



## *The Medical* **Bulletin**

### In Endocrinology

#### **“I DON'T WANT TO AGE” – CAN WE PREVENT OR DELAY AGING?**

THIS IS THE MOST VITAL QUESTION OF THE MILLENNIUM AND YET UNANSWERED. CAN DEATH BE DELAYED? CAN THE COURSE OF DISABILITY AND FUNCTIONAL DEPENDENCE BE REVERSED?

THE THREE MOST WIDELY APPLIED THERAPEUTIC STRATEGIES HAVE BEEN GROWTH HORMONE, VITAMIN D, DEHYDROEPIANDROSTERONE ACETATE.

#### **GROWTH HORMONE**

ADULT GROWTH HORMONE TREATMENT IS RECOMMENDED FOR PRIOR CHILDHOOD GHD, ACQUIRED GHD DUE TO STRUCTURAL LESIONS OR TRAUMA AND IDIOPATHIC GHD. TO DOCUMENT ADULT GHD, LOW SERUM IGF-1 LEVELS AND PROVOCATIVE INSULIN TOLERANCE TEST IS CONDUCTED.

RECOMMENDED DOSES ARE 100 – 200 MCG/DAY WITH MONTHLY UPTITRATION UP TO 600MCG/DAY. CLINICAL RESPONSE, SIDE EFFECTS AND IGF -1 LEVELS ARE USED TO MONITORING THE THERAPY TWICE A YEAR.

REVIEW OF LITERATURE FOR THE THERAPEUTIC APPLICATION OF GH IN NON GHD ADULTS DID NOT SUPPORT ITS BENEFICIAL ROLE. INCREASE IN LEAN BODY AND MUSCLE MASS WAS ACCOMPANIED BY FLUID RETENTION AND EDEMA. THERE WAS NO EFFECT ON MUSCLE STRENGTH, BONE MASS OR FUNCTIONAL CAPACITY. REDUCTION IN TOTAL BODY FAT DECREASED TOTAL CHOLESTEROL LEVELS WITHOUT AFFECTING THE LDL OR TRIGLYCERIDES. NO SIGNIFICANT DIFFERENCE WAS DOCUMENTED IN THE CONTROL GROUP ON LIFESTYLE MANAGEMENT ALONE AND GH PLUS LIFESTYLE ARM.

CONCLUSION : GH HAS NO THERAPEUTIC RECOMMENDATION UNLESS WITH GHD.

#### **VITAMIN D**

HYPOVITAMINOSIS D IS COMMON IN THE POPULATION DUE TO REDUCED OUTDOOR PHYSICAL ACTIVITIES AND IMMOBILITY. AVOIDANCE OF SUNLIGHT AND USE OF SUN PROTECTIVE AGENTS.

LOW VITAMIN D IS ASSOCIATED WITH HYPERTENSION, DIABETES, INSULIN RESISTANCE, ELEVATED BMI AND INCIDENTAL HYPERTENSION.

THERE HAVE BEEN INDIRECT EVIDENCES TO SUPPORT INCREASED INCIDENCES OF CVD IN PEOPLE WITH HYPOVITAMINOSIS D. CANCER SURVIVAL IS BETTER WITH NORMAL VITAMIN D LEVELS. LOW VITAMIN D LEVEL IS AN INDEPENDENT MARKER OF MORTALITY AND SPECIFICALLY MORE SO IN WOMEN.



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SERUM LEVELS OF 25 (OH)D < 25 NMOL/L ARE CONSIDERED DEFICIENT, AND LEVELS BETWEEN 25 AND 75 NMOL/L ARE INSUFFICIENT WITH THE TARGET LEVELS BEING > 75 NMOL/L

### **DHEA**

NO SIGNIFICANT ASSOCIATION HAS BEEN DOCUMENTED IN THE VARIOUS STUDIES BETWEEN DHEA LEVELS AND ALL CAUSE MORTALITY IN EITHER GENDER. NO DIFFERENCE HAS BEEN REPORTED ON QUALITY OF LIFE AS WELL.

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