The Great Portion Debate

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EDITORIAL

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I recently led a longitudinal, multi-disciplinary project that included the development of evidence-based nutrition resources to assist general practitioners (GPs) in the prevention and management of common chronic conditions. [1] These included arthritis, nutrition-related cancers (e.g. prostate, breast and colorectal), coronary heart disease (both males and females) and diabetes. We also developed a resource for use during pregnancy. Each of these resources include a 14 day meal planner that was designed using nutritional modelling, to meet the specific nutritional requirements of each of these groups of people, at a population level.[2] A user manual for GPs and allied health professionals was also developed that summarised the evidence on which these resources were developed.[3] The manual also provides data to allow substitution of foods within the modelled parameters. These resources were not developed to replace the need for referral to nutritionists or dieticians, rather to assist GPs to provide basic evidence-based nutritional information to clients who will benefit from dietary intervention as part of their medical management.

In developing these resources, we conducted systematic reviews of all available literature and resources in the area.[4-5] We have also had numerous discussions with very well respected dieticians, nutritionists, researchers, scientists and GPs plus very long nights thinking about how the enormous amount of data generated through the nutritional modelling of each of these five conditions should be formatted for the resources. The most popular suggestions were to use the food pyramid with the required proportions for each food (and for each condition) superimposed on an 'arthritis pyramid' or 'diabetes pyramid' (etc). Suggested frameworks included the 'Healthy Living Pyramid' from Nutrition Australia[6] based on the 'Health Eating Pyramid' and 'Health Eating Plate' devised by the Harvard School of Public Health (see Figures 1 and 2).[7-9] The Healthy Eating Pyramid programme also has a range of crockery (portion control kit) that assist in controlling portion size in conjunction with educational resources provided. [9]

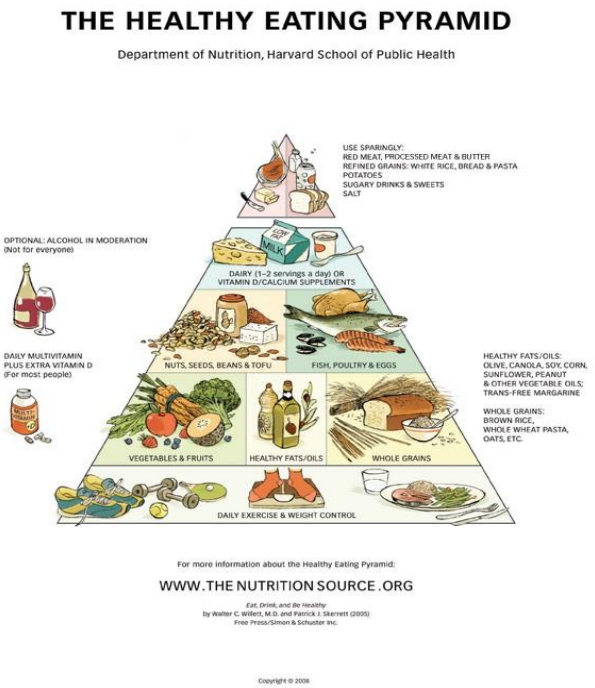

Figure 1: The Healthy Eating Pyramid (www.thenutritionsource.org/)

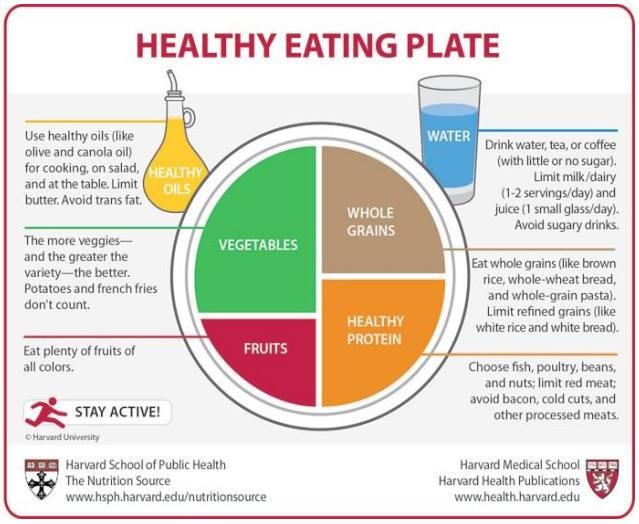

Figure 2: Healthy Eating Plate (www.thenutritionsource.org/)

