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## BONE MINERAL DENSITY IN THE LUMBAR SPINE IN ANOREXIC GIRLS

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**Background and aims:** Cross sectional study of 161 female anorexic adolescents (14.9 ± 4.2 year).

**Methods:** 57/161 anorexic girls received a dual X-ray absorptiometry (DEXA) to measure their bone density. DEXA scans were performed using Hologic, Inc. (QDR 2000/1500) in 19/57 patients and Lunar Prodigy (GE, Lunar, Madison, WI) in 18 patients.

We measured the BMD (bone mineral density) total body (g/cm²), BMC (bone mineral content) total body (g) and BMD lumbar spine L1-L4 (g/cm²). The values of the hologic DEXA scan were standardised and calculated for the lunar values using the conversion formula of Hui et al. for the lumbar spine L1-L4, and compared with the reference values for age and gender of Van der Sluis et al.

**Results:** Z-scores were calculated (Z-score: Patient´s BMD - Expected BMD (Van der Sluis)/SD). We found in 14/57 patients a Z-score of the lumbar spine of ≥ -2 ,17/57 girls had a Z-score between ≥ -1 and ≤ -2 and in 26/57 patients the Z-score was ≤ -1. We divided the anorexic DEXA-scan group in 2 subgroups. Group 1 (n=23) were the girls with primary amenorrhea and group (n=28) were the girls with secondary amenorrhea. In 6/57 patients we had no information of the menstrual cycle.

**Conclusions:** The anorexic girls with primary amenorhea were younger, had a lower BMI and significant lower BMD (L1-L4) and Z-scores BMD. There were no significant differences in weight loss, ghrelin and leptin. Finally we could say that an anorexia nervosa status in girls with primary amenorrhea has a severe prognosis for the bone mineral density.

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## THE PREVALENCE AND RISK FACTORS OF MENTAL HEALTH DISORDERS IN A DANISH GENERAL POPULATION STUDY OF CHILDREN 5-7-YEARS OF AGE

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**Objective:** To estimate the prevalence, co-occurrence and risk factors of mental health disorders in 5-7 year-old children in the general population.

**Materials and methods:** The study is a 5-7 years follow-up of the Danish birth cohort The Copenhagen Child Cohort, CCC 2000, including 6,090 children from the general population. The cohort was screened for mental health problems by questionnaires to parents and pre-school teachers (Strengths and Difficulties Questionnaire, SDQ). Screen positive children and a random sample of 1330 children were assessed by diagnostic interviews administered to parents and questionnaires to pre-schoolteachers (Developmental and Well-being Assessment, DAWBA). Data on peri-natal adversities, socio-demographic risk factors and hospital admissions were obtained from Danish National Registers.

**Results:** The overall prevalence of mental health disorders in 5-7 years-old children was 4.4% (95%CI: 3.3-5.5). Emotional disorders were found in 2.0% children, behavioural disorders in 1.5% (95%CI: 0.9-2.2) and hyperkinetic disorder in 0.9% (95%CI: 0.4-1.4). The prevalence of pervasive developmental disorders was 1.0 (95%CI: 0.5-1.5). Nearly a third had co-occurrence of mental health diagnoses and the relative risk of having a mental health disorder was significantly higher in boys compared to girls: 1.8 (95%CI: 1.1 - 3.1).

Preliminary results on early risk factors and predictors of mental health problems between birth and 7 years in CCC 2000 will be presented at the congress.