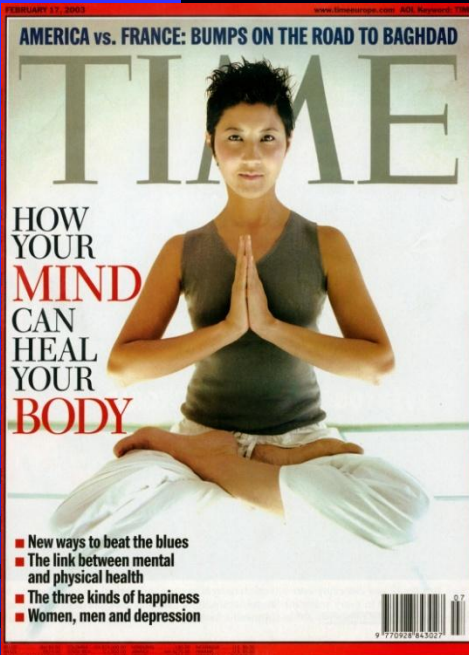


Η ΑΝΟΣΟΦΛΕΓΜΟΝΩΔΗΣ ΑΠΑΝΤΗΣΗ ΣΤΗΝ ΑΣΚΗΣΗ

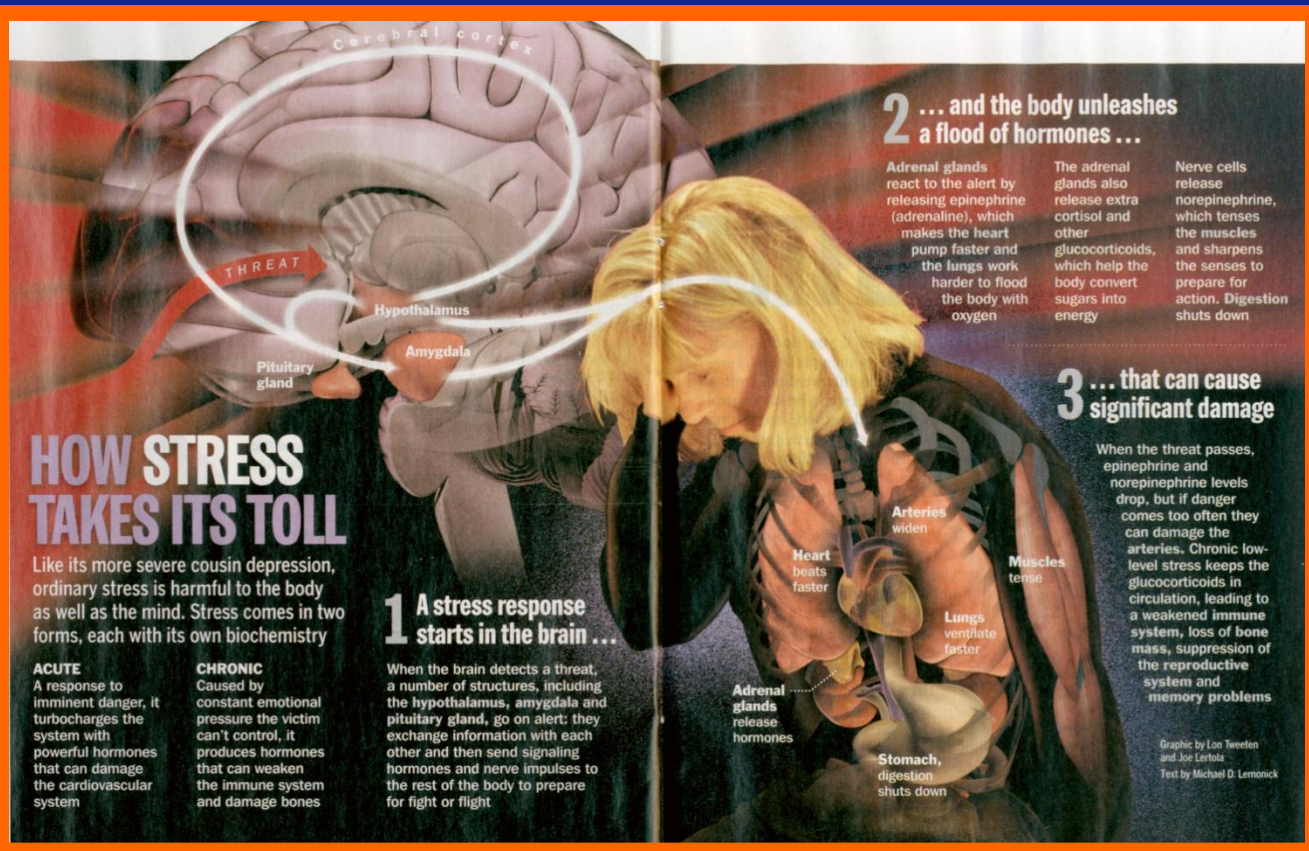
Γ. ΜΑΣΤΟΡΑΚΟΣ
Αναπληρωτής Καθηγητής

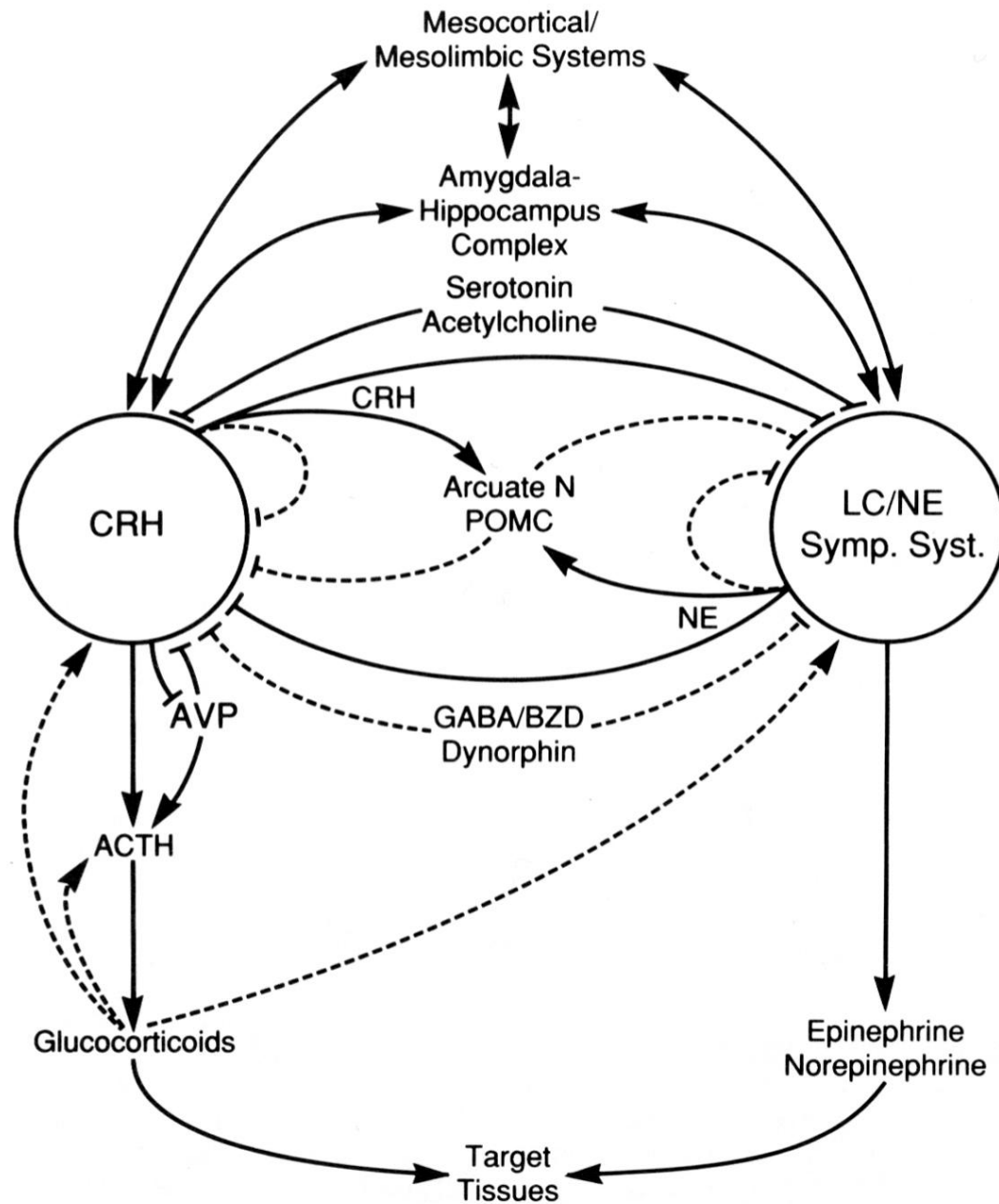
ΕΝΔΟΚΡΙΝΟΛΟΓΙΚΗ ΜΟΝΑΔΑ, ΝΟΣΟΚΟΜΕΙΟ ΑΡΕΤΑΙΕΙΟΝ
ΙΑΤΡΙΚΗ ΣΧΟΛΗ ΠΑΝΕΠΙΣΤΗΜΙΟΥ ΑΘΗΝΩΝ

Η ΑΣΚΗΣΗ ΕΙΝΑΙ STRESS ;



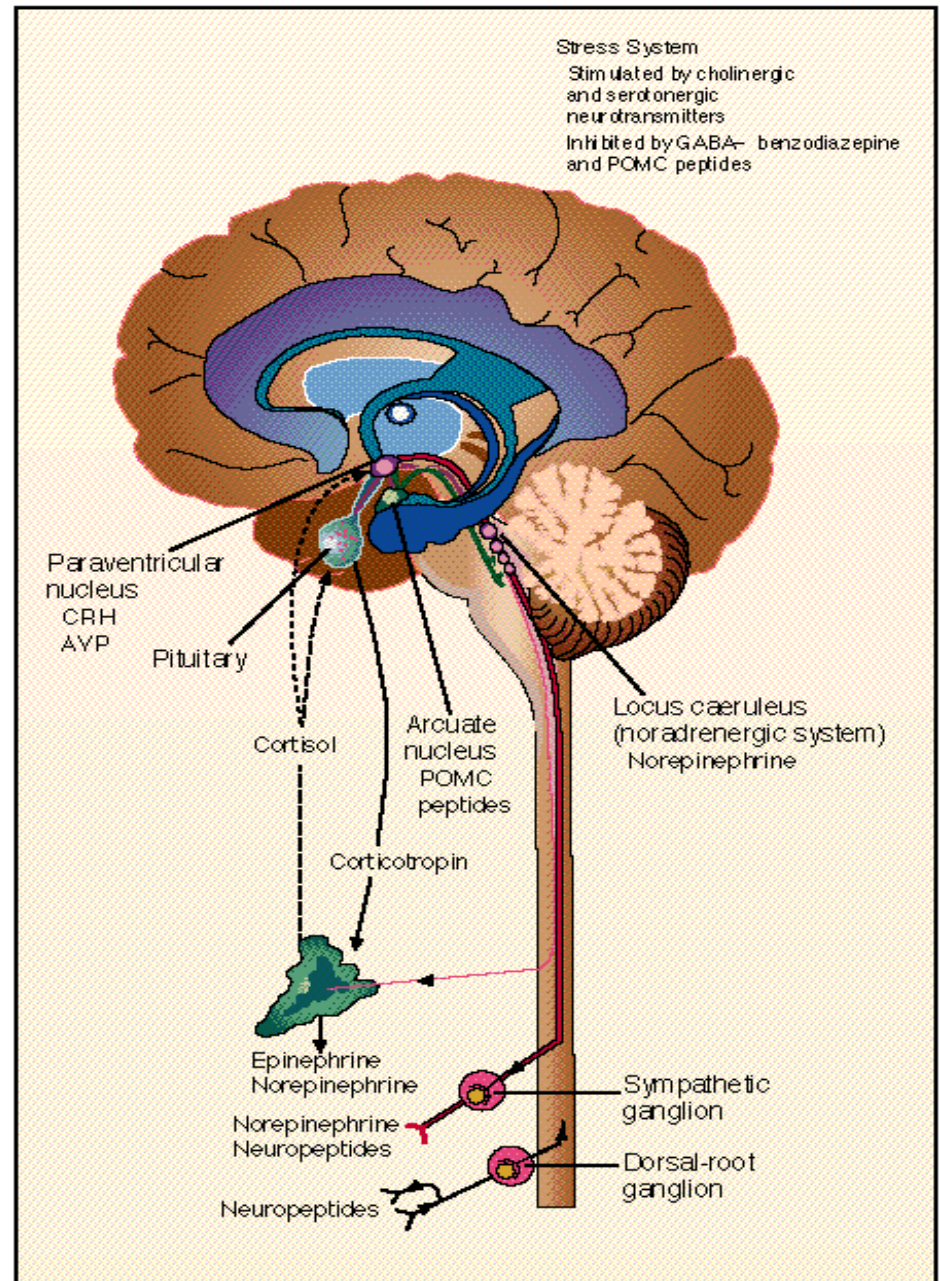
THE INAI STRESS ;

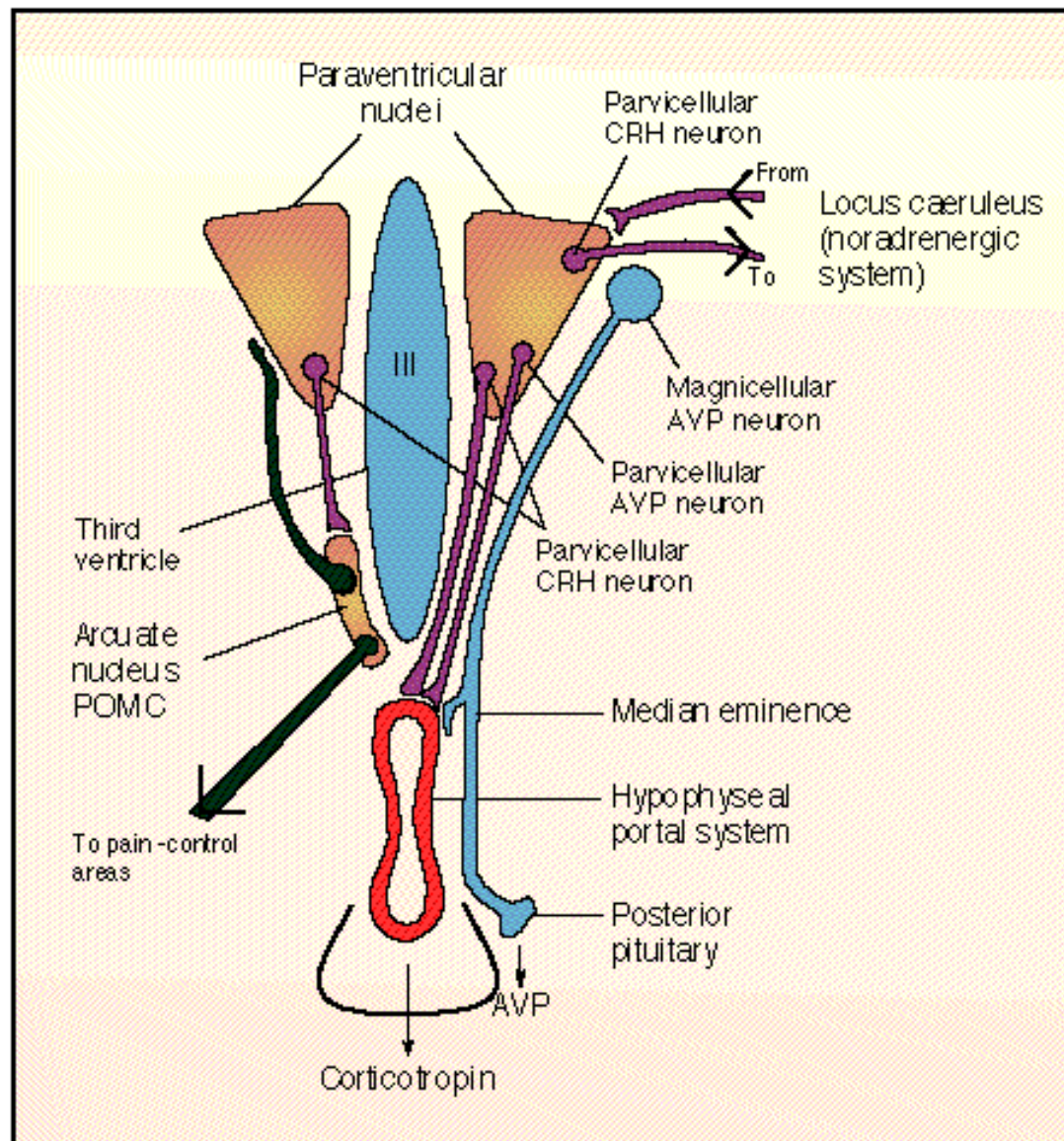




ΥΠΟΘΑΛΑΜΟ- ΥΠΟΦΥΣΕΟ- ΕΠΙΝΕΦΡΙΔΙΚΟΣ ΑΞΟΝΑΣ (ΥΥΕ)

