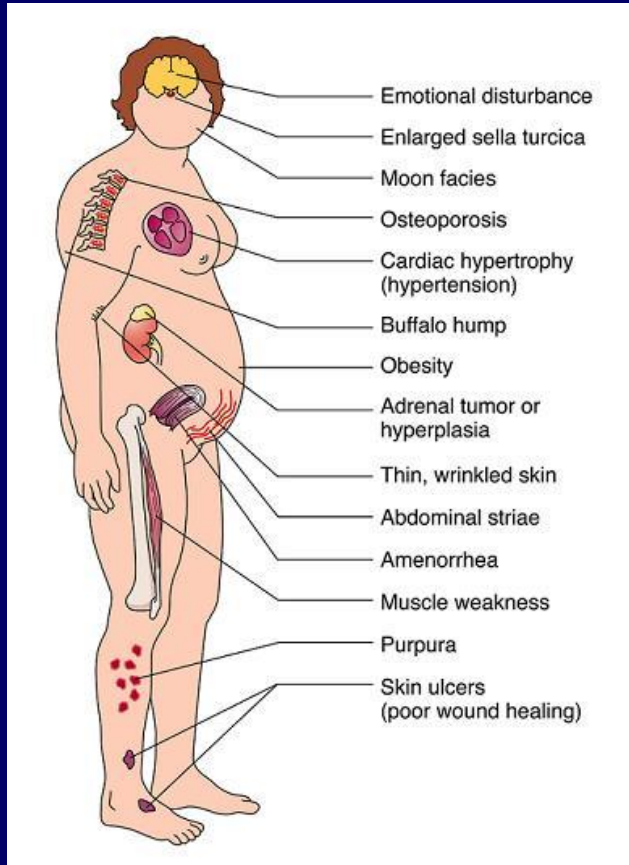
Atrofija dendrita piramidarnih stanica (tri tjedna)



Smanjenje broja piramidarnih stanica

(Inhibicija lokalnog unošenja glukoze u neurone i glije; inhibicija lokalnog iskorištavanja glukoze)

Istraživanja hiperfunkcije kore nad. žlijezde (Cushingov sindrom)

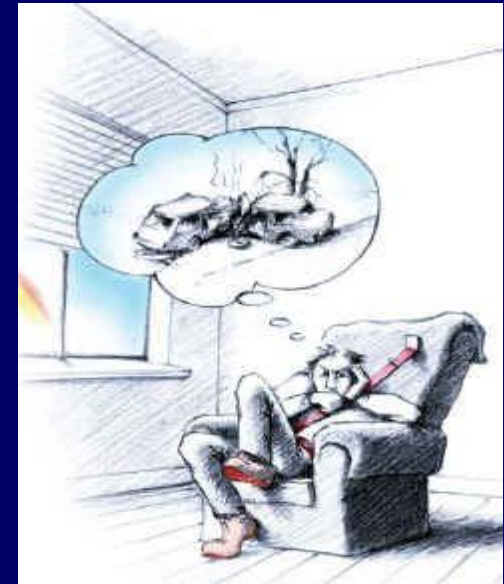


- **Povećana koncentracija glukokortikoida**
- **Bilateralna atrofija hipocampusa**
- **Deficiti pamćenja**
- **Negativne korelacije između razine kortizola i volumena hipocampusa (Starkamn et al., 1992)**

Posttraumatski stresni poremećaj

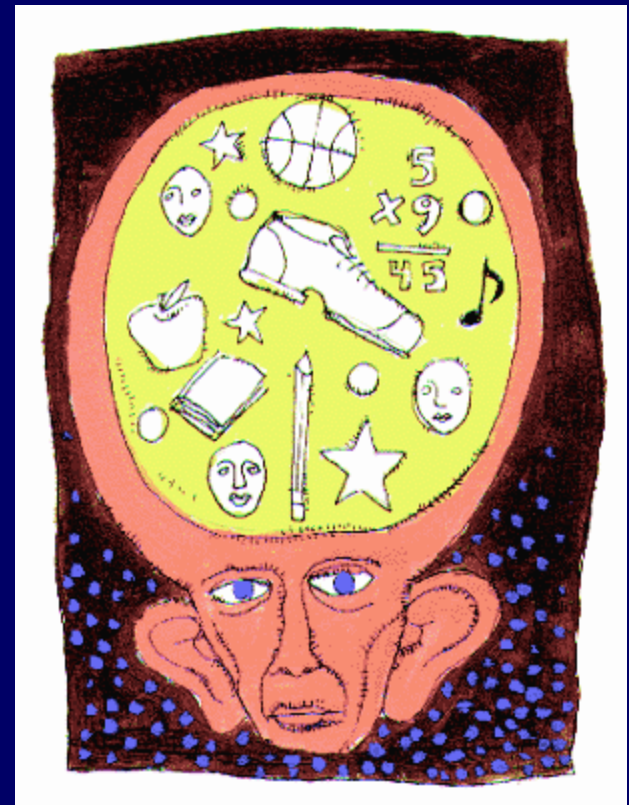


- Povećana koncentracija kortizola kod vijetnamskih veterana s PTSP (Yehuda et al., 1998)
- **Smanjen volumen hipokampusa** (Bremner, 1995; Gurvitz, 1996; Bremner, 1997)
- **Deficit neposrednog (44% niže) i odgođenog (55% niže) dosjećanja** (Bremner et al., 1993)
- 5% manji volumen hipocampusa kod žena seksualno zlostavljanih u djetinjstvu (Stein et al., 1997)

