



Cross-Sectional Study on SHBG and Testosterone as a Tool in Assessing Erectile Dysfunction in Old Age Male

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Cross-Sectional Study on SHBG and Testosterone as a Tool in Assessing Erectile Dysfunction in Old Age Male: This study aimed to investigate the possibility of using SHBG (sex hormone binding globulin) as well as testosterone concentration as a tool in assessing erectile dysfunction in old age male. One hundred thirty five men of 50-70 years old grouped based on factorial design, in which two factors with three levels were used, with 10 subjects in each group. The first factor consists of: (1) diabetic 50-60 year old men; (2) healthy 50-60 year old men; and (3) healthy 61-70 year old men.

The second factor was grouped based on the erectile function status: (1) normal (IIEF>21); (2) moderate (IIEF 15-21); and (3) low (IIEF<15). The dependent variables are total testosterone concentration (TT), SHBG concentration, and free testosterone index (FTI). The TT concentration was determined using Count-A-Count125/solid phase; SHBG concentration was measured with radio-immunometric (IRMA), while FTI was defined by dividing TT concentration by SHBG concentration.

The results, based on ANOVA, showed that in healthy subjects the TT significantly reduced by increasing age and by low erectile function ($p<0.05$) but not affected by the interaction of both factors.

SHBG concentration, on the contrary, significantly increased related to older age ($p<0.05$) but not affected by erectile function nor its interaction with age. FTI also significantly affected by age factor ($p<0.05$) but not by erectile function as well as by health status of subjects. The conclusions are: (1) testosterone is an important factor in regulating erectile function of the penis; (2) SHBG and FTI partially is useless in assessing erectile dysfunction.

Key words: sex hormone binding globulin, erectile dysfunction, old age.

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Demographic-Economic Aspects of Indonesia's Population Ageing

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Increasing life expectancy and rapid fertility decline in Indonesia since the 1970s have accelerated the transition of age structure of population. In the twenty-first century, ageing population is a global phenomenon, which puts pressures on economic, health, social, and political situations in many countries including Indonesia. It presents both oppor-

tunities and challenges for sustainable development of economies in the next half century, though as presented in this paper Indonesia's provinces are at different stages in this transition. This paper shows population aged 60 and above numbered 15.8 million in 2005, or 7.3% of the population. Regional variation exists, for instance, Pacitan reached 14.2%, which is much higher than national rate.

The age-structure transition has shifted the two groups of dependent population, the young and old, as the elements of the dependency ratio. This paper shows that the dependency ratio declined from 0.86 in 1970s to 0.50 in 2005, will continue to decline to 0.43 in 2020-25 and start to increase again to reach above 0.50 in 2040. Therefore, the demographic window of opportunity in Indonesia occurs between 2005 and 2040. The economic life cycle is fundamental to understanding the demographic-economic aspect of population ageing.

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HIV Vaccine: Hope or Dream ?

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The world has tried so many ways and put their maximum effort in preventing HIV epidemic. Vaccine as one of the most popular paradigm in disease prevention has also been researched to contain the exploding HIV cases. Many HIV vaccines have been developed and will be tested to pass the first, second and third phase trial, before being released to the community. This article will discuss challenges in developing HIV vaccines, and results of several vaccine trials.

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