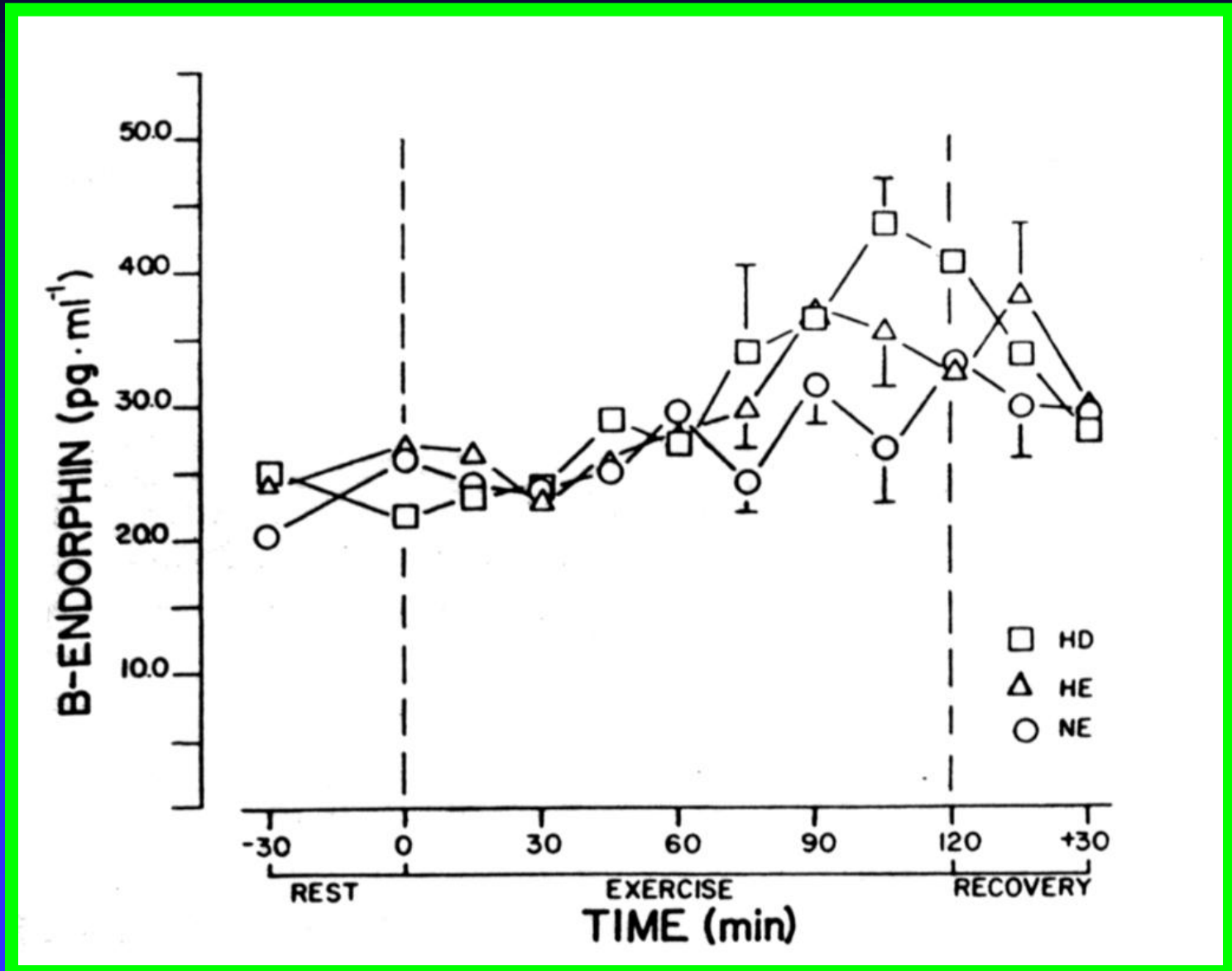
N. Engl. J. Med. 1995, 332:1351-1362



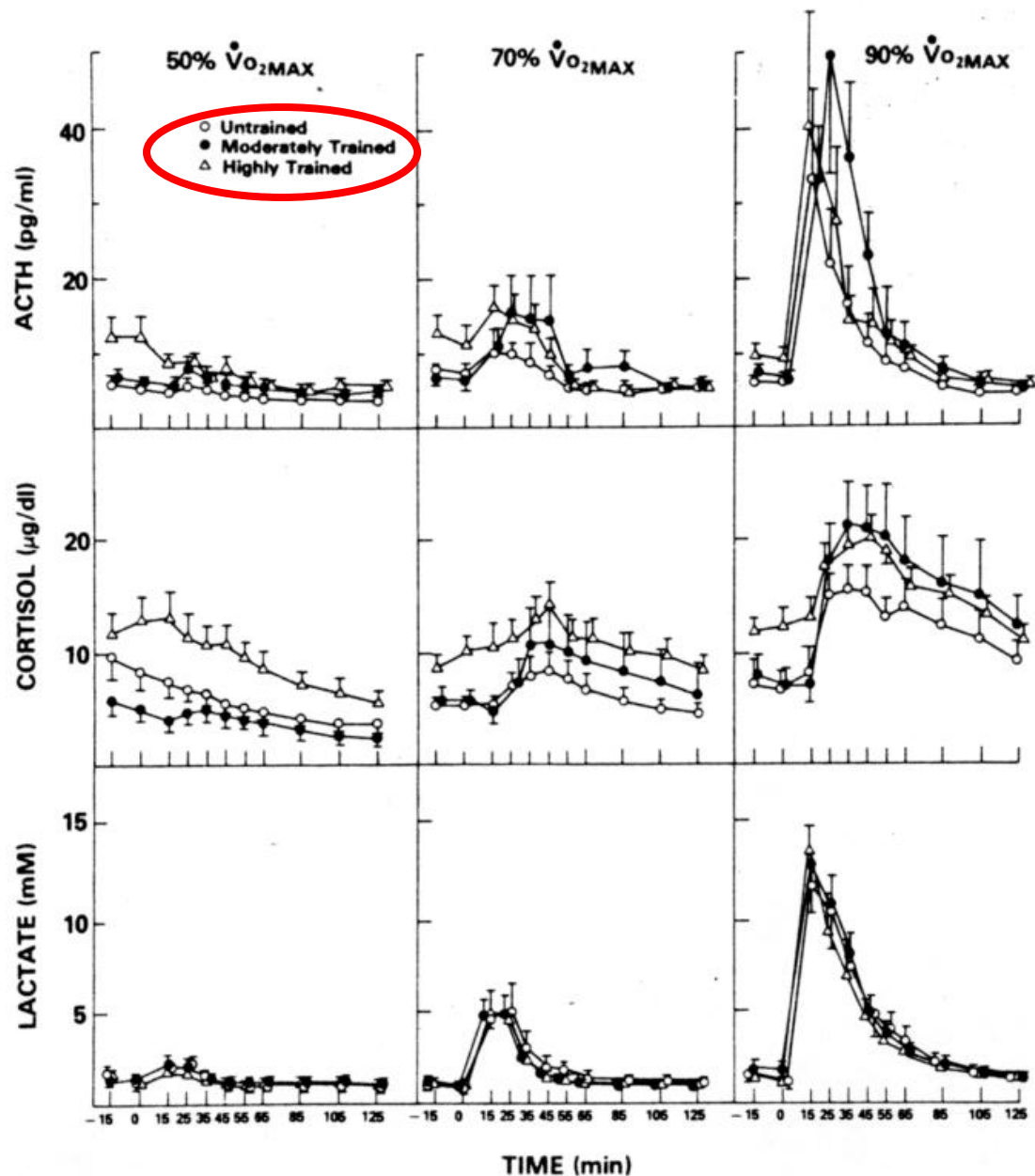


**ΑΣΚΗΣΗ
ΚΑΙ
ΥΥΕ ΑΕΟΝΑΣ**

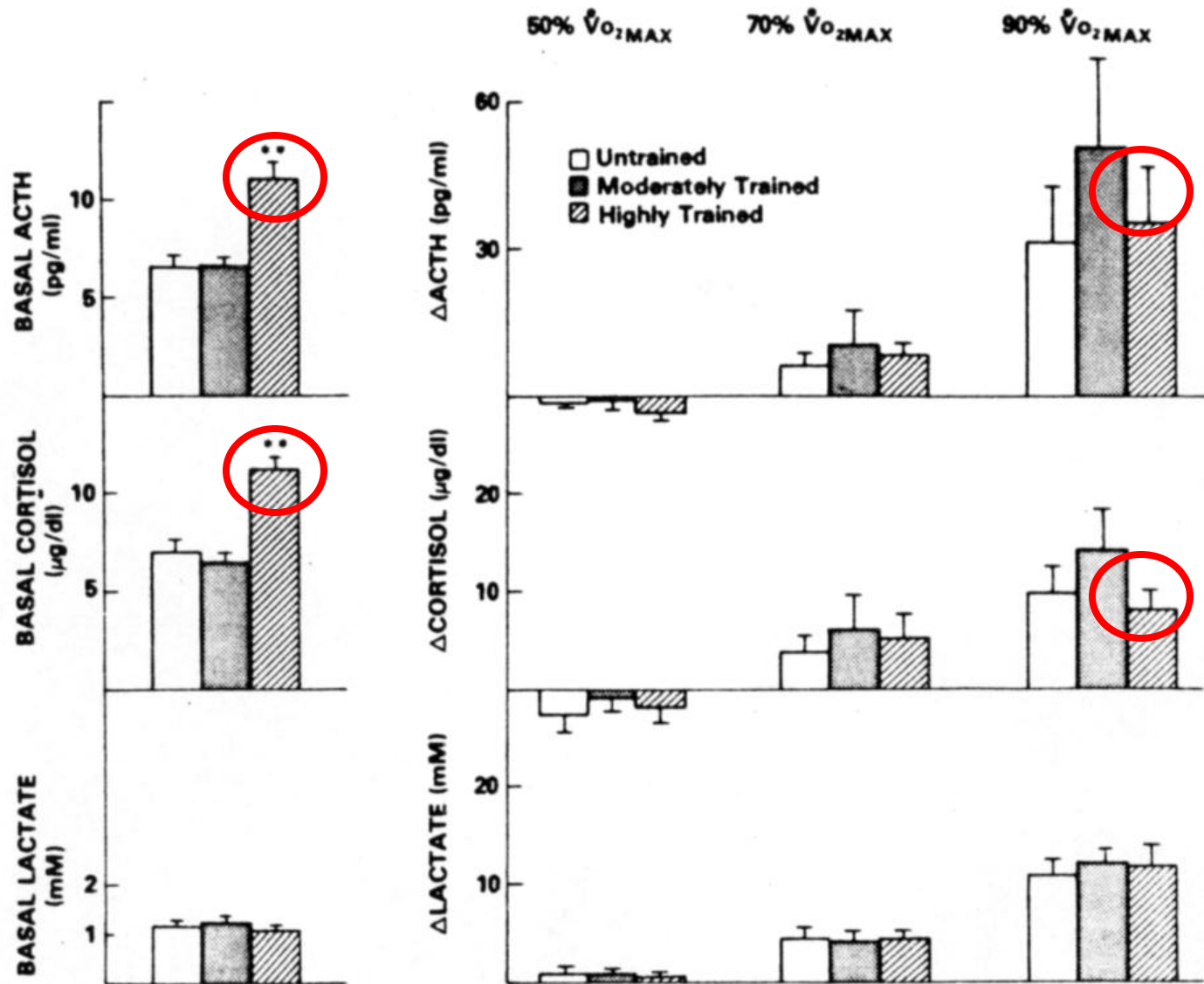
Exercise-thermoregulatory stress and increased β -endorphin