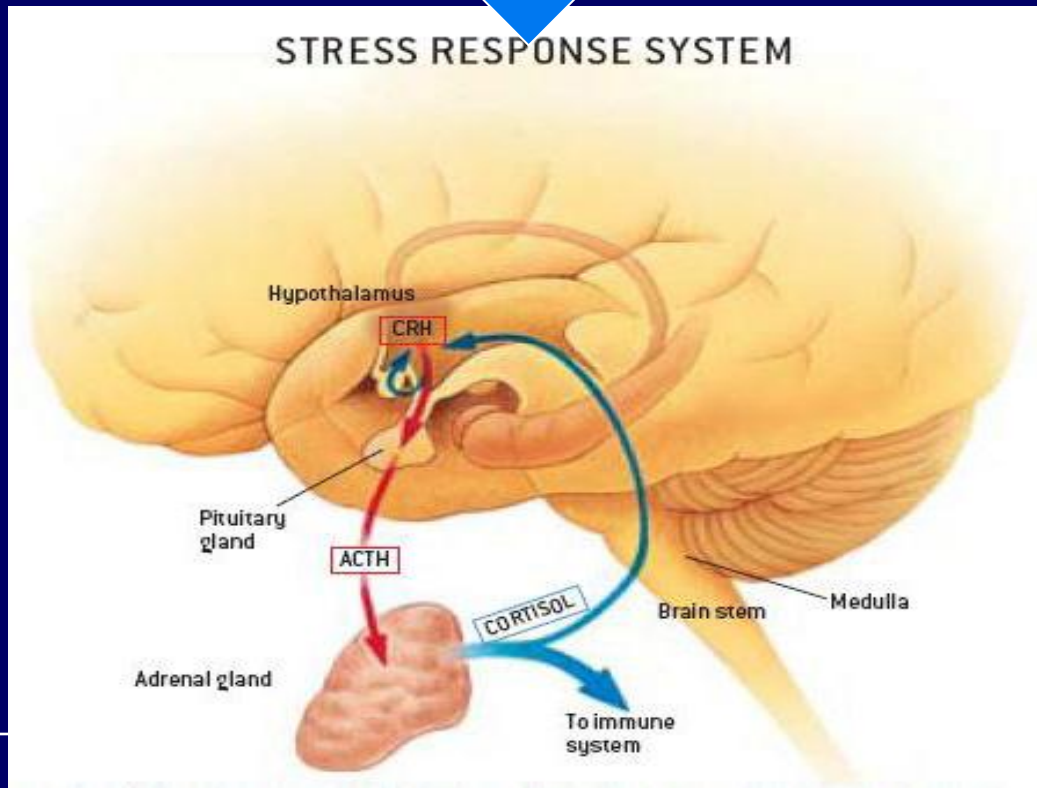


Ispitivanja na zdravim ispitanicima

- Sintetski glukokortikoidi (10 mg) producirali su smanjeno dosjećanje i prepoznavanje neutralnih i pozitivno konotiranih riječi kod 22 studenta (Tops et al., 2003)
- Visoke doze sintetskih glukokortikoida (160 mg) producirale su deficit dosjećanja verbalnog materijala (Newcomer et al., 1999)



**Alkohol, pušenje,
poremećaji spavanja i prehrane**



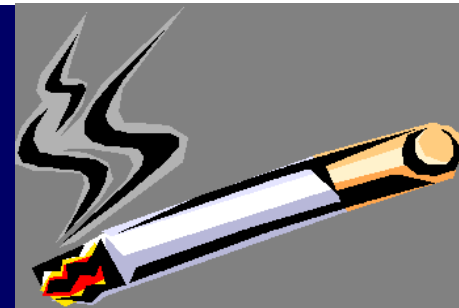
Alkohol



- Stimulator sustava hipotalamus-adenohipofiza-kora nadbubrežne žlijezde

(Canals et al., 1997;
Lovallo, 2005; Lovallo,
2006)

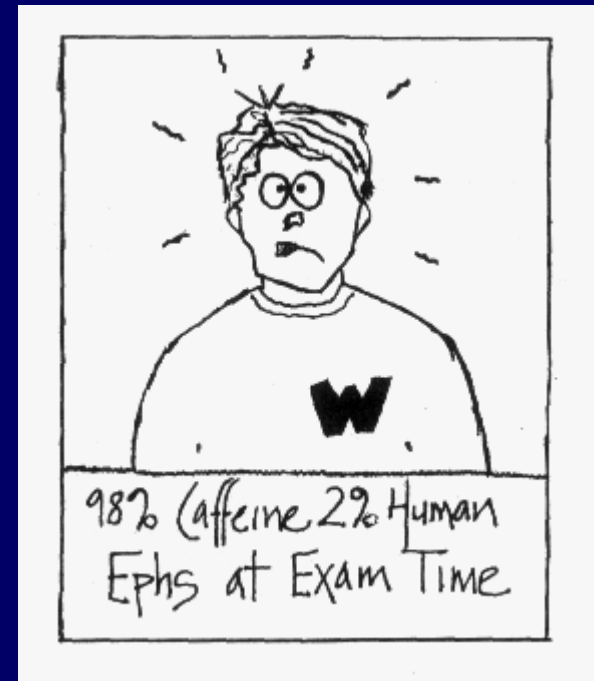
Nikotin



- Pušenje 10 cigareta dnevno
→ povećanje kortizola
(Canals et al., 1997)
- Dvije popušene cigarete
aktivacija HPA sustava
(Rohleder & Kirschbaum, 2005)
- Intravenozno injektiranje nikotina
nepušačima (Newhouse et al., 1990)

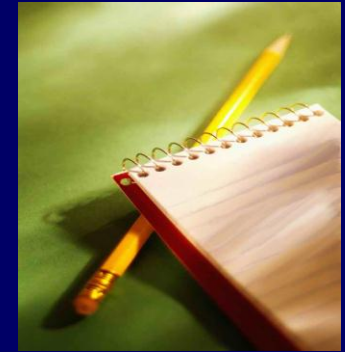
Ispitni period

- Reducirano spavanje
povećana
konzumacija kave i
čaja, povećano
pušenje,
 - reducirana potrošnja
alkohola
- (Gruzelier et al., 2001)



Usmeni i pismeni ispiti

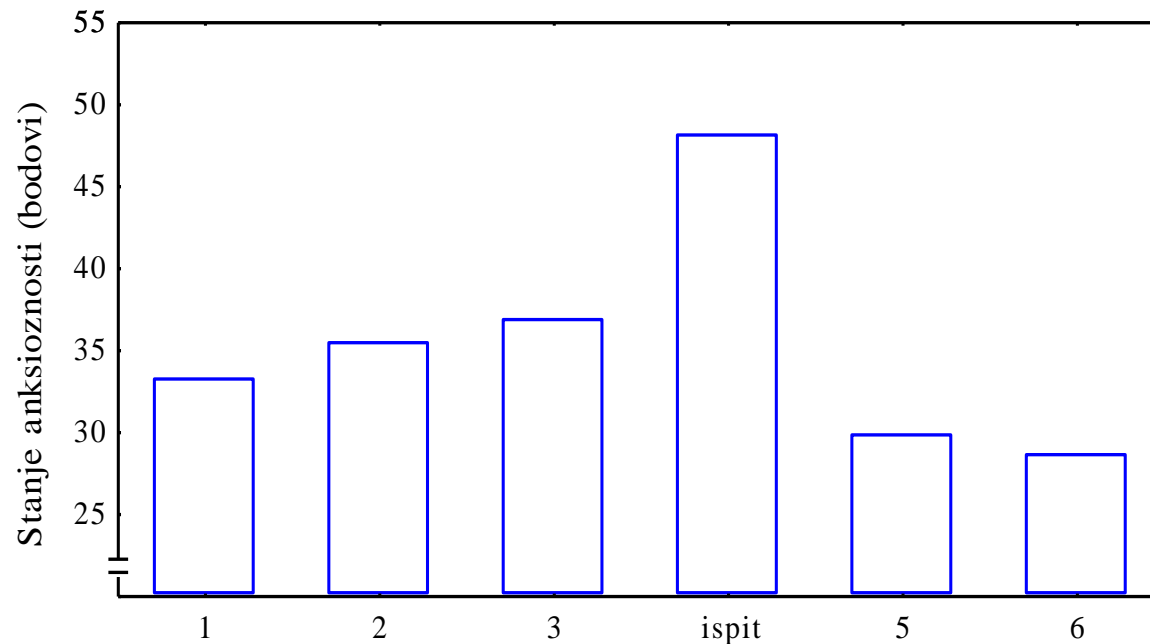
- Usmeni ispiti su stresniji



Šimić N. (2003) Neke psihofiziološke reakcije na ispitni stres

Slika 6.1. Promjene stanja anksioznosti tijekom
predispitnog, ispitnog i postispitnog perioda

