

P05

Elderly malnutrition screening in the community

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Background – Malnutrition is a frequent and serious problem amongst elderly people. At present there are a range of malnutrition screening tools available however malnutrition screening rarely occurs in the community setting and the advantages of the malnutrition screening process are poorly understood.

Objective – To identify how useful malnutrition screening tools are in identifying people at risk of malnutrition in the aged population in the community setting.

Design – Literature review utilising the following databases; Medline, CINAHL and PsycInfo using the MeSH terms: aged or elderly or frail elderly or aged eighty and over; malnutrition or under nutrition; and screening. The review focused on under nutrition. Articles that focused on over-nutrition, micronutrient intake, malnutrition assessment and other care settings were excluded. Aged was defined as over 65 years. Following this, additional articles were identified through searching the articles references.

Outcomes – There are a range of malnutrition screening tools that have been developed for use amongst elderly people living in the community. Extensive testing of these tools has been limited. Accuracy and efficiency varies between tools. Consistency of the tools utilised in different care settings was identified as important for continuity of care. Additionally, simplicity of the tool and the instigation of appropriate actions in a resource restricted environment were identified as important. Limitations of malnutrition screening tools that were identified included: poor completion rates of the tools and low rates of referral acceptance following the identification of malnutrition risk. Benefits following implementation include; increased weight and independence and decreased levels of malnutrition and associated complications.

Conclusion – Overall the information presented demonstrated that malnutrition screening tools if correctly selected and utilised are useful in identifying risk of malnutrition and therefore generating appropriate actions.

P06

Gender differences in the relationship between plasma leptin and long chain omega-3 polyunsaturated fatty acids

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Background – Leptin, a hormone-like peptide secreted by adipose tissue, is a strong correlate of obesity. Weight loss is accompanied by a reduction in circulating levels of leptin. Dietary supplementation with omega-3 polyunsaturated fatty acids (n-3PUFA) has been shown to reduce plasma levels and down-regulate leptin expression.

Objective – To investigate the relationship between leptin and plasma n-3PUFA concentration in male and female individuals.

Design - A cross-sectional observational study involving 128 adults (male $n=47$ and female $n=81$). Plasma n-3PUFA concentrations were measured by gas chromatography and leptin levels were analysed using high sensitivity immunoassay in fasting plasma samples.

Outcomes – Leptin concentration was significantly higher in females compared to males (42.8 ± 3.6 vs, 17.6 ± 2.1 ng/mL, $P<0.001$). Plasma DHA concentration was significantly higher in females compared with males ($2.29\pm 0.84\%$ vs. 2.03 ± 0.09 , $P=0.04$). Plasma total n-3PUFA and DHA concentration were negatively correlated with leptin ($r=-0.33$, $P<0.002$ and $r=-0.40$, $P<0.0001$, respectively), in female participants only. Furthermore, when data were split into quartiles for DHA, a significant negative trend with plasma leptin was found ($P<0.01$) in female participants.

Conclusion – Plasma n-3PUFA, in particular DHA concentration, is negatively correlated with leptin levels in females but not in male subjects. The consumption of n-3PUFA may be reflective of a healthier weight status.