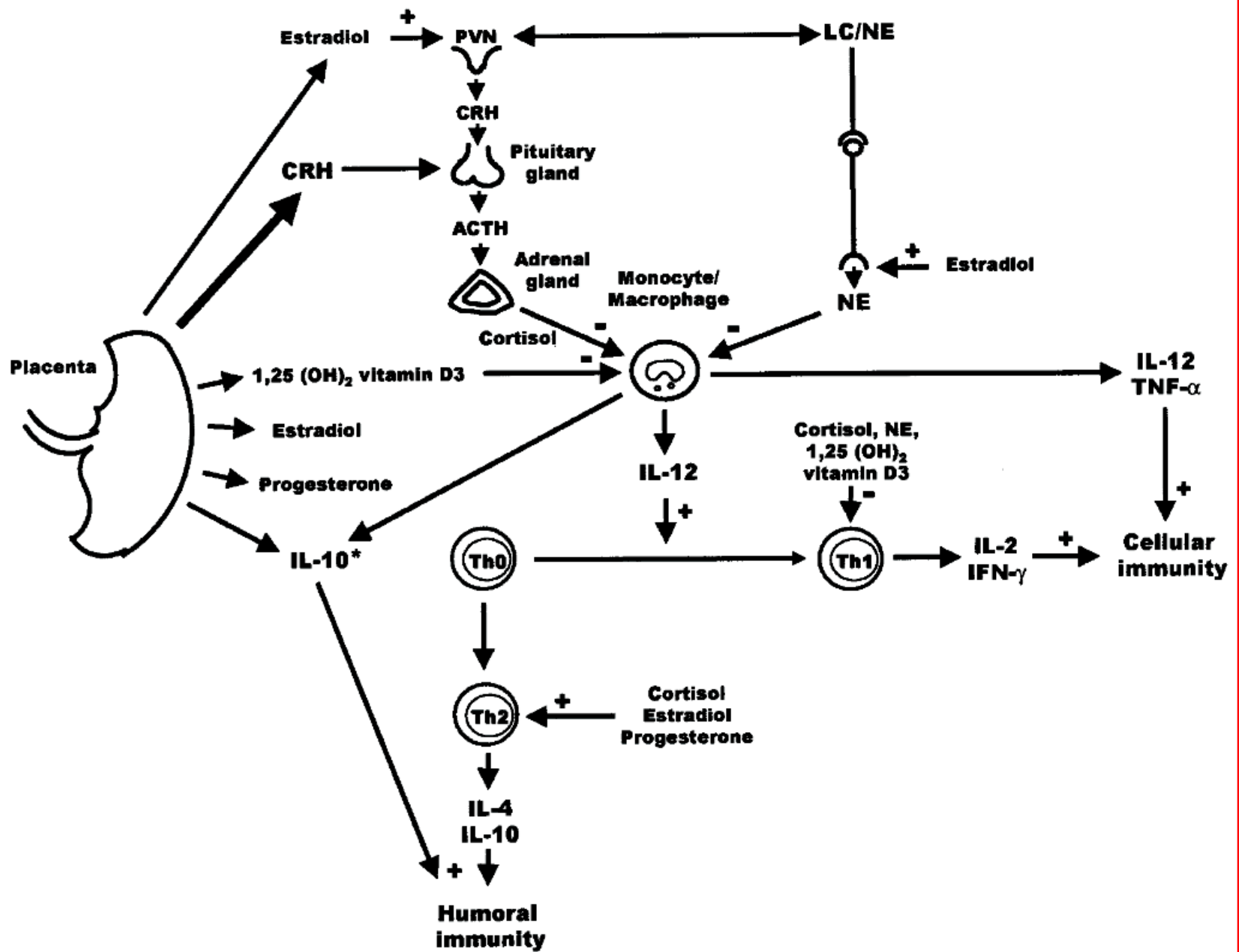


Απάντηση του ΥΓΕ στην άσκηση σε τάπητα

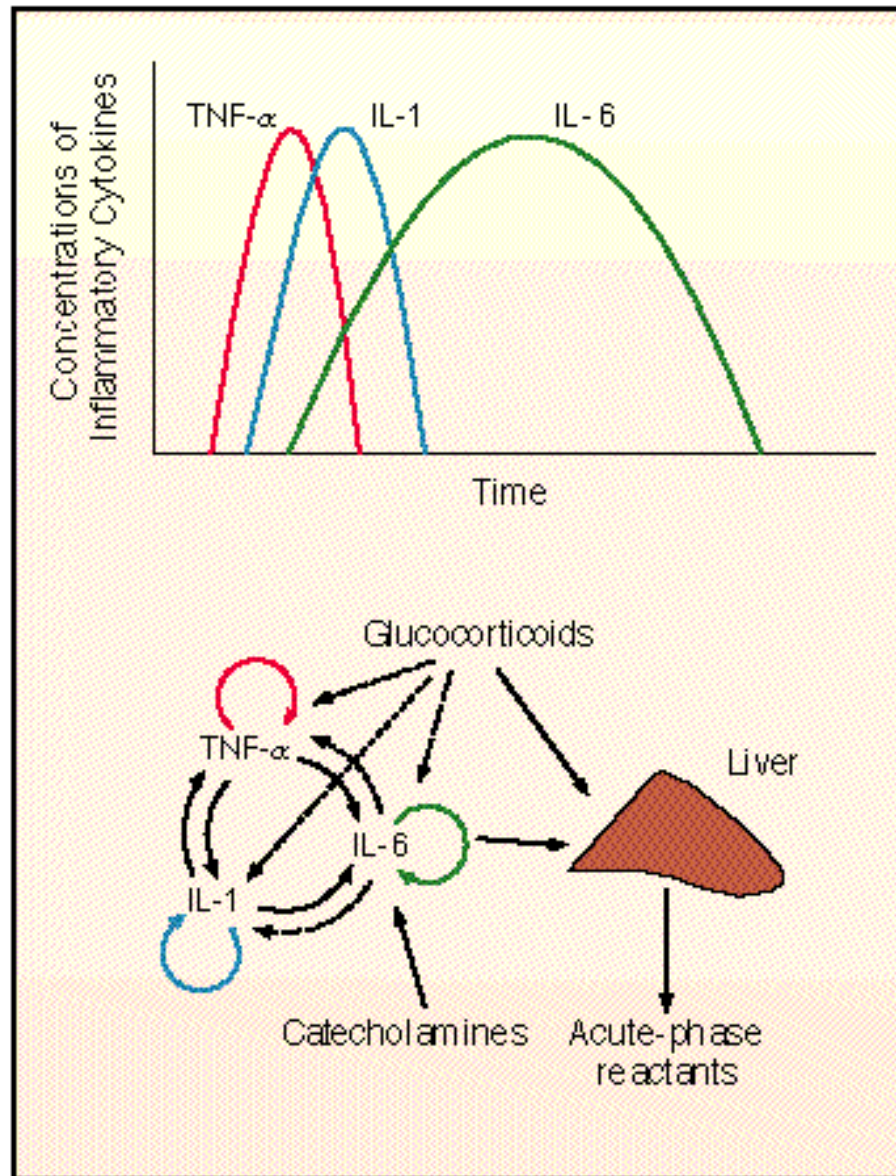


ACTH, F and lactate before and after treadmill exercise

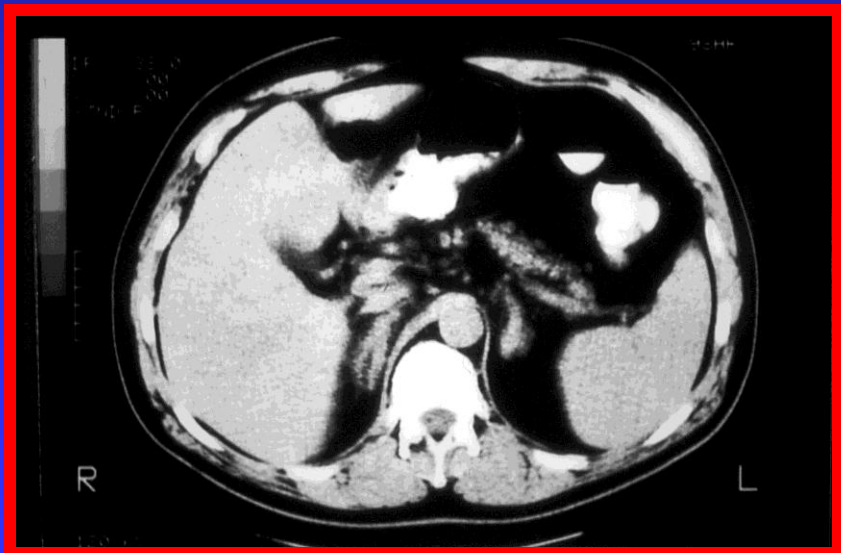
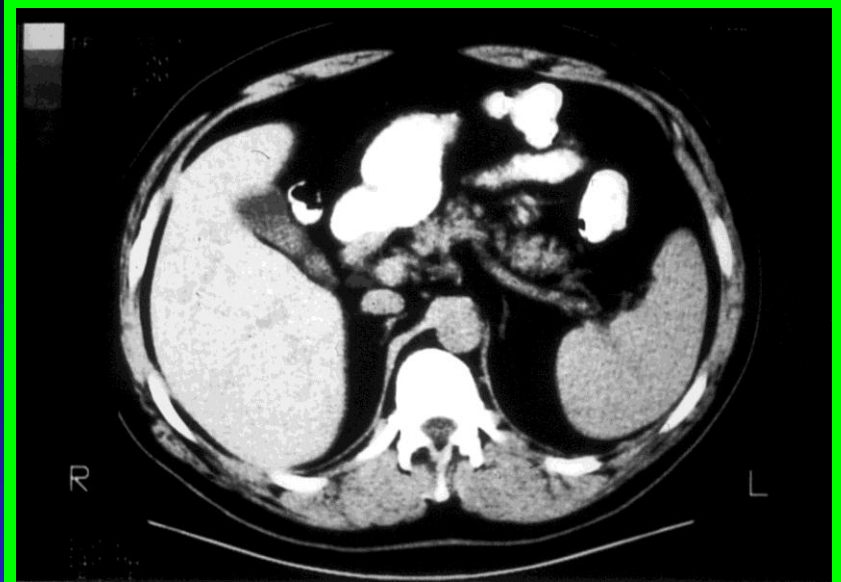
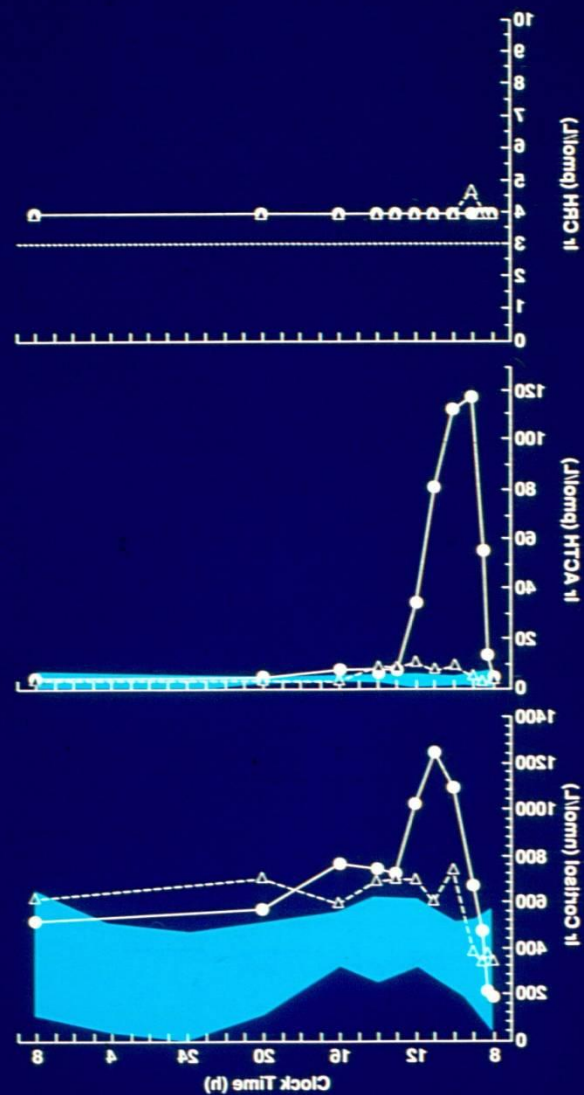




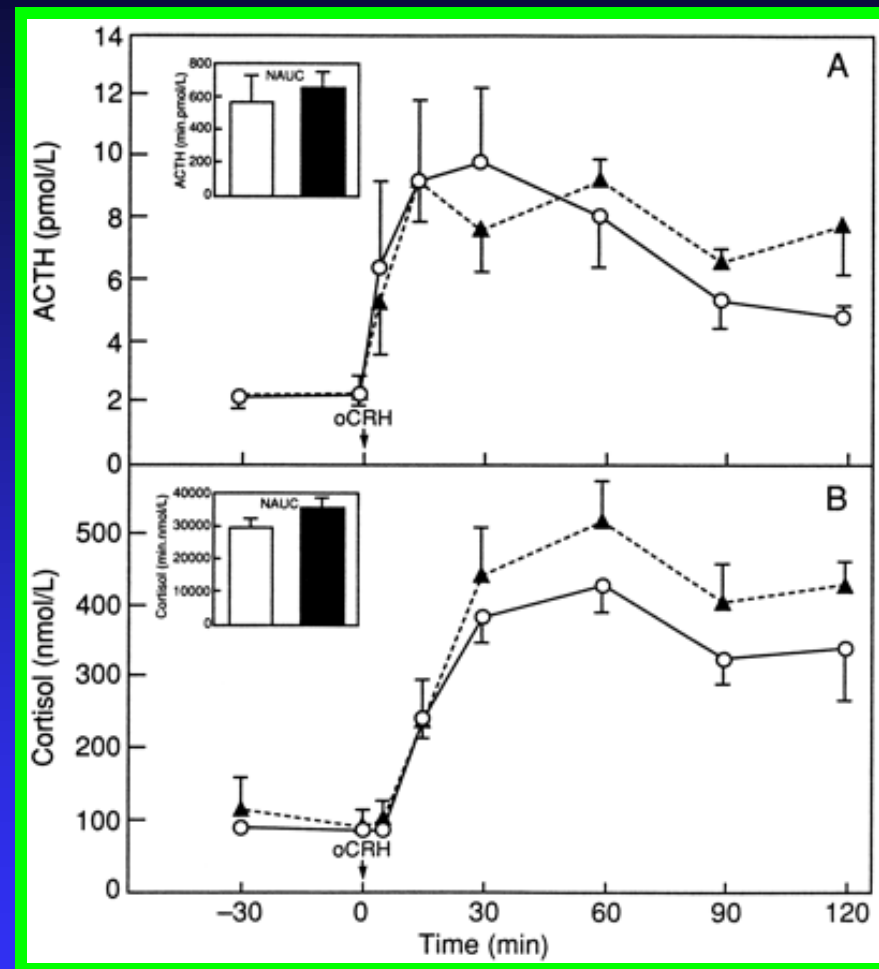
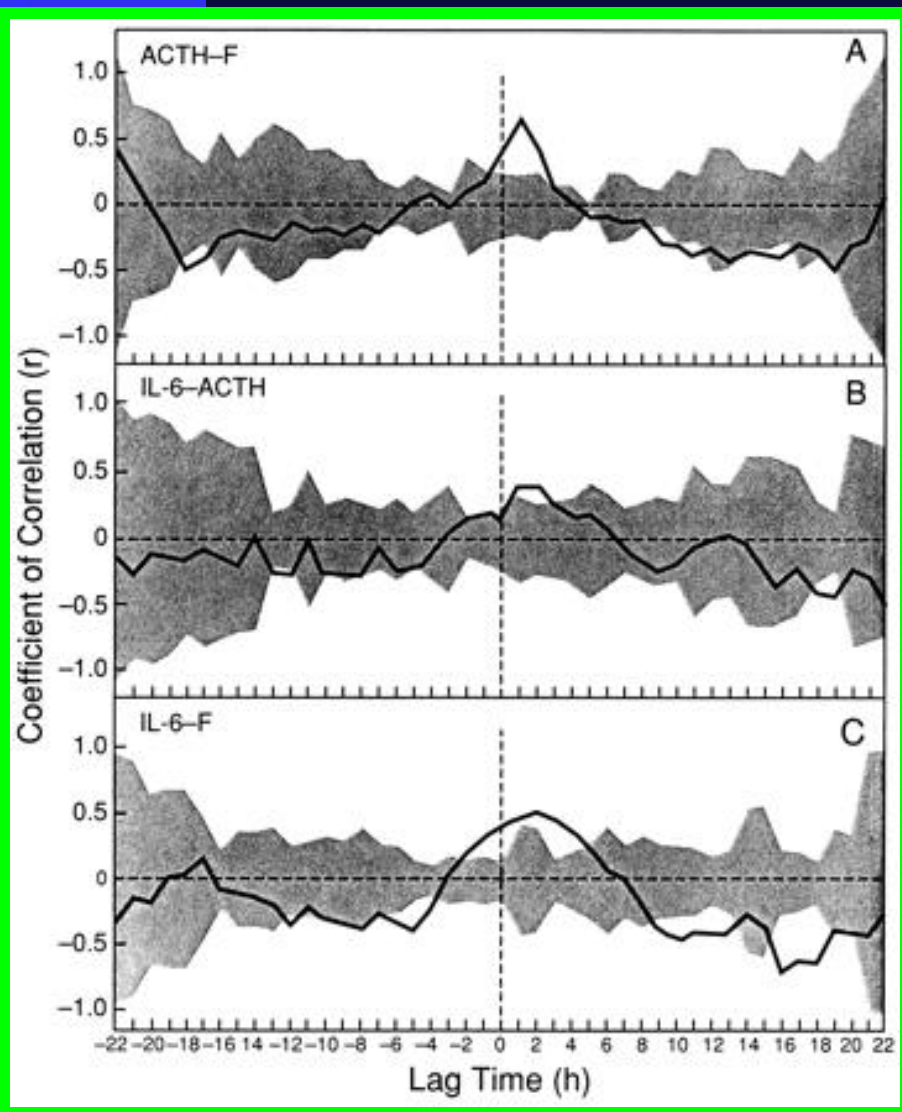
**ΑΣΚΗΣΗ
ΥΥΕ ΑΕΟΝΑΣ
ΚΑΙ
ΚΥΤΤΑΡΟΚΙΝΕΣ**