$F=11.70$; $p<0.01$



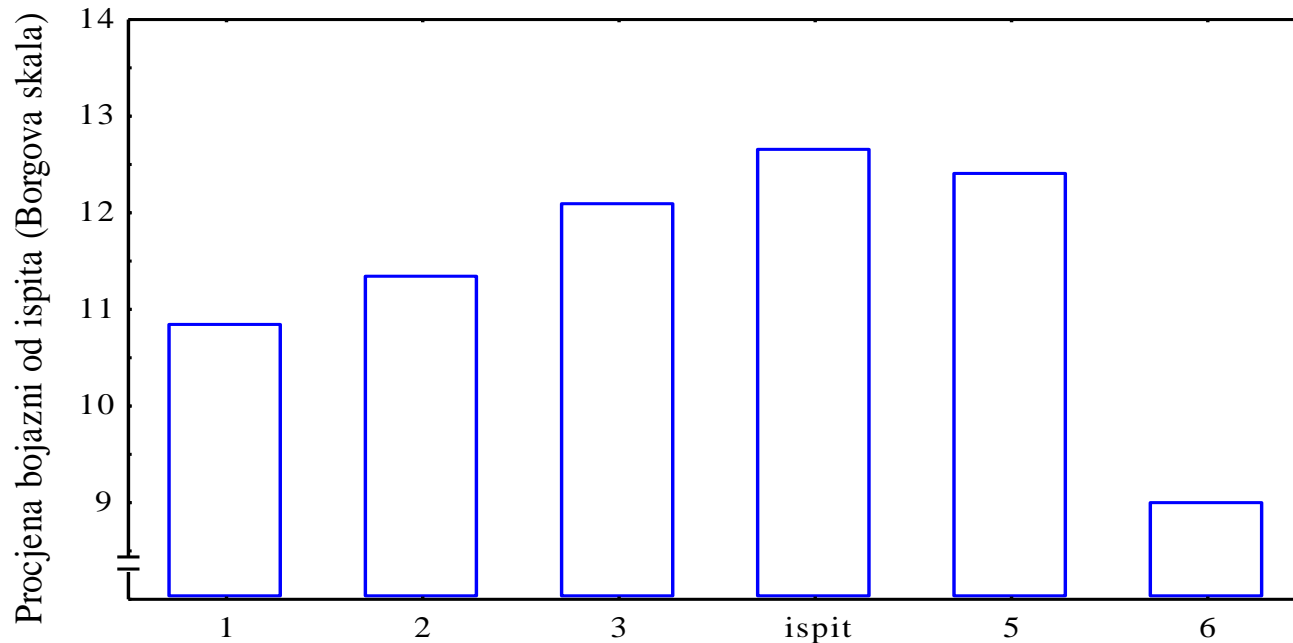
1 – 20 dana prije ispita
2 – 10 dana prije ispita
3 – jedan dan prije ispita

4 – dva sata prije težeg ispita (prvi izlazak)
5 – jedan dan nakon ispita
6 – 10 dana nakon završetka ispita

Šimić N. (2003) Neke psihofiziološke reakcije na ispitni stres

Slika 6.3. Procjene bojazni od ispita

$F=2.29; p<0.05$

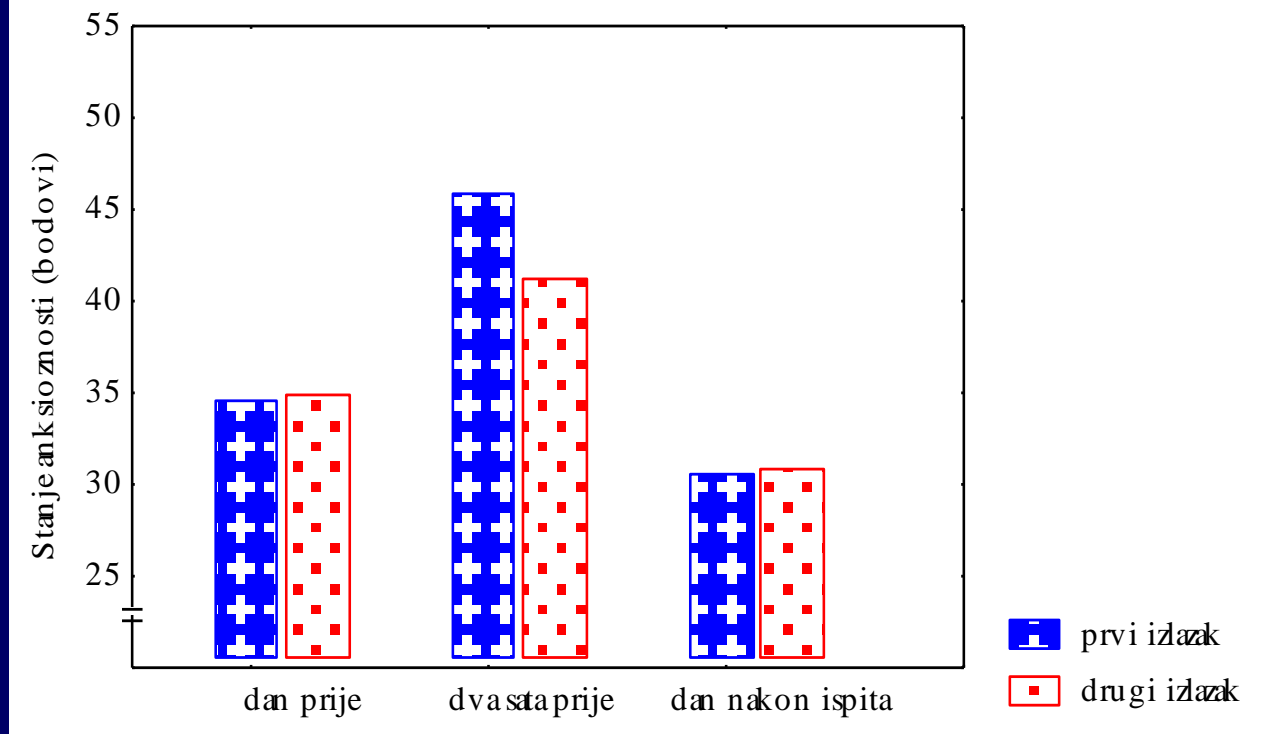


1 – 20 dana prije ispita
2 – 10 dana prije ispita
3 – jedan dan prije ispita

4 – dva sata prije težeg ispita (prvi izlazak)
5 – jedan dan nakon ispit
6 – 10 dana nakon završetka ispita

