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Nutrition Matters

March 2009

Hello and welcome to the March edition of Nutrition Matters, a quarterly newsletter produced by Melbourne Dietetic Centre for Aged Care Facilities to support optimal nutrition practices.

The professional dietitians at Melbourne Dietetic Centre compile the dietetic insights offered in this newsletter. In this issue, we look at the role of nutrition in falls prevention.

Nutrition and Falls Preventions

Presently, falls are among the most serious preventable injury facing older Australians. ¹ The nutritional status of an elderly adult has been shown to be a determining factor in their risk of falling, severity of injuries incurred and recovery time after a fall-related injury. ² Studies have confirmed that micro- and macro- nutrient deficiencies are associated with increased falls risk due to the many side effects of poor nutritional condition, including reduced muscular strength and impaired mobility. ¹ Increasing the awareness of the importance of nutrition status as a falls risk factor, can assist in the prevention of malnutrition and subsequently reduce falls and acquired injuries.

Low body weight secondary to protein energy malnutrition (PEM) increases the propensity to fall by accelerating age-dependent bone loss, impairing movement coordination, reduced reaction time, increasing bone fragility, and reducing muscular strength which in turn impacts on gait and balance. ¹ Recent studies have shown that the prevalence of PEM in Queensland residential aged care facilities has been found to be 40–45 per cent. ³ Overseas studies have reported levels of PEM in older patients admitted to hospital with hip fractures as between 39 and 58 per cent. ³ Excess body weight, however, may be protective against falls injuries as the reserves of body fat act to cushion a fall, as well as assisting to meet the

increased energy requirements associated with fracture and healing¹.

Deficiencies in a number micro-nutrients have been shown to contribute to increased falls risk in older adults, including Vitamin D deficiency. When in its active form, vitamin D binds to a receptor in muscle tissue, leading to improved muscle function and therefore reduced risk of falling. ⁴ A 2004 study found that adequate vitamin D levels reduces the risk of falls among institutionalised older people with stable health by more than 20 per cent when compared to those who had acquired Vitamin D deficiencies. ⁴ The incidence of deficiency of vitamin D (levels <25 nmol/L) in Australia has been reported as 22–86 per cent in residential aged care. ⁵ Another study found that in Australia, 86 per cent of women and 68 per cent of men in residential aged care have frank vitamin D deficiency and virtually all of the remainder of residents have a level in the lower half of the reference range. ⁶



Although there are a small number of Vitamin D containing foods, there is good evidence to suggest that sourcing vitamin D from dietary intake alone is not sufficient, and our main source of vitamin D is sunlight. ⁵ There is no Recommended Dietary Intake (RDI) for vitamin D, however 1–2 hours of direct sunlight per week is perceived to be adequate. ⁷ Vitamin D supplements are readily

Nutrition and Falls Preventions Cont...

available and necessary for many institutionalized elderly with low sun exposure levels and dietary Vitamin D intake. A number of studies have demonstrated that when both calcium and vitamin D intake and serum levels are adequate simultaneously, femoral bone loss and, in institutionalized patients, the incidence of hip fracture is reduced.⁷ Calcium is stored in our bones and is what helps to maintain their strength, and Vitamin D acts to increase the absorption of calcium and therefore is also vital in retaining bone health.

Vitamins A, C and E are necessary for human visual perception and deficiencies of these vitamins can cause sight impairments which in turn can cause confusion, disorientation and imbalance whilst mobilizing, and therefore result in falls.⁹ Similarly, Vitamin B12 and folic acid deficiencies can elevate risk of falling, due to proprioceptive loss and mental confusion respectively.⁹ Dehydration is a common health problem in older adults and can lead to confusion, postural hypotension, constipation and delirium, all of which can increase fall risk.⁹ Deficiency in vitamin K has also been suggested to contribute to bone fragility in patients sustaining hip fracture.¹⁰ For this reasoning, it is imperative that aged care facilities ensure that the meals which they provide are nutritionally appropriate.

Falls are a serious yet often preventable ongoing problem for residents of aged care facilities, and nutrition is one of the key risk factors. An accredited practicing dietitian can work with aged care facilities to develop a malnutrition screening system, review and help to improve the nutritional adequacy of the menu, and provide nutritional advice tailored to residents' individual needs, to assist in reducing the incidence of falls.

References:

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Nursing Homes in the News

"Almost half of all elderly residents in Australian aged care facilities are malnourished" a new study has found. The study also found that of the residents considered to be malnourished, very few (17.8%) had been seen by a dietitian in the past 6 months.

- Malnutrition prevalence and nutrition issues in residential aged care facilities Deanne Gaskill, Lucinda J Black, Elisabeth A Isenring, Stacey Hassall, Fran Sanders, Judith D Bauer *Australasian Journal of Ageing* (27: 189-194) December 2008.

This is a concern for all facilities. Melbourne Dietetic Centre can provide comprehensive nutrition services to identify residents at risk of malnutrition and work with your facility to plan management strategies. As aged care experts, MDC has the experience to help you provide the best care for your residents.

About MDC

Melbourne Dietetic Centre is the largest private practice of professional dietitians in Victoria. MDC has provided professional and accredited Dietetic Services to aged care facilities, hospitals, individuals, government, community and corporate groups since 1982, and are leaders in aged care nutrition.

Our team of 14 professional dietitians share a strong commitment to providing aged-care specialised services of an exceptionally high professional standard. Our commitment to customers is to ensure Best Current Practice for residents, and to provide leadership for continuous quality improvement.

What MDC Can Provide For Your Facility

- Efficient regular or on-call clinical services
- Menu reviews and menu planning
- Staff education
- Nutrition and hydration auditing
- Locum or leave cover for your regular dietitians
- Nutrition screening for malnutrition risk
- Food service workshops
- Nutrition and hydration policy development
- Quality Assurance activities and reports
- Assistance for passing accreditation

What's on the Menu?

Aged Care Accreditation Standards require that menus are reviewed regularly by a professional to ensure nutritional adequacy and appropriateness for residents. Menu reviews are an integral component ensuring that your residents are achieving optimal nutrition, health and quality of life.

A menu review needs to be thorough and comprehensive and shouldn't just be an assessment done on paper. A comprehensive menu review should:

- be undertaken by an Accredited Practising Dietitian who specialises in aged care be conducted at minimum yearly
- involve a site visit, including interviews with key catering, nursing, care staff and management
- include meal time observation and audits for serving size, presentation, nutritional adequacy and taste
- evaluate appropriateness for demographics, cooking methods, ingredients, flexibility, variety, and limitations
- evaluate systems for food and fluid service
- include an extensive written report with practical, aged-care specific recommendations

Melbourne Dietetic Centre has undertaken countless menu reviews for aged care facilities across Victoria.- please call us to discuss the specific needs of your facility.



Meet The Team

Julie has over 10 years experience as a dietitian working in aged care consulting, 1:1 counselling, group education and nutritional health promotion.

Julie has practised in a range of settings including: public hospitals, community health, nursing homes and provided public health education via seminars, radio sessions, group programs and displays. Julie has a passion for aged care her experience through working across many facilities in Melbourne has helped a number of sites to make significant improvements to the nutrition of their residents.

Julie enjoys working with facilities to help improve overall nutrition and hydration systems and has recently been involved in developing and conducting nutrition and swallowing audits throughout the Peninsula region.

When not working, Julie loves to spend time with her husband and two daughters. Julie enjoys being involved in her daughters' school, eating out, visiting family and friends and walking.



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