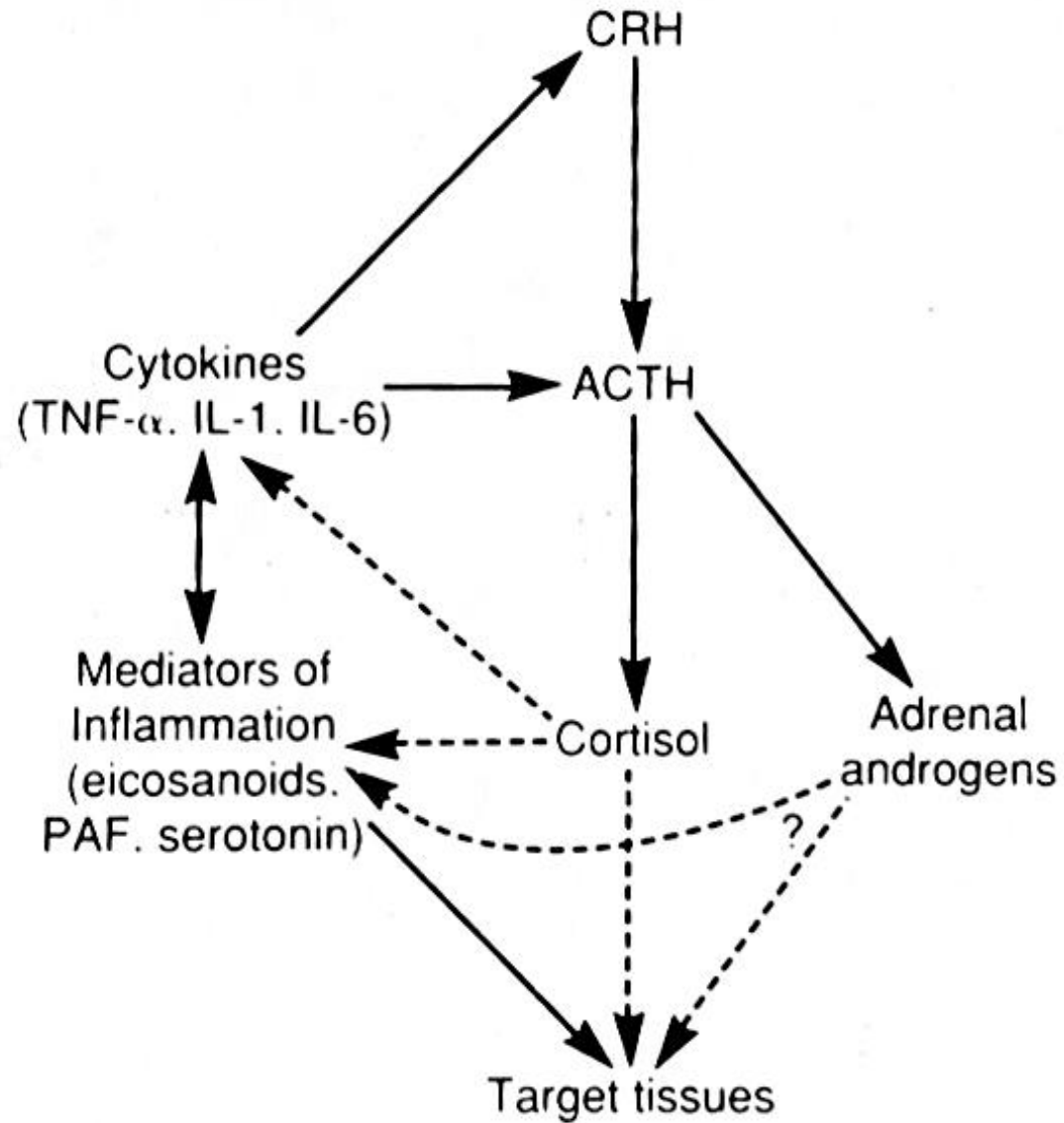
N. Engl. J. Med. 1995,
332:1351-1362



Rheumatoid arthritis

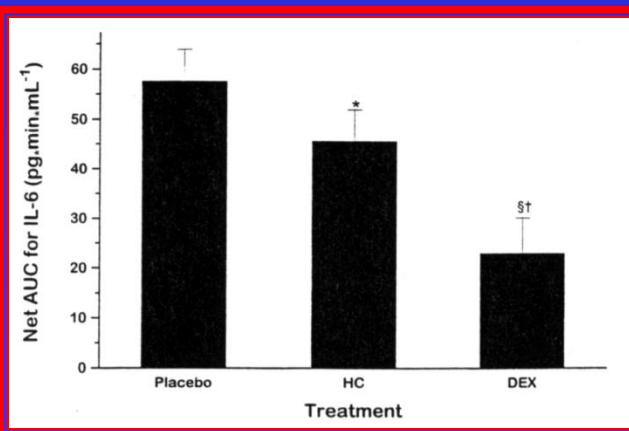
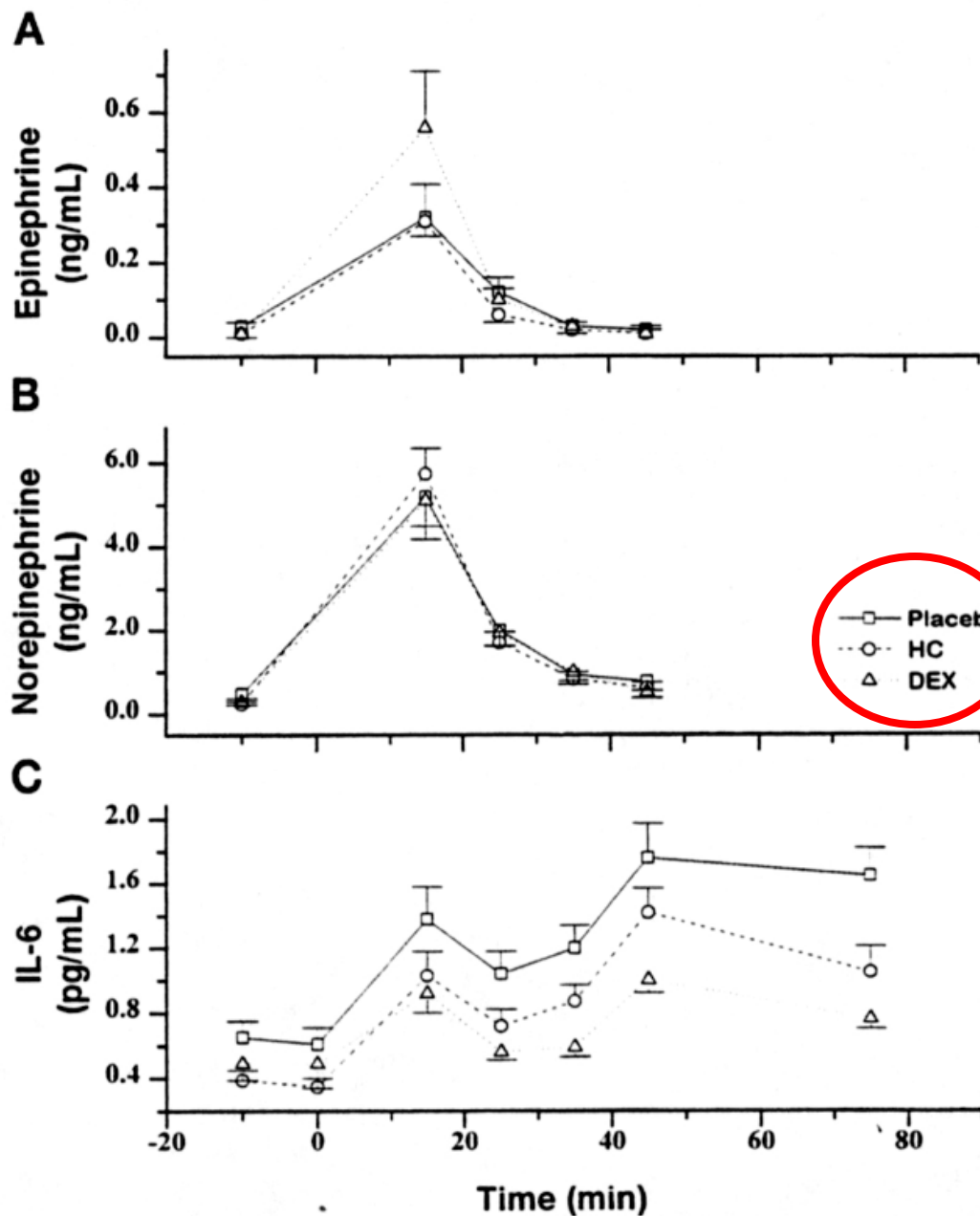


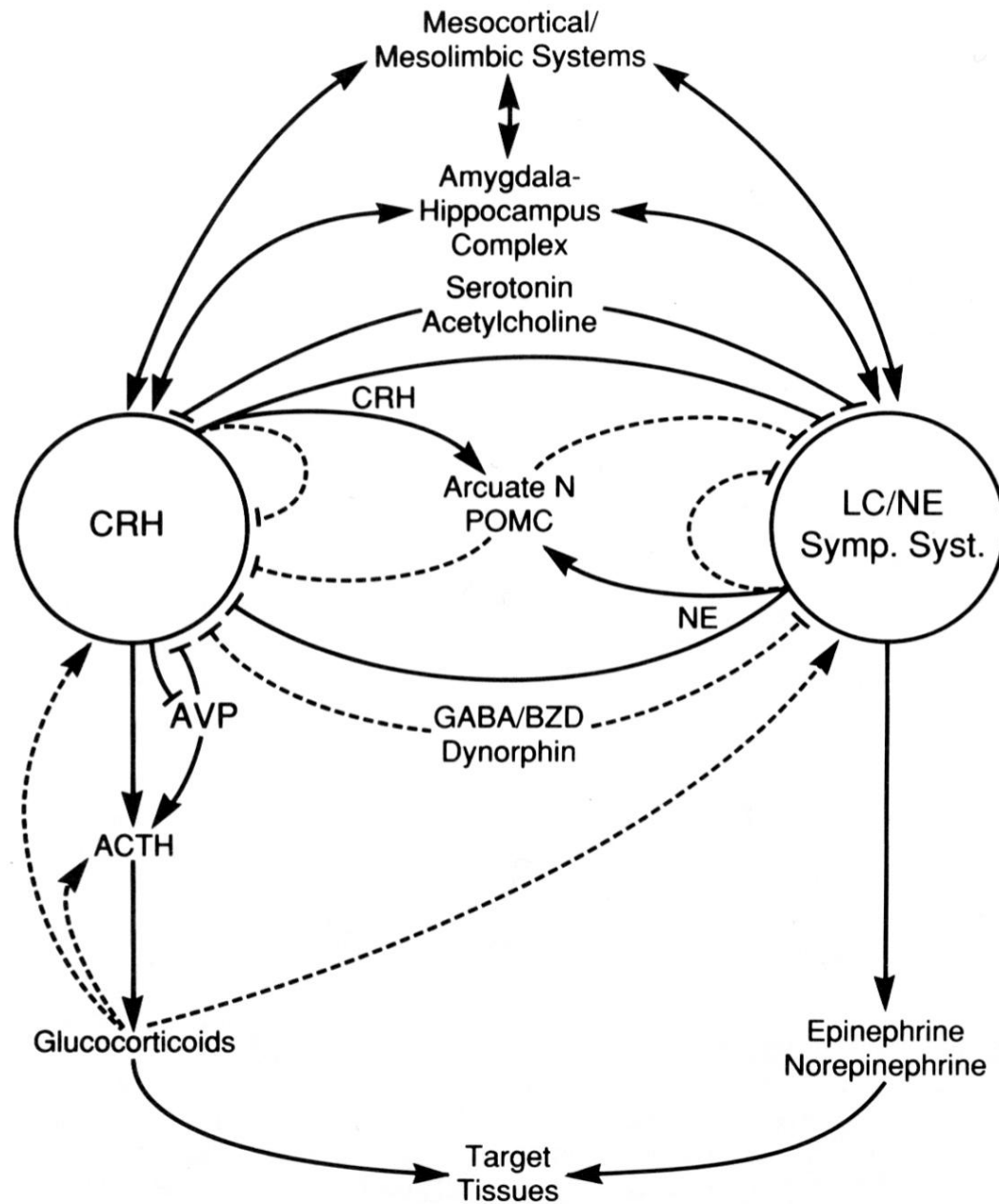
J. Clin. Endocrinol. Metab. 1997, 82:1279-1283