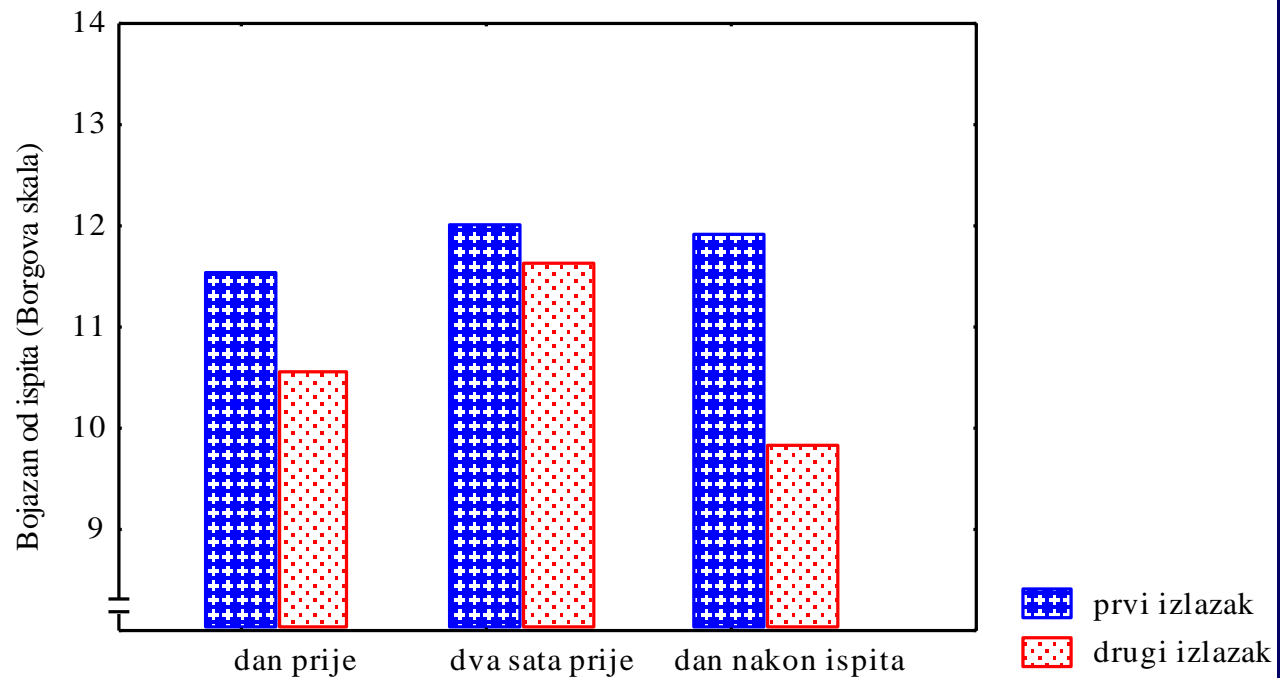
Šimić N. (2003) Neke psihofiziološke reakcije na ispitni stres

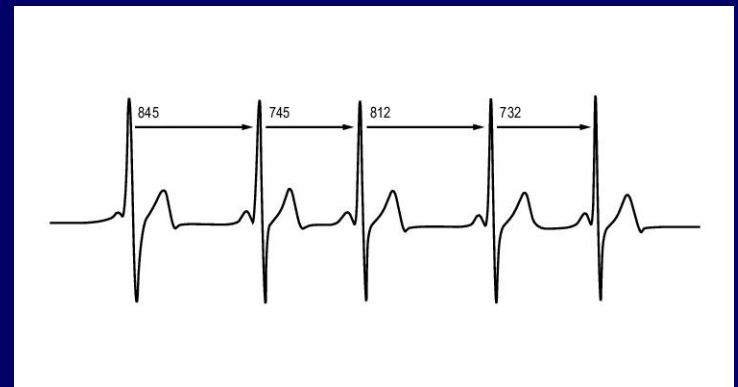
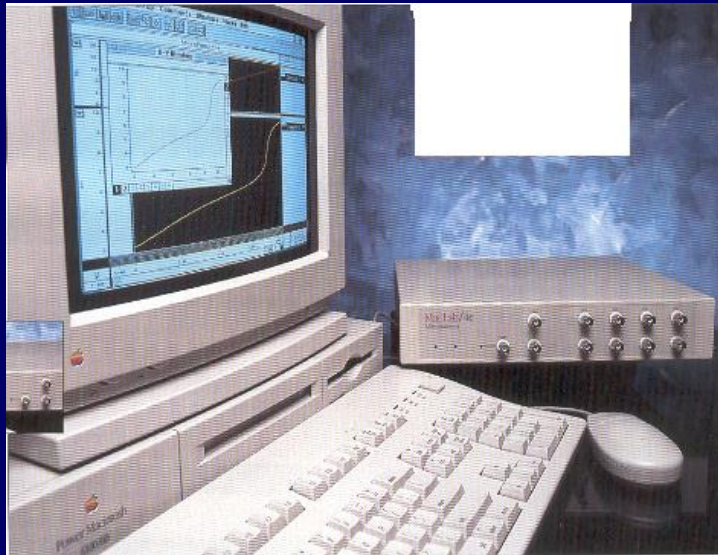
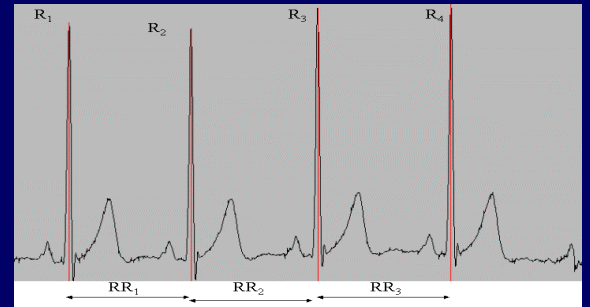
Slika 6.9. Promjene stanja anksioznosti kod prvog i drugog izlaska na ispit