I am sure many of you have had similar debates. Time and time again, the words 'pyramid', 'plate' and 'portion size' meander through these debates. Conversations usually centre around which 'pyramid' or 'plate' should be used, what format they should be delivered in and what works best in practice. Inevitably the conversation comes around to the hotly debated issue of 'portion size' and how to reverse the trend of ever growing portion sizes, particularly over the past decade which has been a major factor in the current overweight and obesity epidemic.[11] Steenhuis and Vermeer (2009) conducted a review of studies that focused on portion size and energy intake. The review found that portion size had increased dramatically over the past two decades in most of the developed world by around 30% and that these increases were mainly associated with highly processed, energy dense foods.[11] The review also found that few interventions had successfully addressed portion size at the individual level, rather most focused on changing the physical environment (with little success). There was a paucity of evidence around how to effectively target portion size at a population or sub-population level and that research in this area was urgently needed in an effort to reverse the current escalating obesogenic environment worldwide. [11]

Where does this leave us? Many health professionals are faced with trying to address over-nutrition on a daily basis. Portion size is a good place to start but what does a portion mean to your 'average client'? (What is average client? – a debate for another day!). I thought about my family. Our heights range from 5'2" to 6"; weights from 55kg to 100kg; males and females; young and (not so) old; office workers through to very physically active trades; easy to please that will eat anything put in front of them through to a strict vegetarian that needs to still recognise all the food on the plate after cooking. I thought about what 'portion size' means to them (and to me as the domestic goddess in our household). I want to provide meals that met the nutritional needs of my family that are easy to prepare and affordably within the family budget. This information was at the forefront of my mind as we sought to develop this series of resources that we knew could be of great assistance to GPs. Infinitely most importantly, was the need to get the format right so people would actually use them.

The research team developing these resources had extensive experience in translating complex scientific and research data into user friendly formats for specific target groups so the communication side of things was well covered. Still the debate raged. So what of the portion sizes? In the GP resources developed[6] the portion sizes are quantified as they were developed for the management of specific chronic conditions and also for optimal nutrition during pregnancy. However this does not solve the problem beyond the needs of these five specific sub-populations.

We did reach some consensus on the great 'portion size' debate and that is that we need to wade through the masses of information, evidence and resources that we are constantly bombarded with and take a stance that can be justified. After all, that is part of our core business as health professionals.

So here is my two pence worth. After spending the last three years leading a team researching all published nutrition-related evidence, information and resources that are available to health professionals in Australia, my personal philosophy is clear. I use 'palm portions'. What can fit comfortably (not heaped, overflowing, or compressed – fingers outstretched with no food touching the fingers) onto the cupped palm of an individual is their personal portion size. Some may say it is a crude measure however I would say to them, try it and see if it works with clients. It is a simple, easy measure that is easy to understand and accounts for the different shapes and sizes of our client population. Of course we need to add caveats about the types of foods recommended but it does work well in practice. For example, it helps to solve the problem of the 'five servings of vegetables' that are commonly seen as three beans, five peas, two mushrooms, a heap of mashed potatoes and parsley to garnish.

It is clear that we need to urgently conduct interventions in the 'physical, economic, political and socio-cultural environments'[11] that provide evidence on how health

professionals can clearly and effectively articulate portion size at a population level that results in reductions in energy intake. However, in the interim, we need to keep the lines of communication open and use existing networks and online publications such as the AMJ, to share strategies and initiatives that have shown some success in tackling over-nutrition in practice. Hopefully this may provide the momentum we need to convince governments and funding bodies that short-term investment in finding ways to effectively reduce portion size at a population level will have long-term health and economic benefits.

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PEER REVIEW

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CONFLICTS OF INTEREST

The author declares that she has no competing interests.