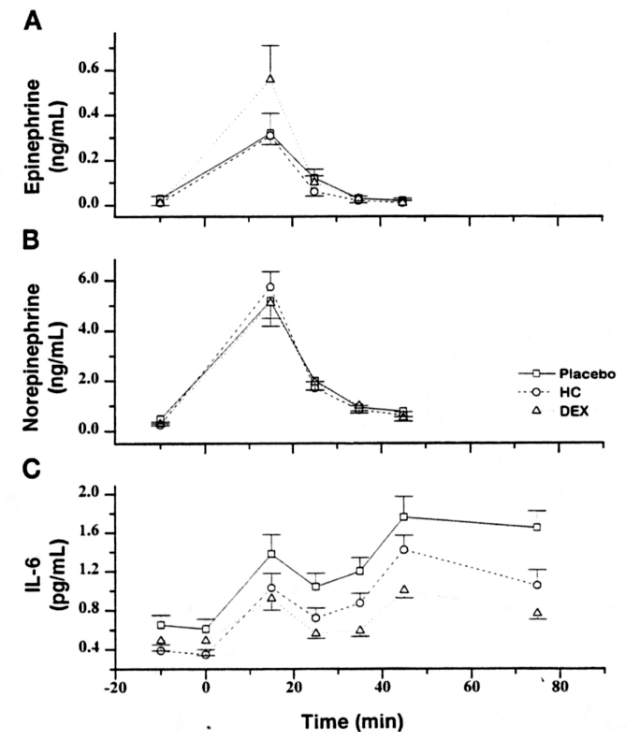
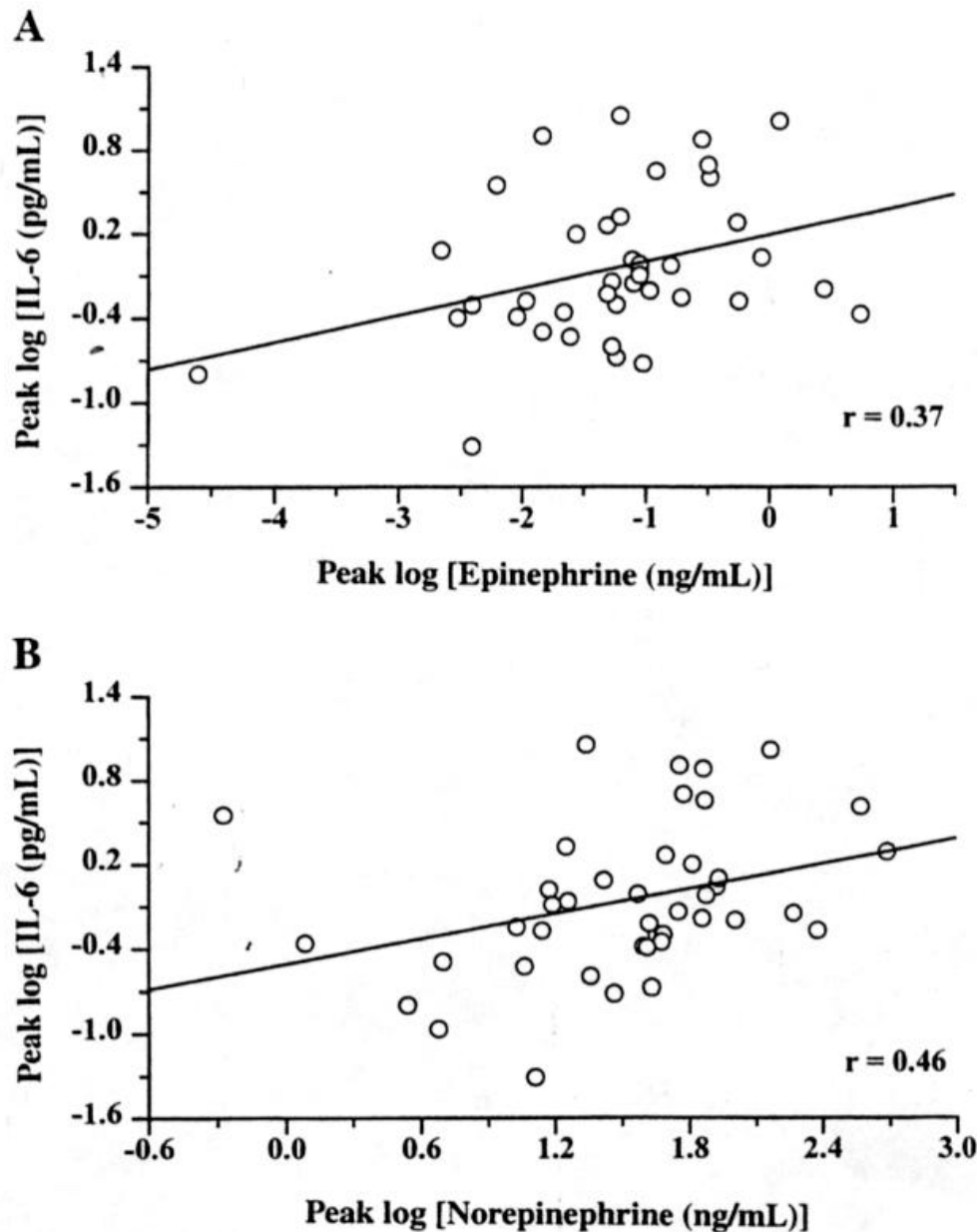
Η άσκηση
διεγείρει
την έκκριση IL-6 s

Αναστολή από
γλυκοκορτικοειδή

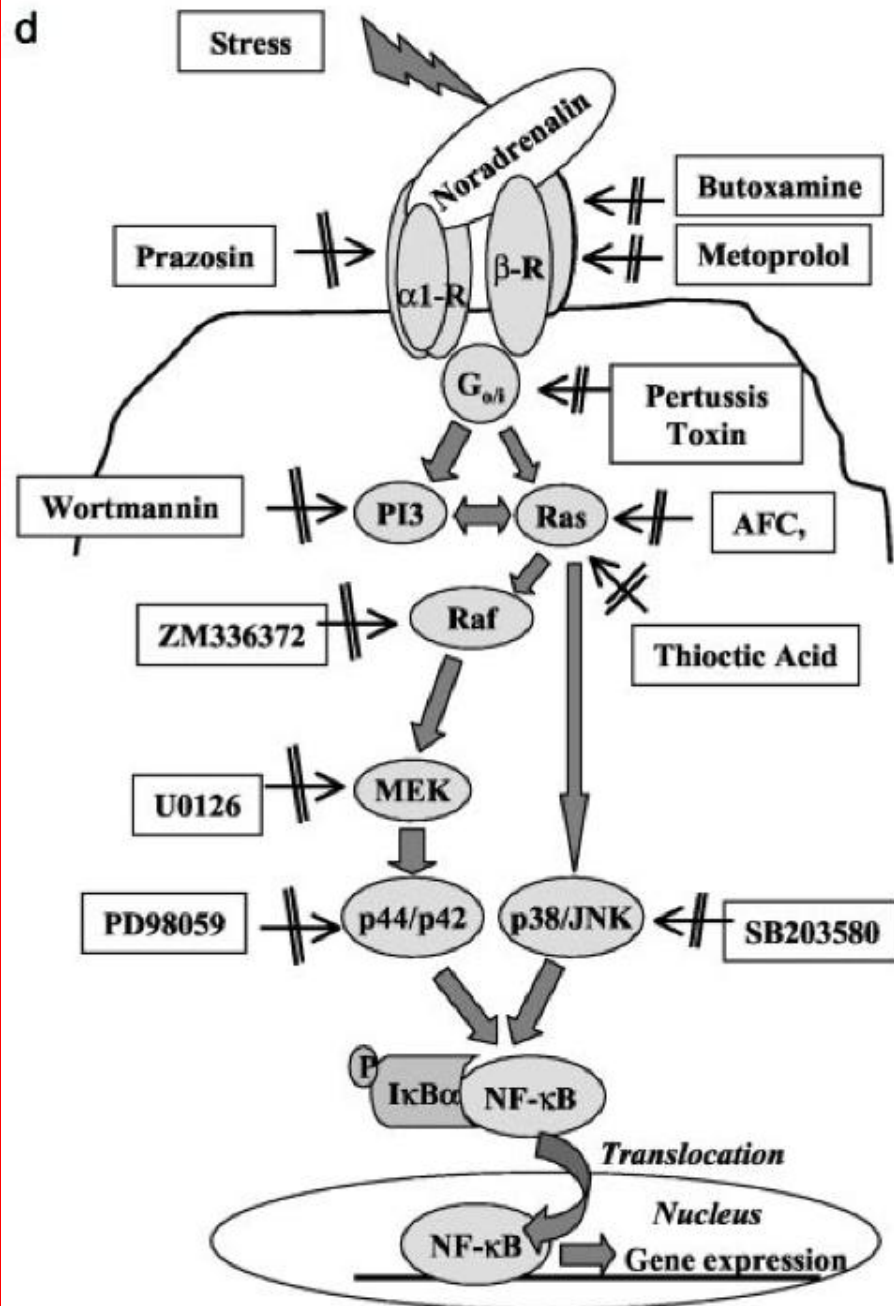




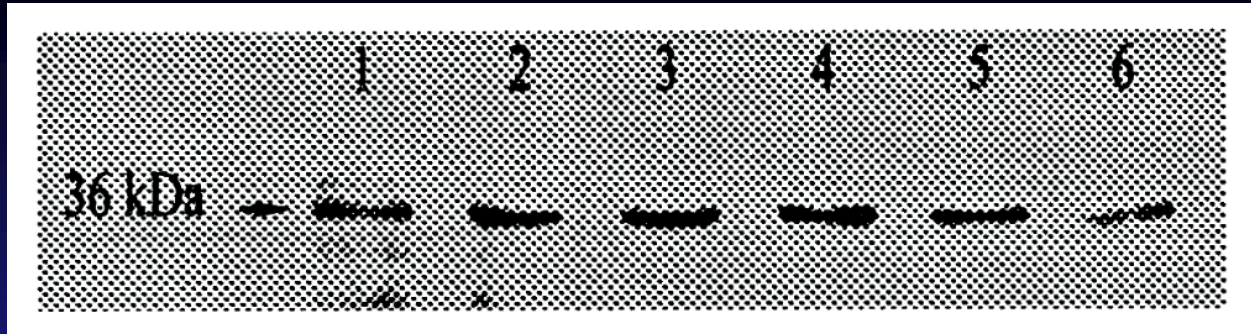
Exercise-stimulated IL-6 correlates with catecholamines



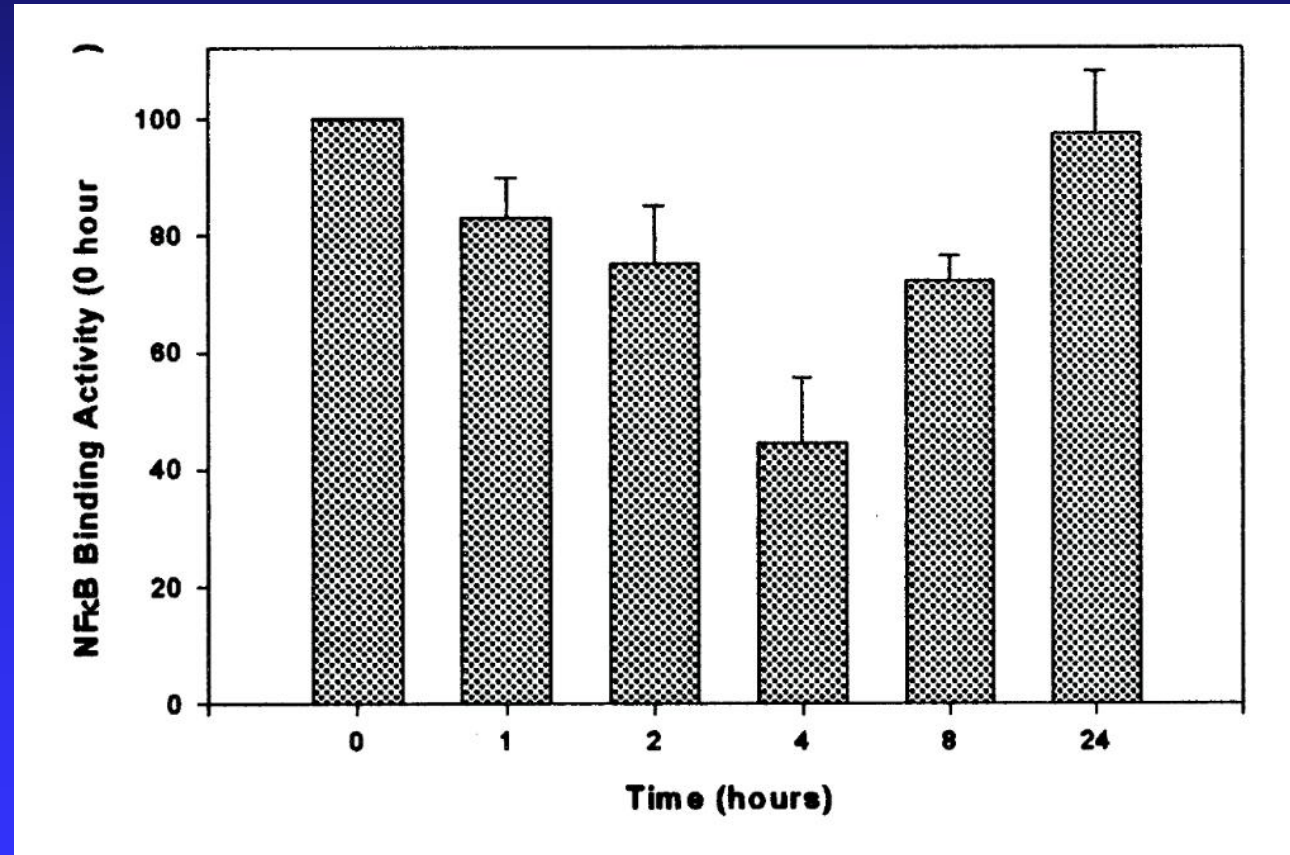
Ερμηνεία



IkappaB in MNC



**Hydrocortisone
injection *in vivo*
(MNC cells)**

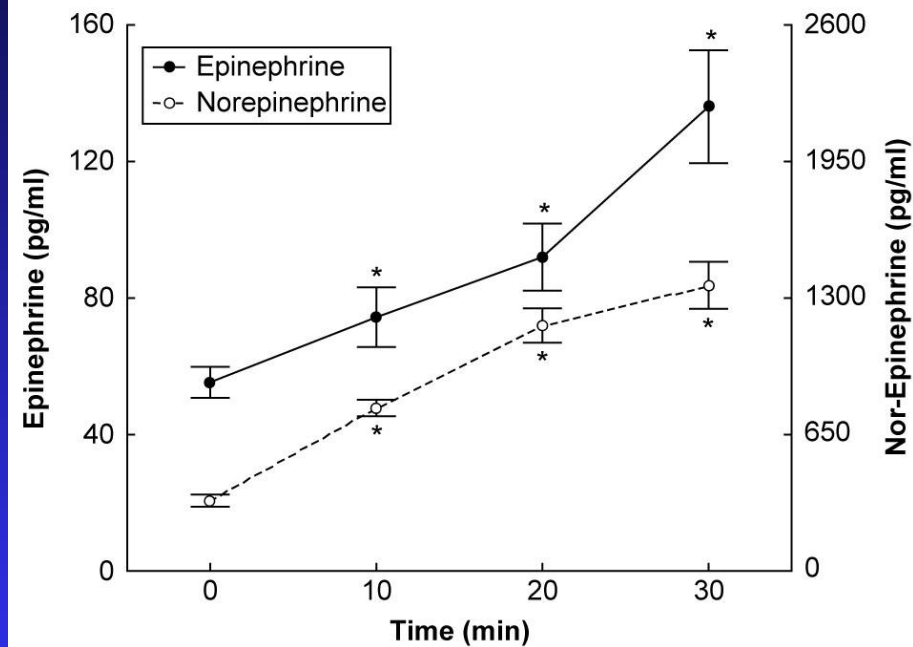
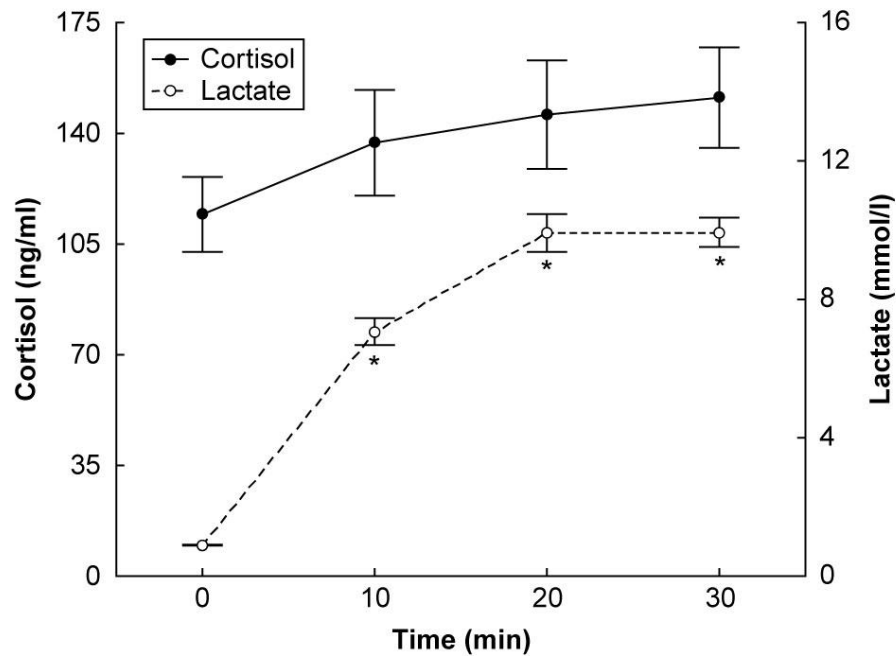