Šimić N. (2003) Neke psihofiziološke reakcije na ispitni stres

Slika 6.10. Procjene bojazni od ispita kod prvog i drugog izlaska na ispit

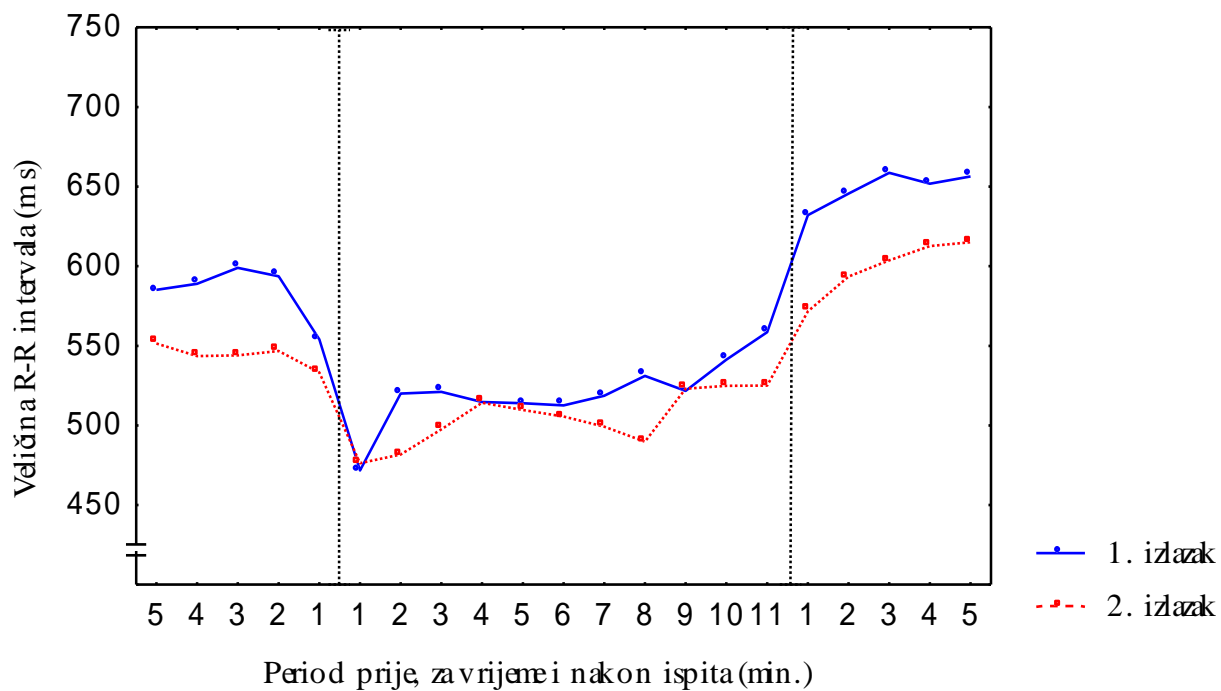






Neke psihofiziološke reakcije na ispitni stres

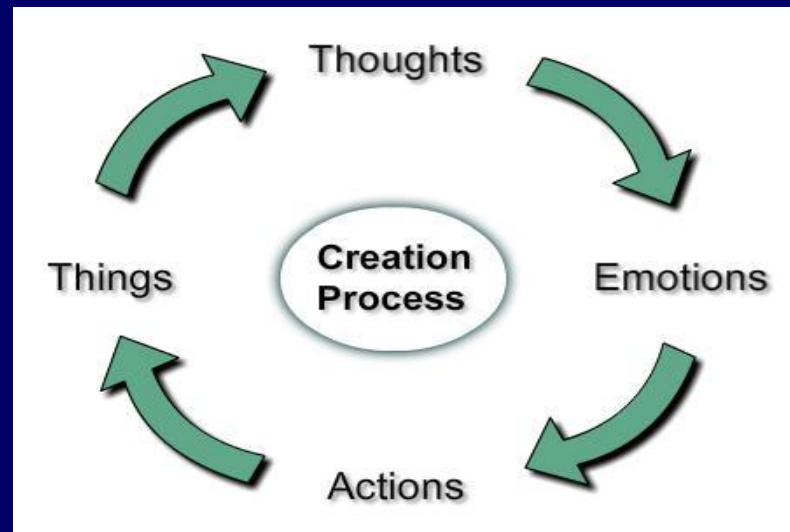
Sl. 16. Promjene R-R intervala prije, za vrijeme i nakon prvog i drugog izlaska na ispit



