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MASTICATION; NUTRITION

The relationship between oral function and Body Mass Index among independently living older Japanese people

Ikebe K, Morii K *et al.* *Int J Prosthodont* 2006; **19**: 539-546

Low masticatory performance was related to being underweight.

In elderly people, an inability to masticate food may affect nutritional status. This study investigated 807 independent subjects aged 60+ yrs in a Japanese community, who were interviewed and examined. Normal Body Mass Index (BMI; 20-25) was present in 70%, 13% were underweight and 17% were overweight.

There were no significant correlations between BMI and either masticatory performance measured by concentration of glucose exuded from standardised chewing of gummy jellies, or maximal occlusal force. However, when subjects with the poorest masticatory performance were considered in regression analysis, they were significantly more likely to be underweight (OR = 1.98). Similarly, lower occlusal force was associated with being overweight (1.82). There were no associations with tooth number or type of dentition.

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IMAGING; PATHOLOGY

Positron emission tomography: a promising diagnostic modality for head and neck pathology

Tamara L, Velez I *et al.* *J Oral Maxillofac Surg* 2006; **64**: 1272-1277

Positron emission tomography (PET) may allow earlier diagnosis and more precise follow-up.

In PET scanning, a radioactive substance is injected and travels to a target organ in the body, where positrons are emitted and produce gamma rays. Computed tomography (CT) with PET scanning can produce some images of higher diagnostic accuracy than other imaging methods, particularly for malignant tumours. For head and neck squamous cell carcinoma (SCC), PET scanning may be better than ordinary CT, MRI, ultrasonography and nuclear bone scan.

In this paper, 4 sets of images are compared to show how fused PET-CT images may provide information not available with other scans. The conditions shown are laryngeal SCC, metastatic parotid adenocarcinoma to cervical vertebra, Hodgkin's lymphoma, and multiple metastases. The authors note that PET disadvantages include false negatives from necrotic tumours, false positives with some inflammation, high cost and artefacts induced by metallic implants, but suggest that PET is outstanding if interpreted by an experienced nuclear medicine specialist.

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CARIOLOGY

Progression of dental caries and tooth loss between the third and fourth decades of life: a birth cohort study

Broadbent JM, Thomson WM *et al.* *Caries Res* 2006; **40**: 459-465

From 26 to 32 yrs of age, many teeth were lost because of caries.

There is little evidence on caries progression in adults. In this study, 89% of survivors in a predominantly white New Zealand cohort born in 1972-3 were dentally examined at ages 26 and 32 yrs, a total of 901 subjects.

At ages 26 and 32, respective mean DFS scores were 12.8 and 14.7. Over the period, the mean number of teeth lost through caries increased from 0.2 to 0.6, while tooth loss from other causes increased from 1.8 to 2.2. Most of the caries experience occurred in posterior teeth, and least in lower anterior teeth. At 26, there were no implants and at 32, 6 subjects had them. No carious retained roots were present at 26, but by age 32, 21 subjects had them.

The authors consider the effects of caries to be substantial, and suggest that there is significantly increased tooth loss in this age group.

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DENTAL TRAUMA

Traumatic injuries to the primary dentition and effects on the permanent successors – a clinical follow-up study

Sennhenn-Kirchner S, Jacobs H-G. *Dent Traumatol* 2006; **22**: 237-241

About a quarter of permanent successors were affected.

Maxillofacial trauma commonly affects the primary dentition. In a German hospital, 106 children were treated for trauma to 200 primary teeth over a 5 yr period, and 71% of these were upper central incisors. Subsequent follow-up examination of permanent teeth was performed in 15 subjects aged up to 3 yrs at the time of injury (66% with sequelae), and 25 aged 3-7 yrs (25%).

In 39 children, 20 permanent teeth were affected: 10 had enamel hypoplasia, 5 had deformed crowns or roots, and 5 were ankylosed or had eruption abnormalities. Intrusion had caused all the deformities and affected 3 other teeth, while subluxation, avulsion and root fracture of primary teeth had led to hypoplasia or eruption irregularities. The authors consider no definite prediction of damage to permanent teeth is possible at the time of primary injury, and recommend regular follow-up.

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