NF-kappaB binding

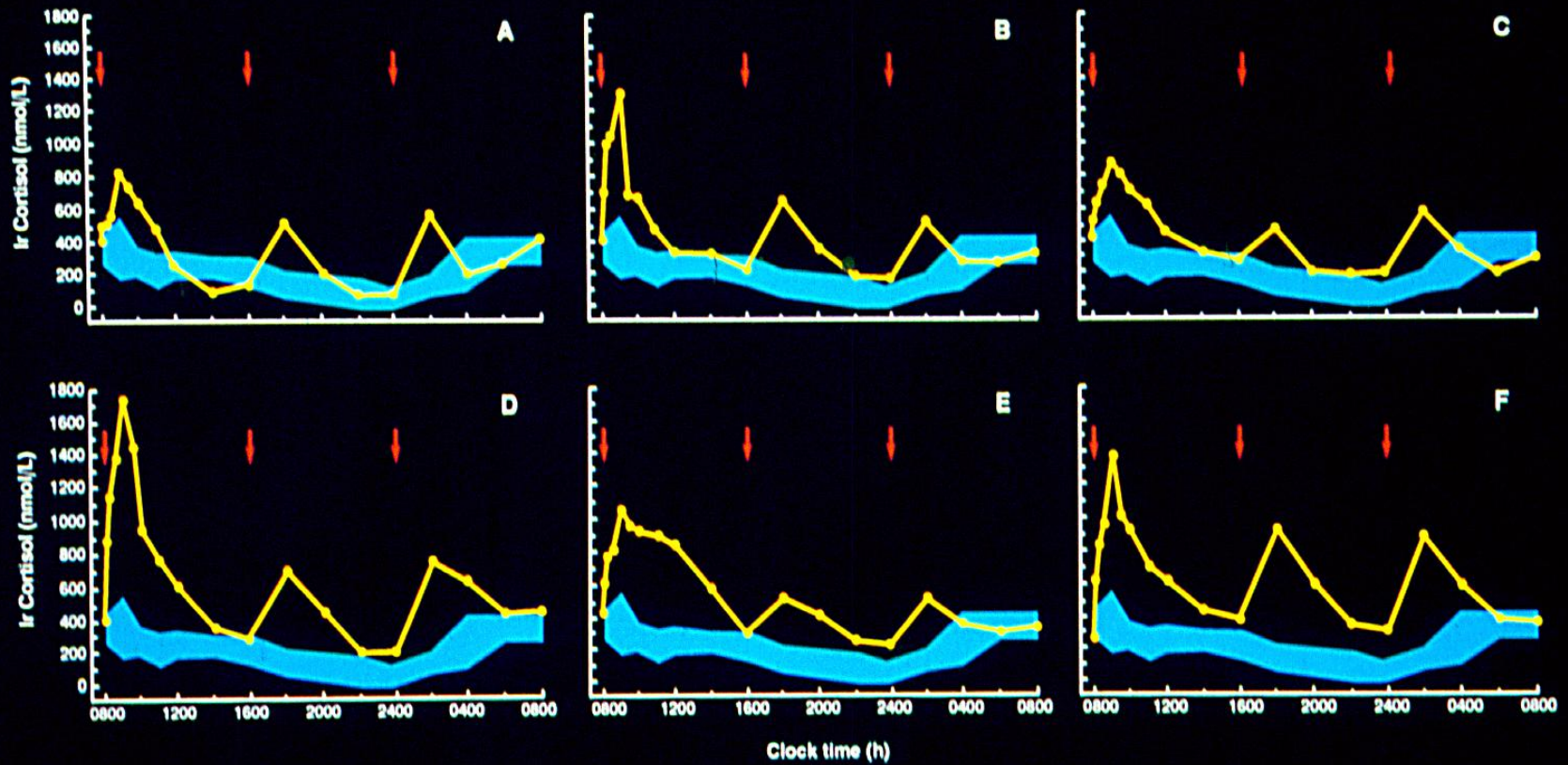
ΑΣΚΗΣΗ ΑΝΤΙΣΤΑΣΕΩΝ

1. 10 ΑΣΚΗΣΕΙΣ (ΣΤΗΘΟΣ, ΠΛΑΤΗ, ΤΕΤΡΑΚΕΦΑΛΟΣ, ΔΙΚΕΦΑΛΟΙ, ΤΡΙΚΕΦΑΛΟΙ, ΚΟΙΛΙΑΚΟΙ, ΡΑΧΙΑΙΟΙ Κ.ΛΠ.)
2. 1 ή 2 ή 3 σετ
3. 10-12 ΕΠΑΝΑΛΗΨΕΙΣ
4. 75-80% 1ΜΕ

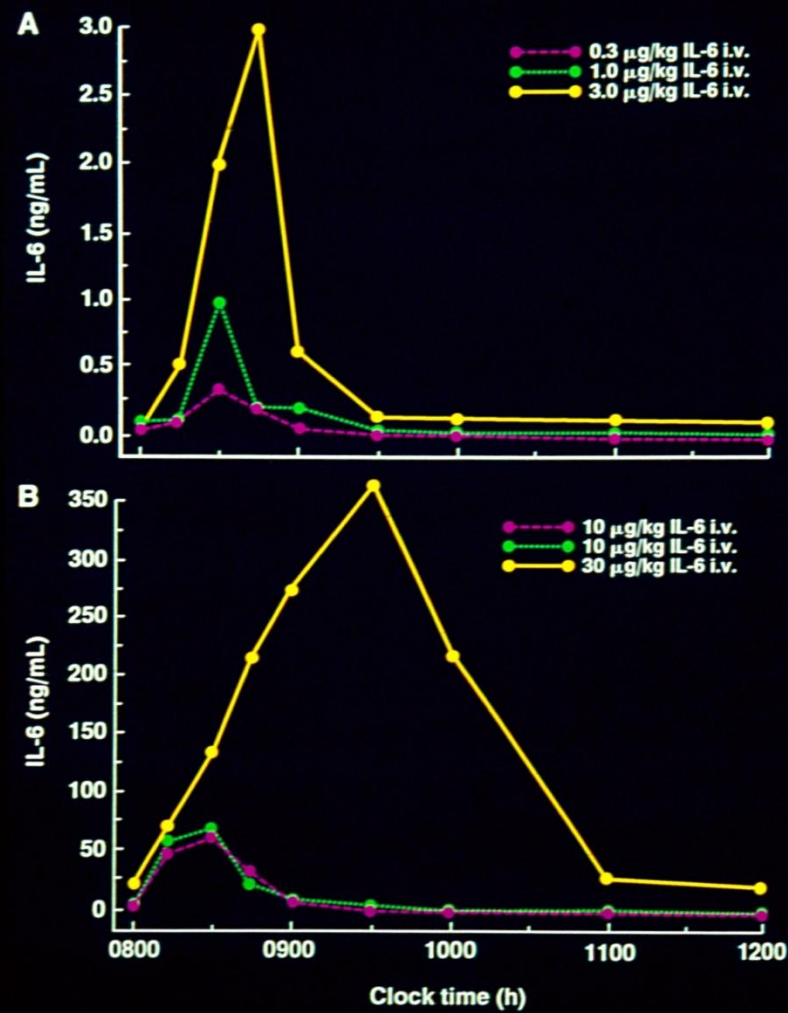
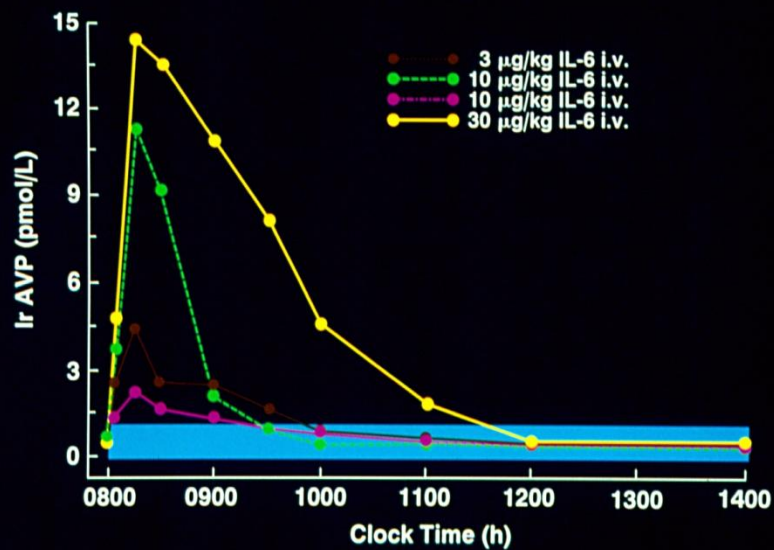
Απάντηση του ΥΥΕ στην άσκηση αντιστάσεων



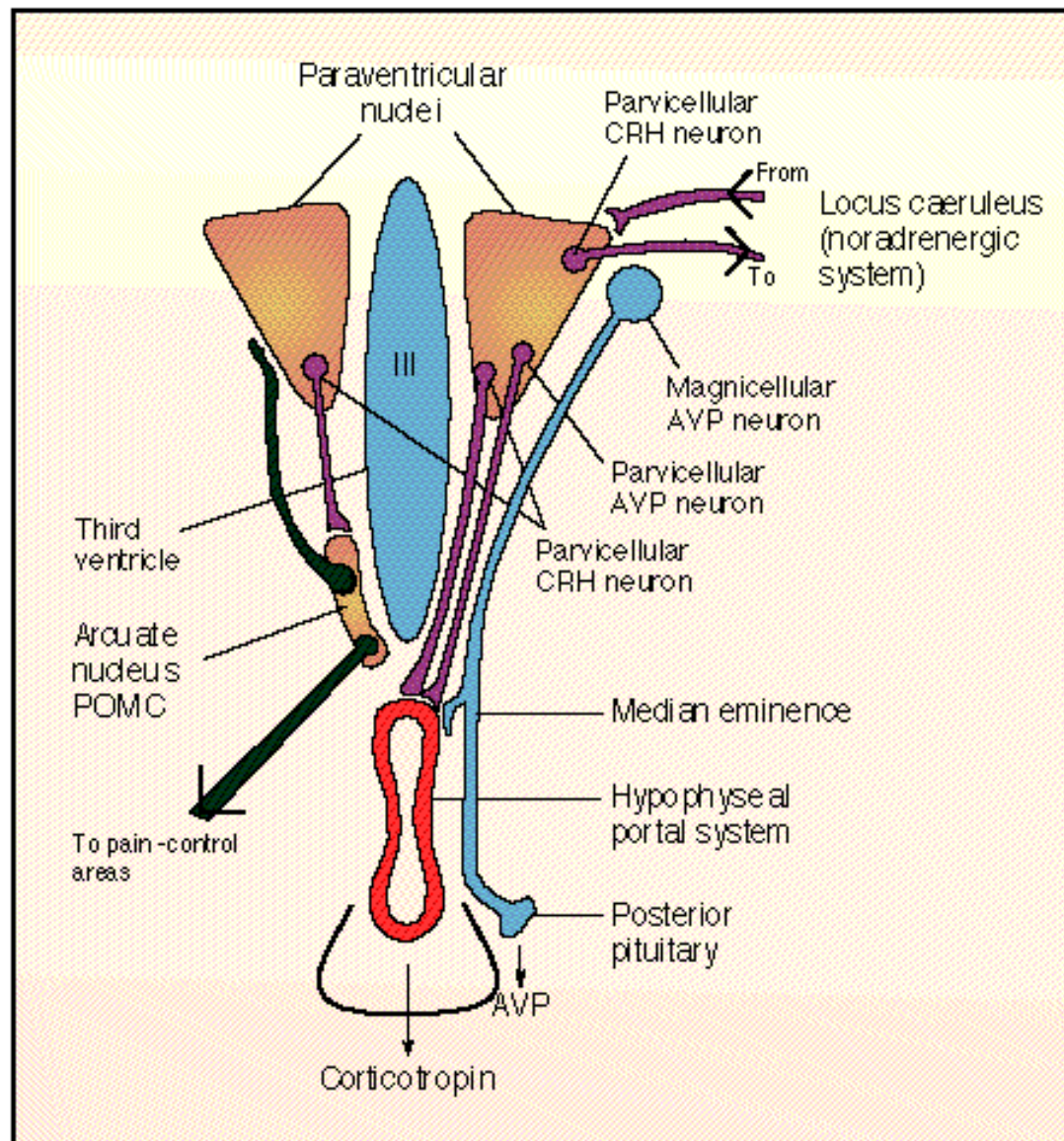
**ΥΥΕ ΑΕΟΝΑΣ
ΚΑΙ
ΑΝΤΙΑΙΟΥΡΗΤΙΚΗ
ΟΡΜΟΝΗ**