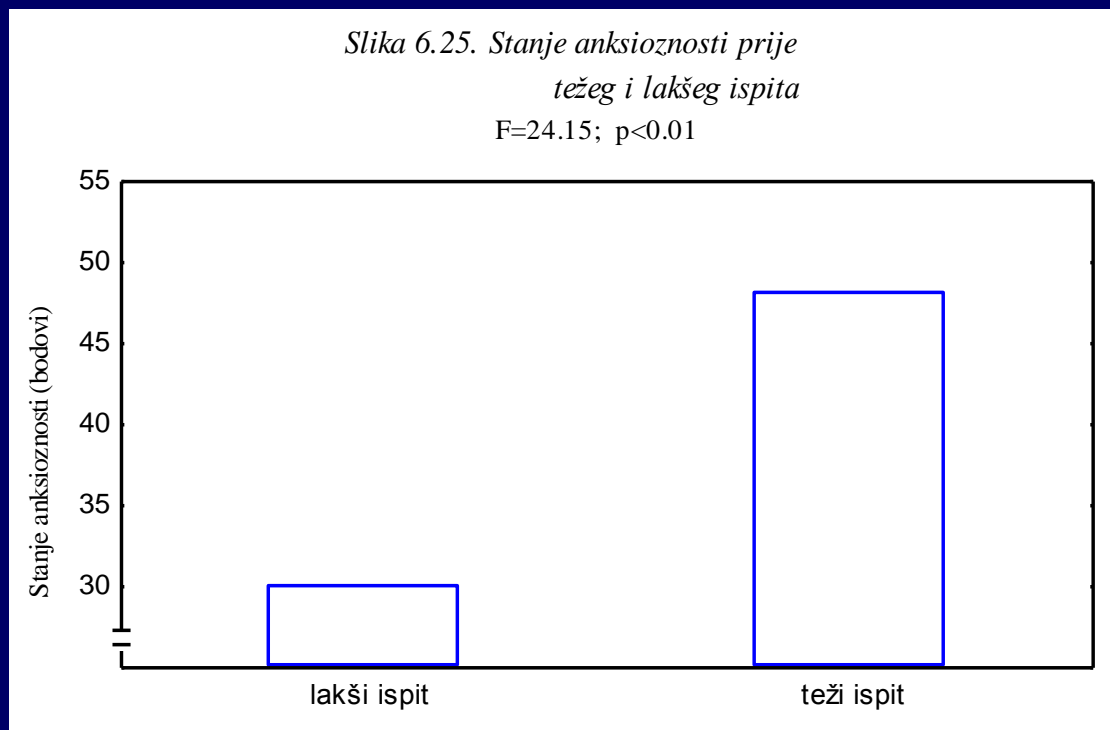


□ Negativne/pozitivne emocije
za vrijeme ispita

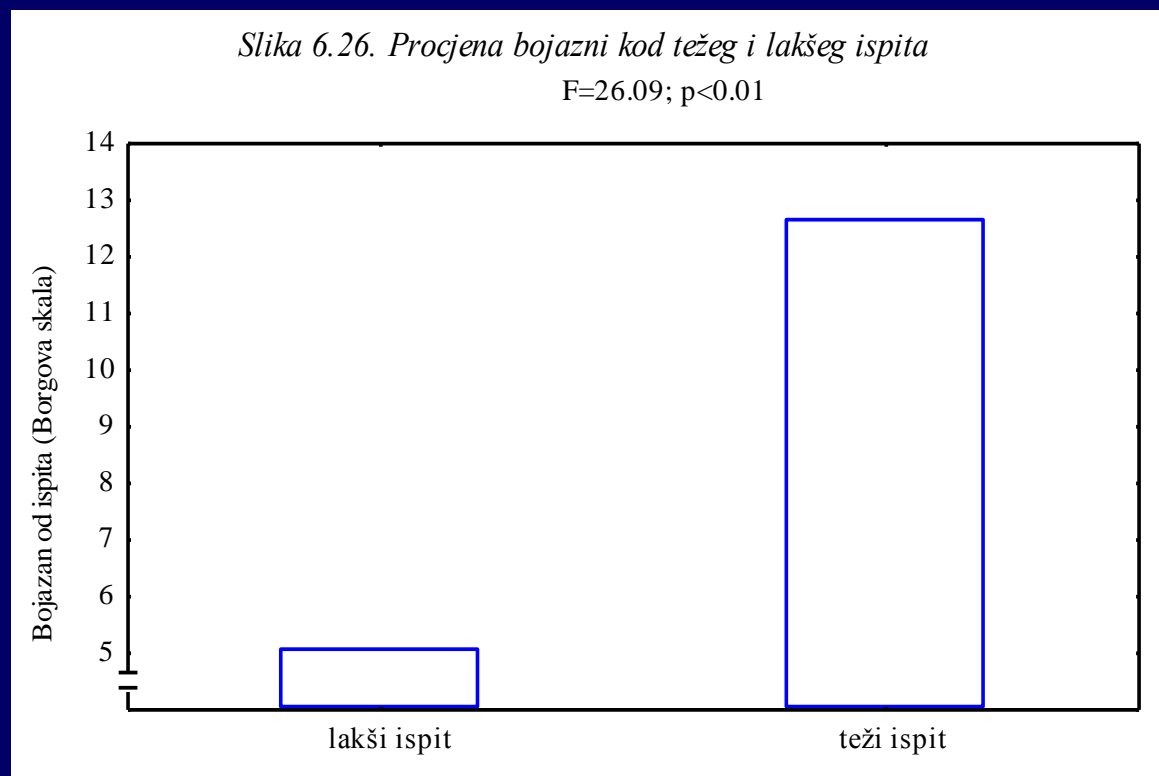
(Spangler et al., 2002)



Šimić N. (2003) Neke psihofiziološke reakcije na ispitni stres

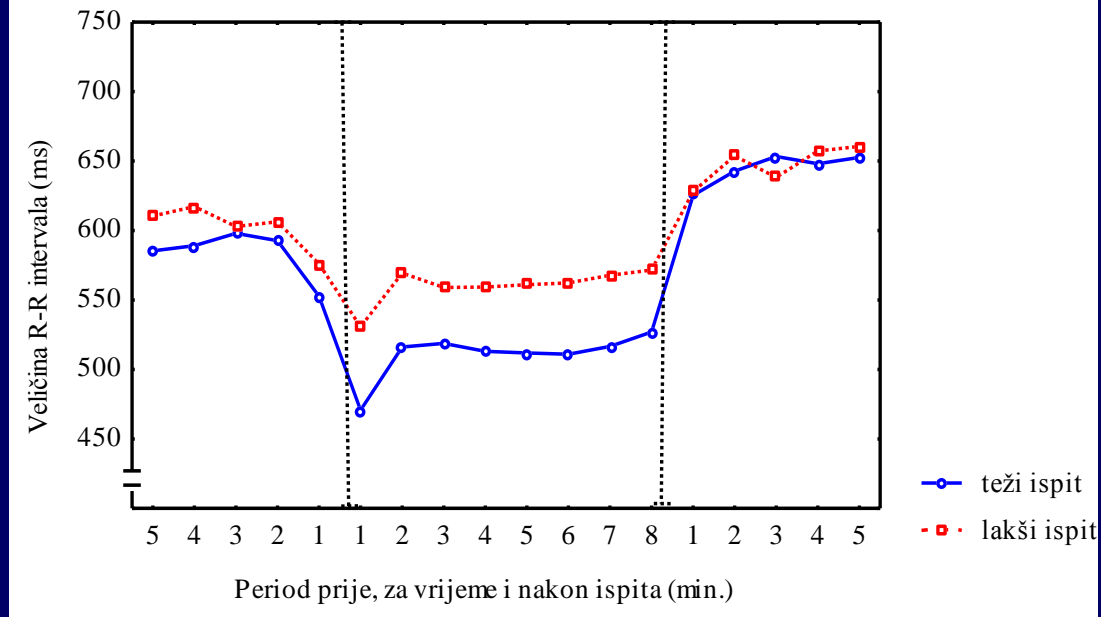


Šimić N. (2003) Neke psihofiziološke reakcije na ispitni stres



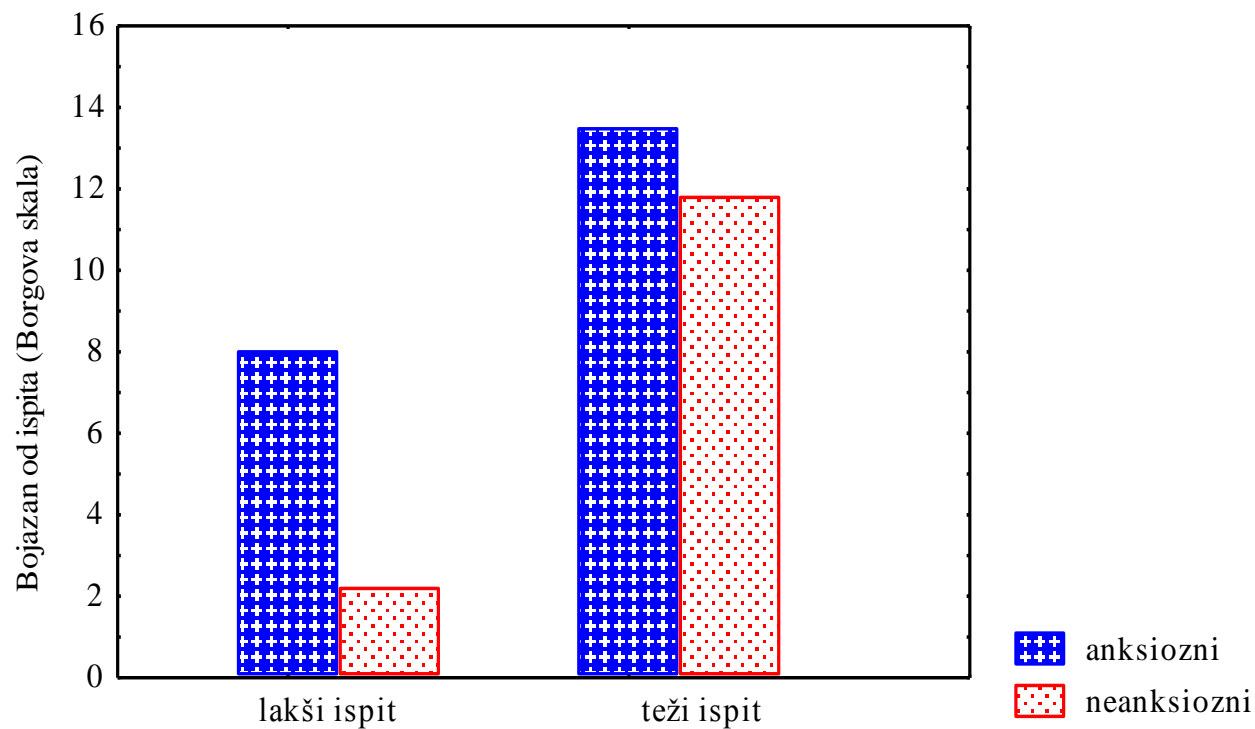
Šimić N. (2003) Neke psihofiziološke reakcije na ispitni stres