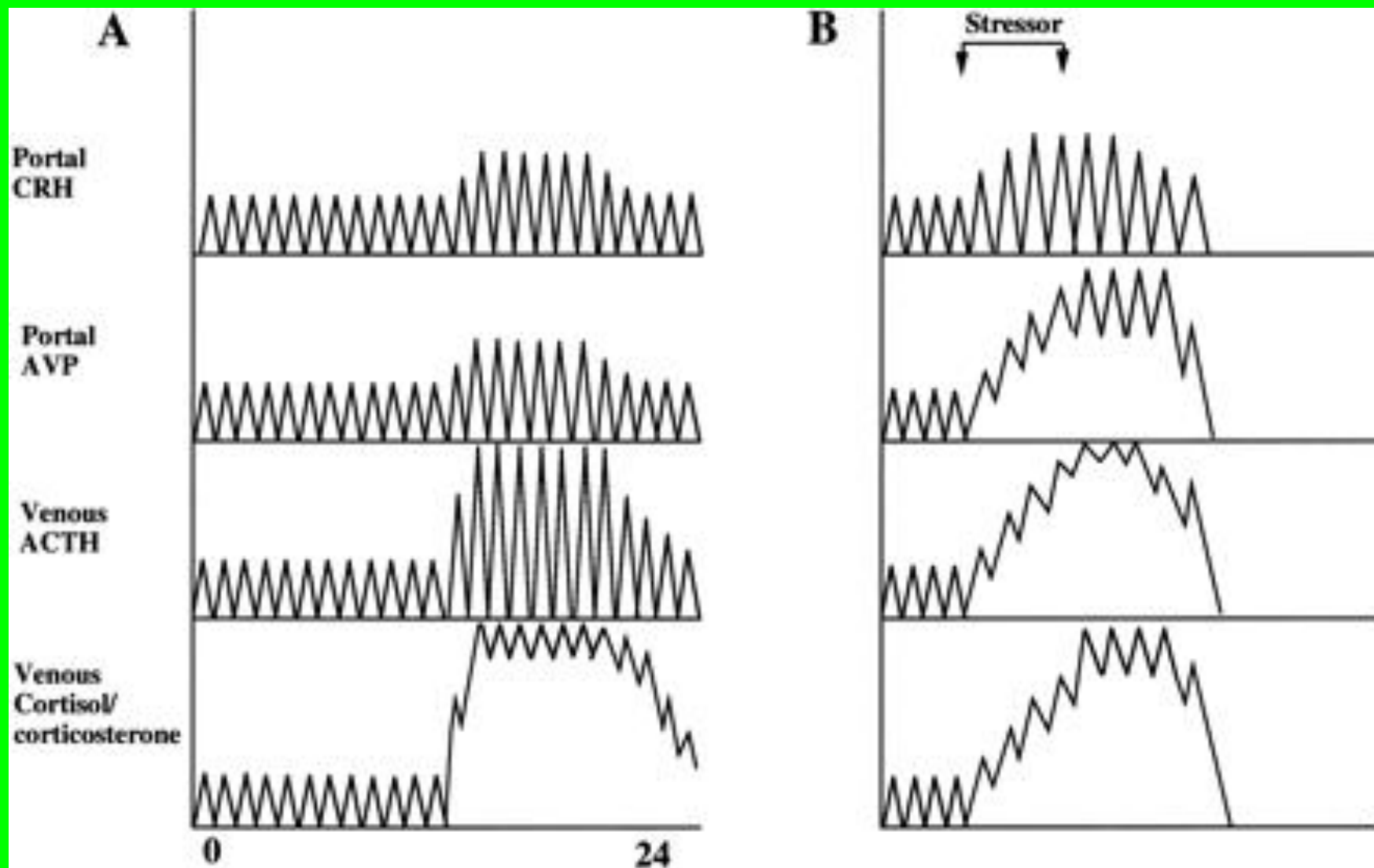


G. Mastorakos et al, J. Clin. Endocrinol. Metab. 1994, 79:934-939



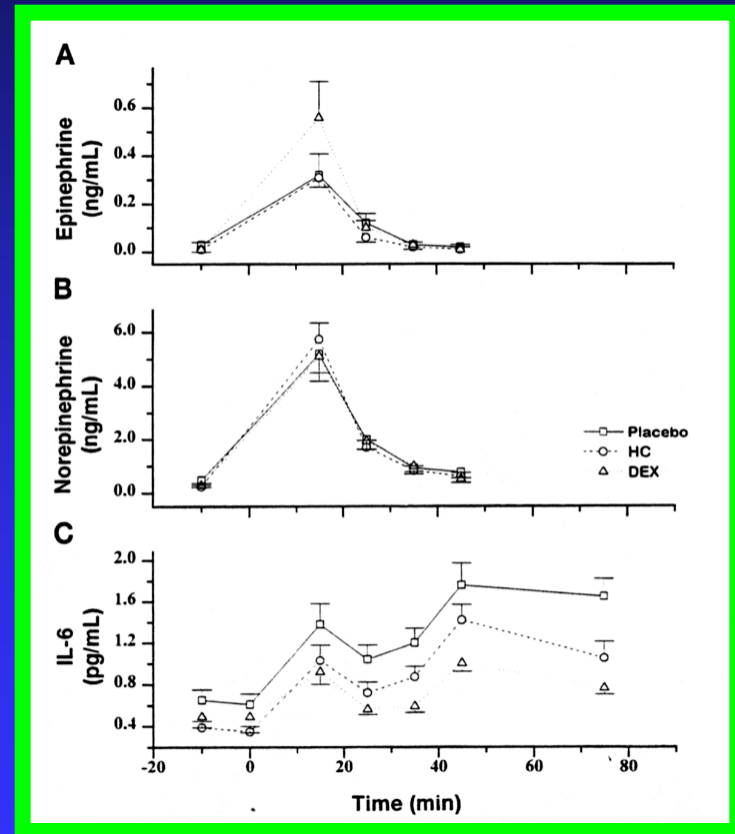
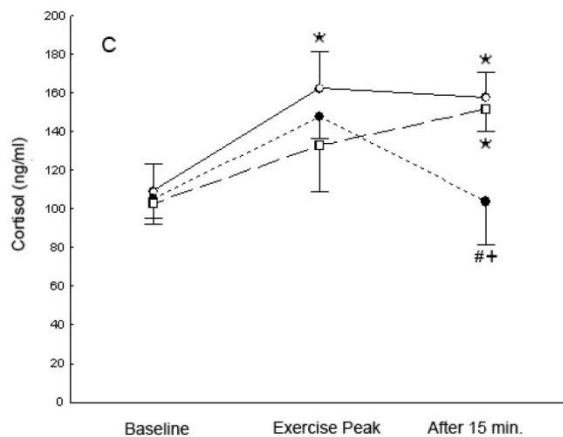
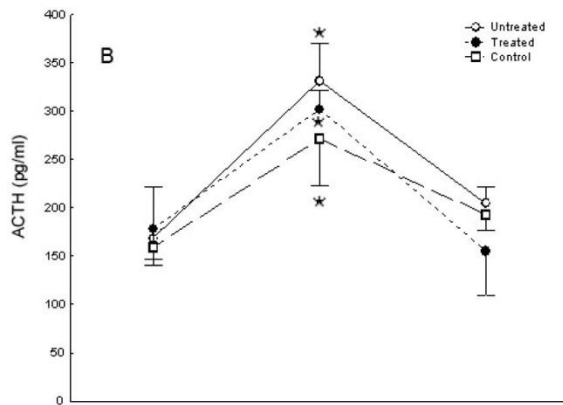
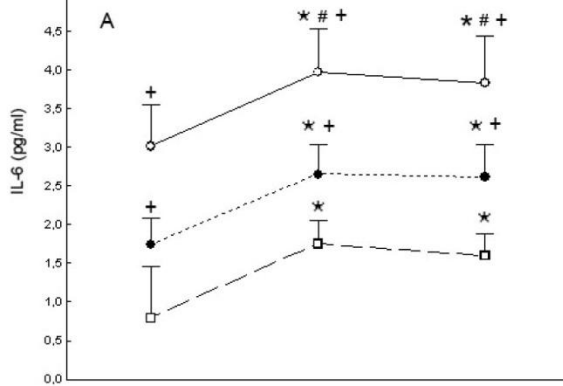
G. Mastorakos et al,
J. Clin. Endocrinol. Metab. 1994, 79:934-939



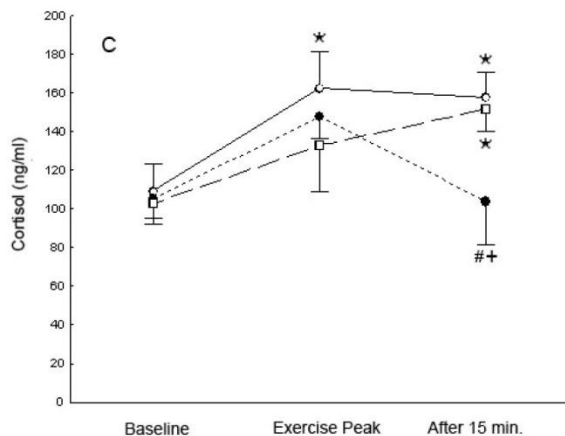
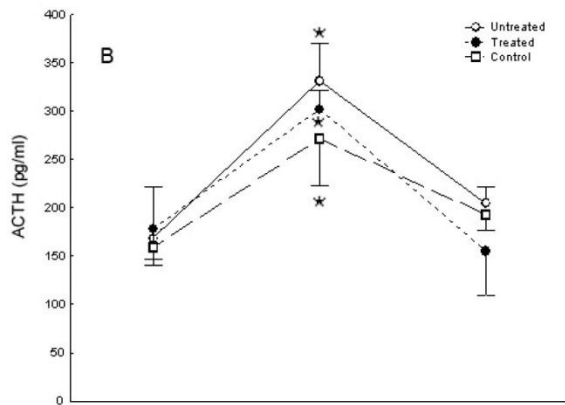
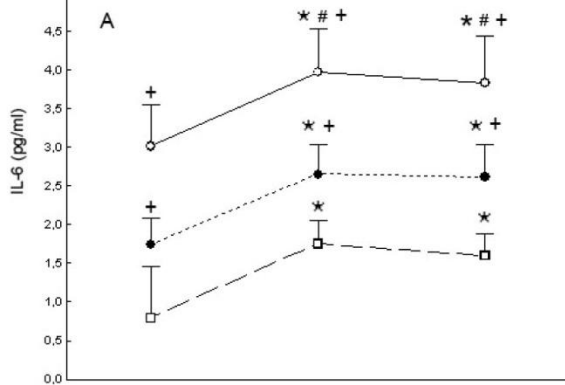


**Η ΑΣΚΗΣΗ ΩΣ ΔΟΚΙΜΑΣΙΑ
ΕΛΕΓΧΟΥ ΤΗΣ ΟΞΕΙΑΣ
ΑΝΟΣΟΦΛΕΓΜΟΝΩΔΟΥΣ
ΑΠΑΝΤΗΣΗΣ και ΤΟΥ ΥΥΕ ΣΕ
ΑΥΤΟΑΝΑΣΑ ΝΟΣΗΜΑΤΑ**

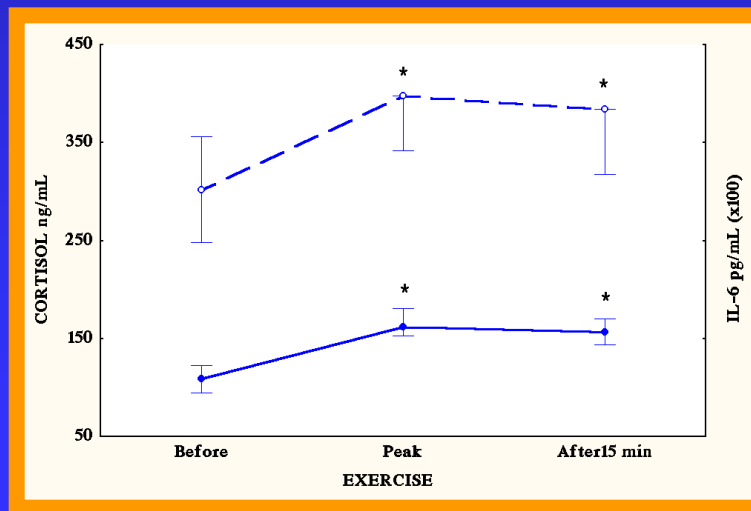
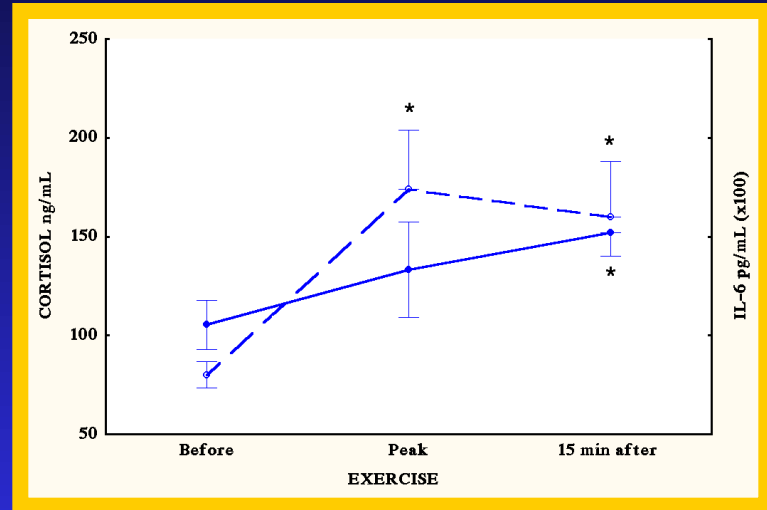
Απάντηση της IL-6 και του ΥΥΕ στην άσκηση σε τάπητα σε σαρκοειδικούς ασθενείς