Slika 6.28. Promjene R-R intervala prije, za vrijeme i nakon teže i lakšeg ispita



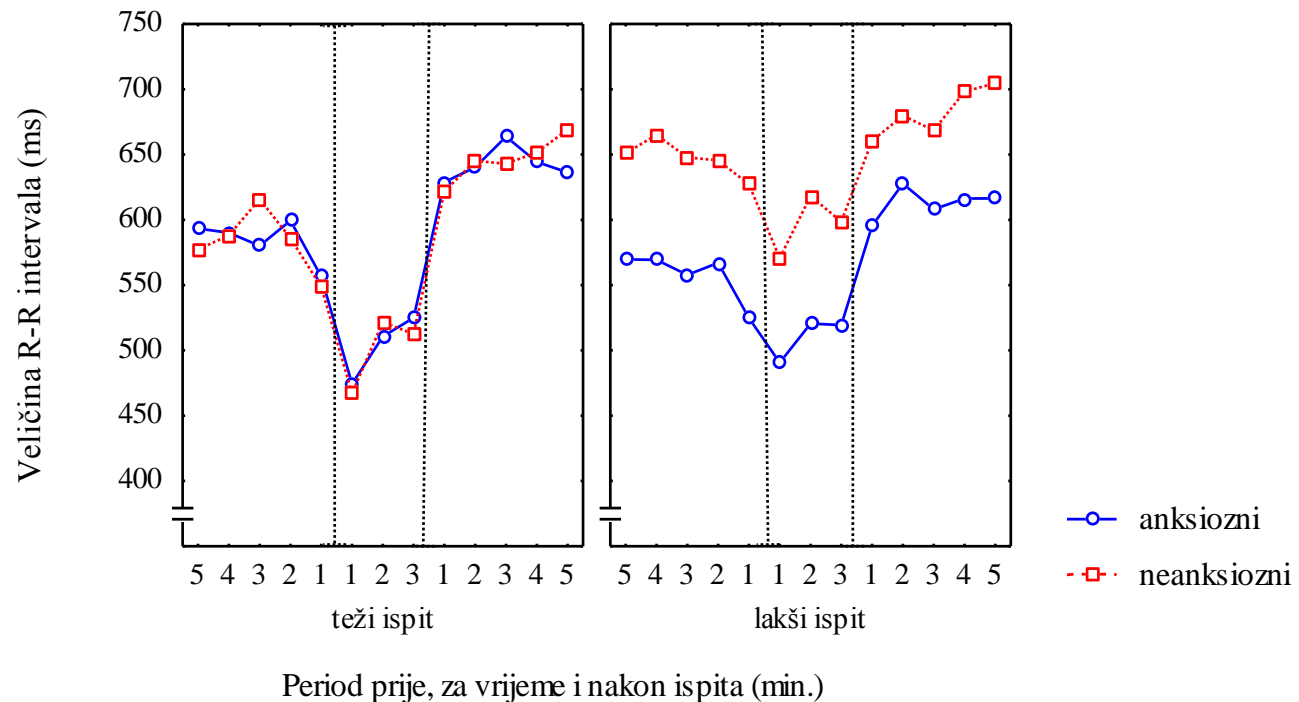
Šimić N. (2003) Neke psihofiziološke reakcije na ispitni stres

Slika 6.32. Procijene bojazni od teže i lakšeg ispita kod ispitanika s različitim stupnjem anksioznosti



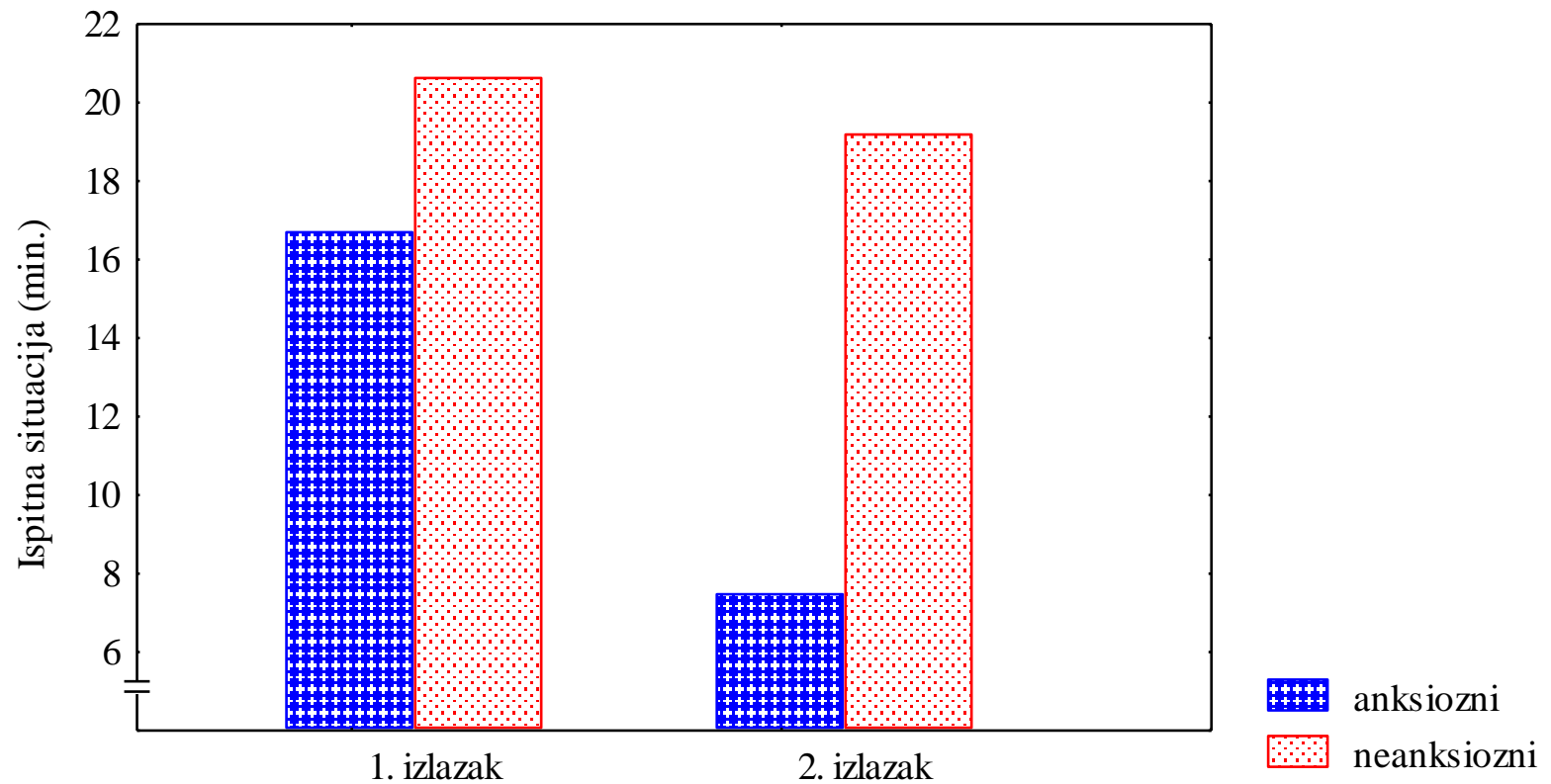
Šimić N. (2003) Neke psihofiziološke reakcije na ispitni stres