Απάντηση της IL-6 και του ΥΥΕ στην άσκηση σε τάπητα σε σαρκοειδικούς ασθενείς

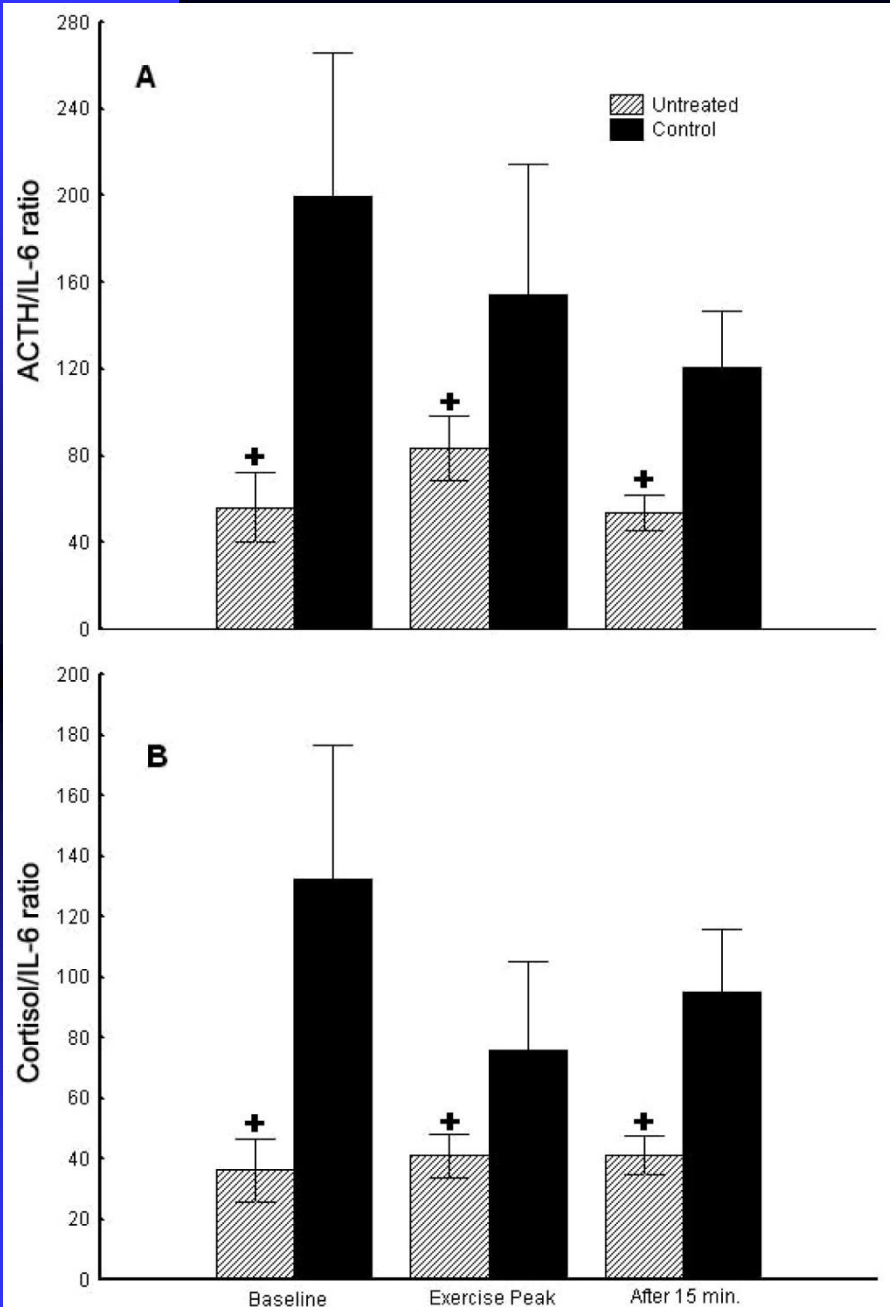


Υγιείς
μάρτυρες



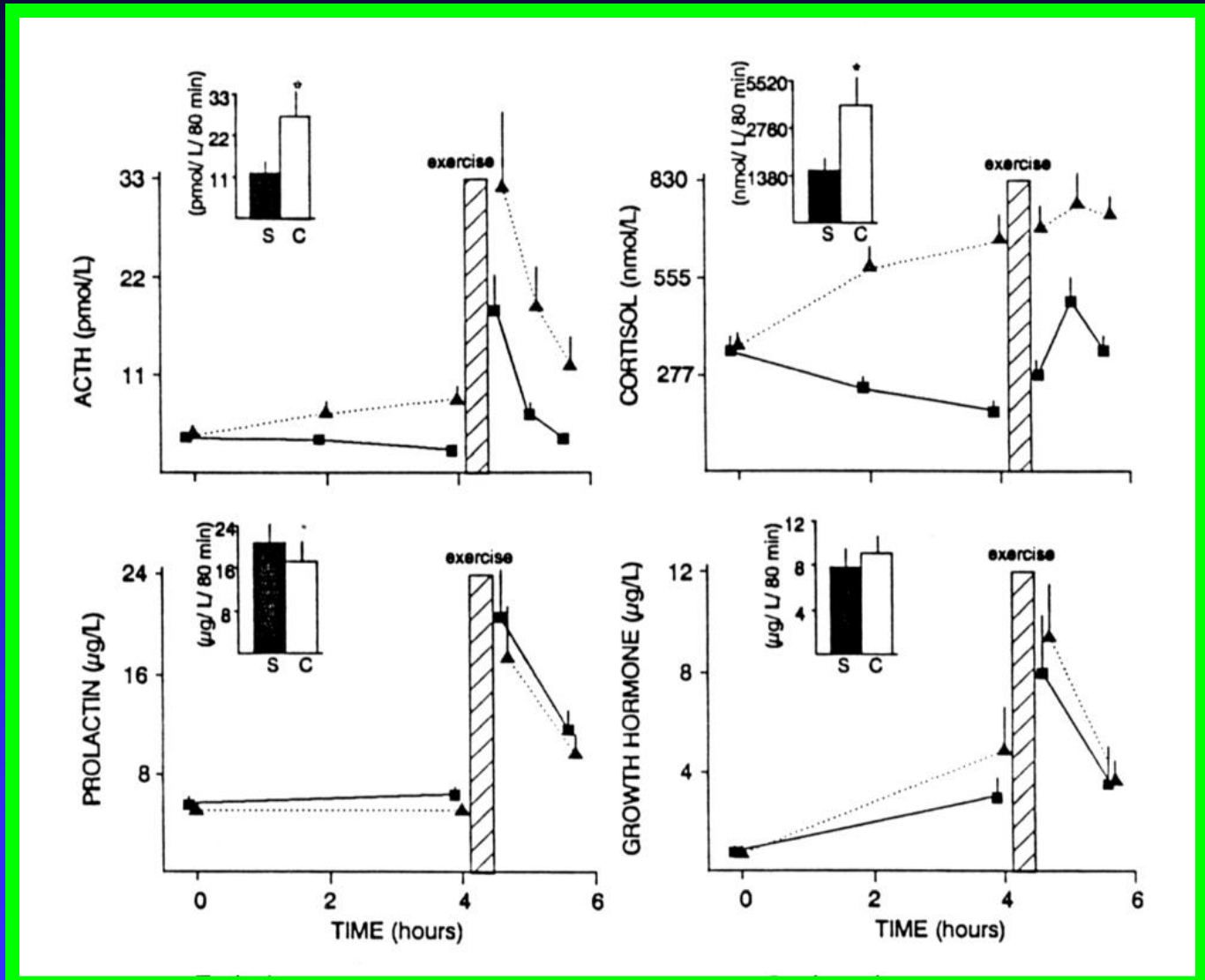
Ασθενείς

Απάντηση της IL-6 και του ΥΥΕ στην άσκηση σε τάπητα σε σαρκοειδικούς ασθενείς

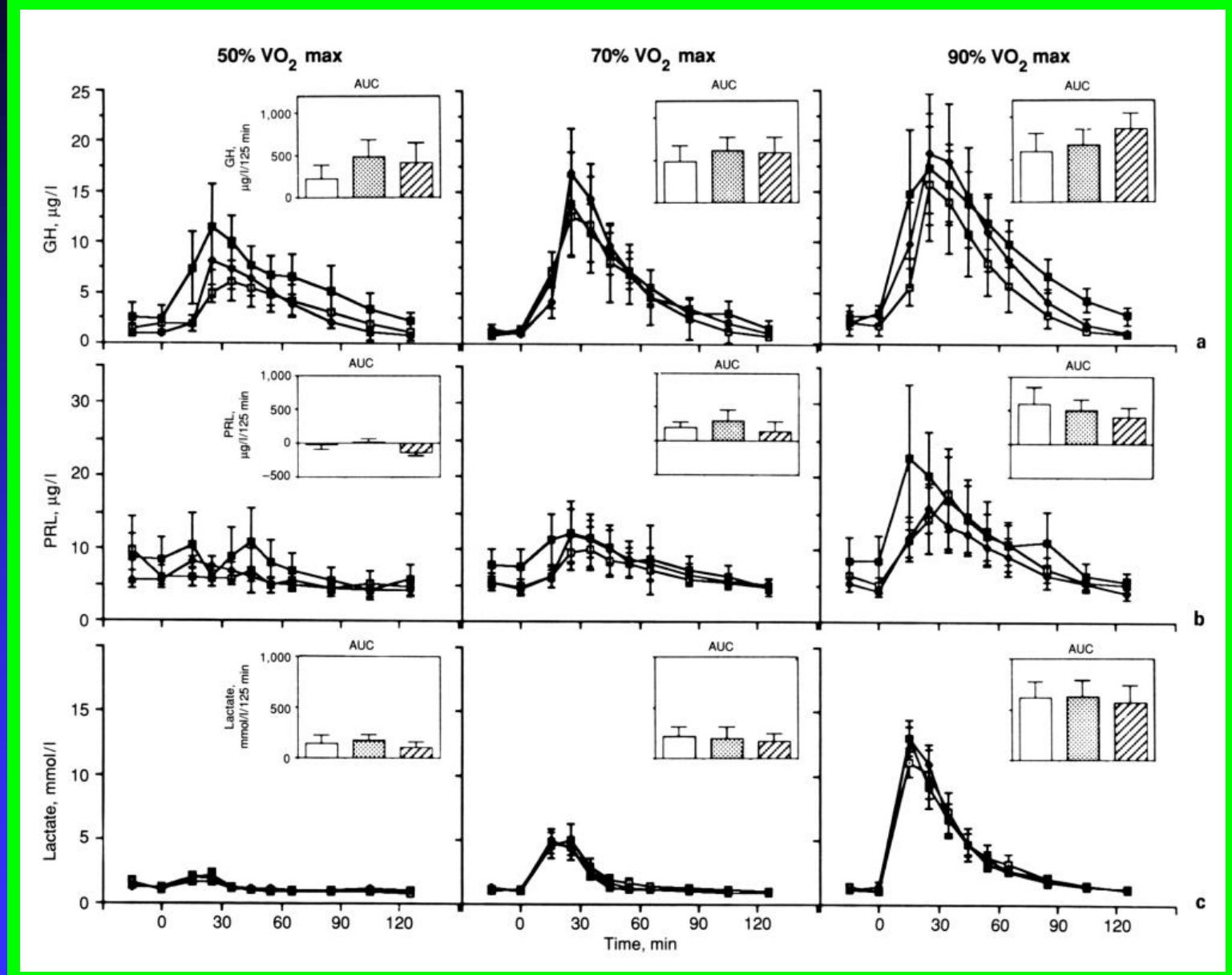


**Η ΑΣΚΗΣΗ ΚΑΙ ΆΛΛΕΣ
ΟΡΜΟΝΕΣ ΠΟΥ
ΣΧΕΤΙΖΟΝΤΑΙ ΜΕ ΤΗΝ
ΑΠΑΝΤΗΣΗ ΣΤΟ STRESS**

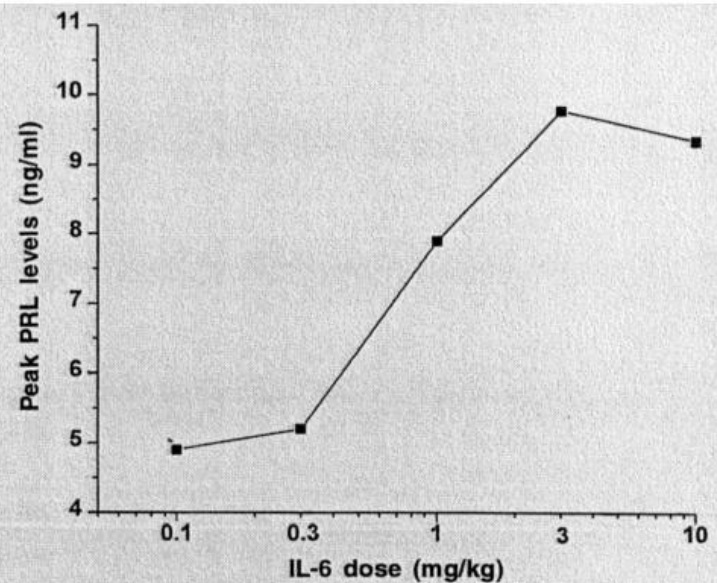
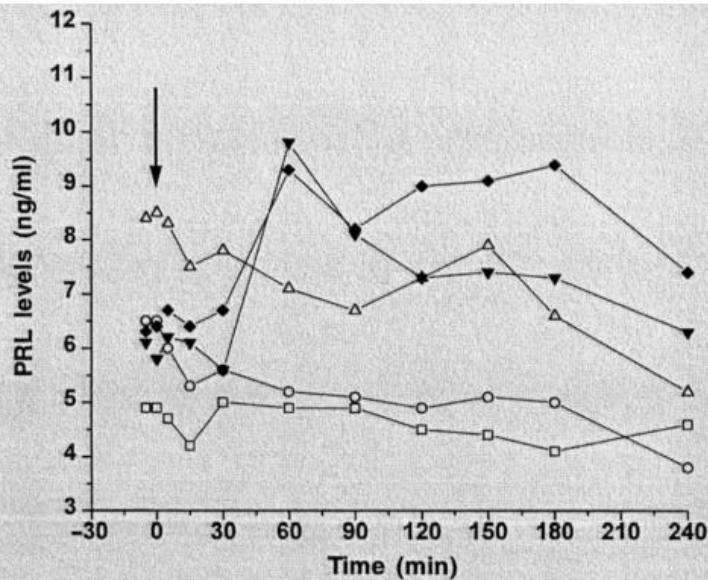
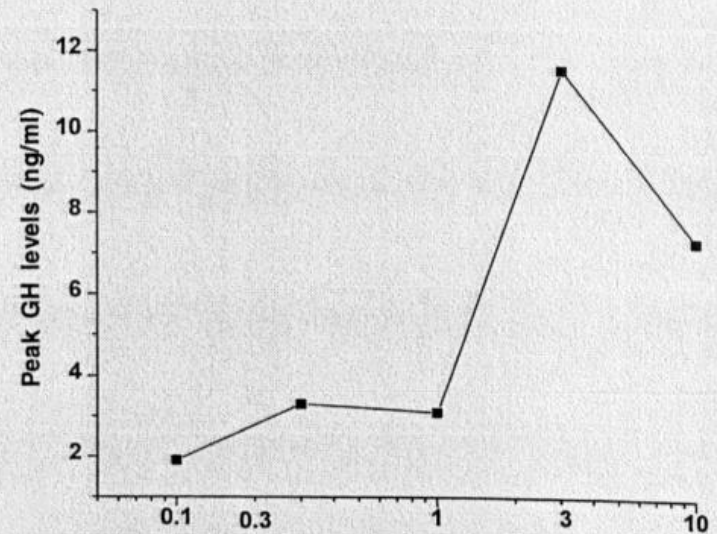
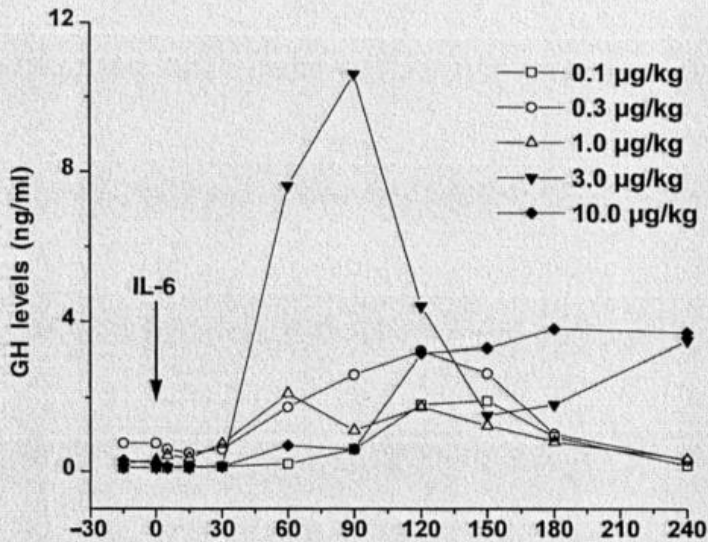
CRH is not the sole factor mediating exercise-induced ACTH



GH and PRL responses to graded levels of acute exercise



GH and PRL responses to graded doses of IL-6



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