Slika 6.33. Promjene veličine R-R intervala kod ispitanika s različitim stupnjem anksioznosti



Šimić N. (2003) Neke psihofiziološke reakcije na ispitni stres

Slika 6.24. Trajanje težeg ispita kod ispitanika s različitim stupnjem anksioznosti
crta anksioznosti $F(1,9)=6.40; p<0.05$



Anksioznost i ispitni stres

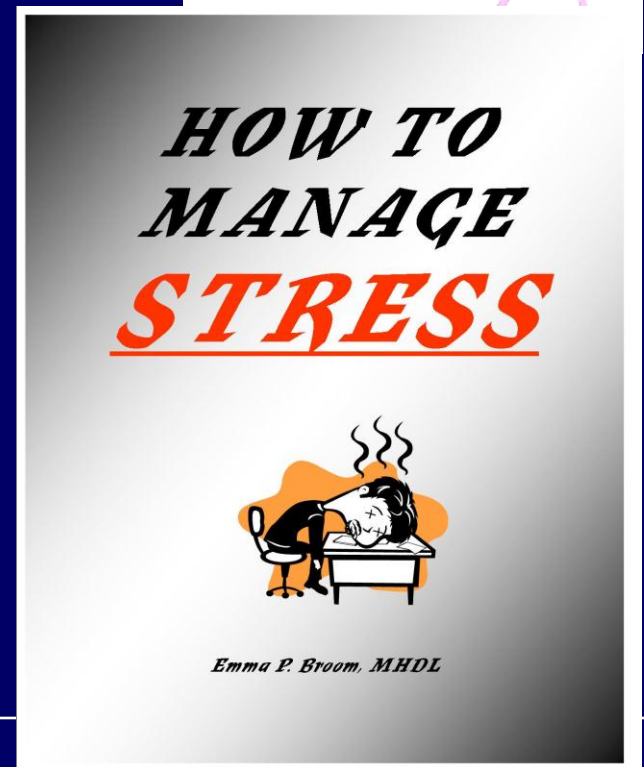
- Anksiozniji - više nervoznih pokreta, manje kontakta očima s ispitivačem za vrijeme ispita (Huwe et al., 1998)
- Lošiji uspjeh na ispitu

(Huwe et al., 1998;
Avero i Calvo, 2000)



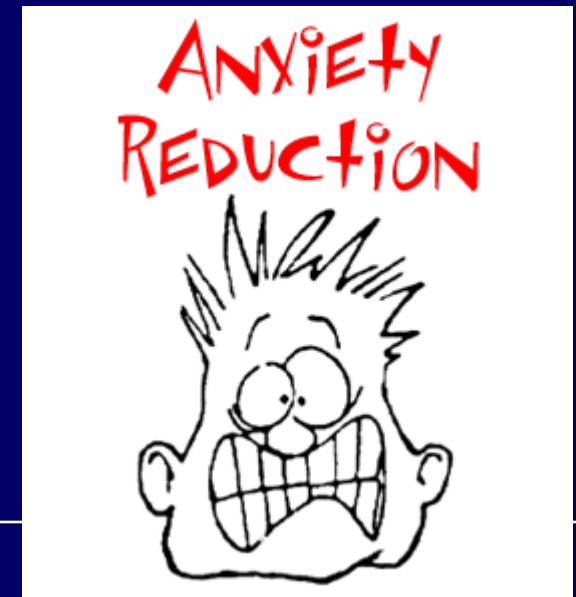
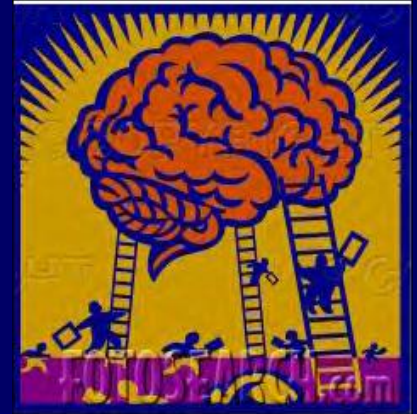
Kako smanjiti ispitni stres

- Određena doza stresa je korisna
- Stres ne možemo ukloniti, ali ga možemo kontrolirati.



Kako smanjiti ispitni stres

- 1. bez panike



ANXIETY REDUCTION



- Priprema za ispite
- Lista prioriteta
- Smanjiti broj aktivnosti
- Aktivnost koja nas smiruje





- Izbjegavati pretjerane emocionalne reakcije
- Zabrinutost – uznemirenost
- Bijes-ljutnja
- Depresija-tuga





□ Biti organiziran



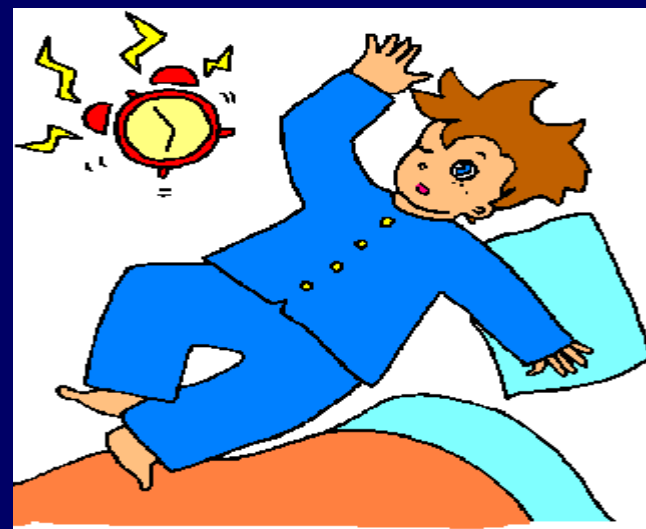


□ Pismeni ispiti





□ Dan/noć prije ispita





□ Ispitni dan





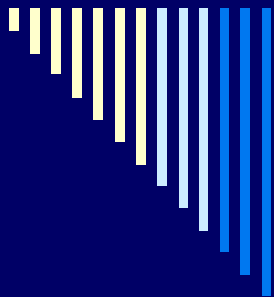
- (Ne) razgovarati s drugima uoči ispita





- Simptomi:
- Blokiranje misli
- Brzo plitko disanje
- Misli prolaze brzo
- Ne možete se ničega sjetiti





- *“Mogu se suočiti s ovom situacijom. Pripremao sam se, nije istina da ne znam ništa”*





Antistresori

- Smisao za humor
 - Socijalna podrška
 - Mogućnost kontrole
 - Pozitivno mišljenje
 - optimizam
-



ZAŠTO ZEBRE NIKADA NE DOBIJU ČIR?



Zebra koja bježi od lavice



Psihološki stresori
anticipacijski stresni
odgovor

Sapolsky (1998):
*Who don't zebras get
ulcers*"





Reduce the Stress in Your Life Today!

