

VITAL

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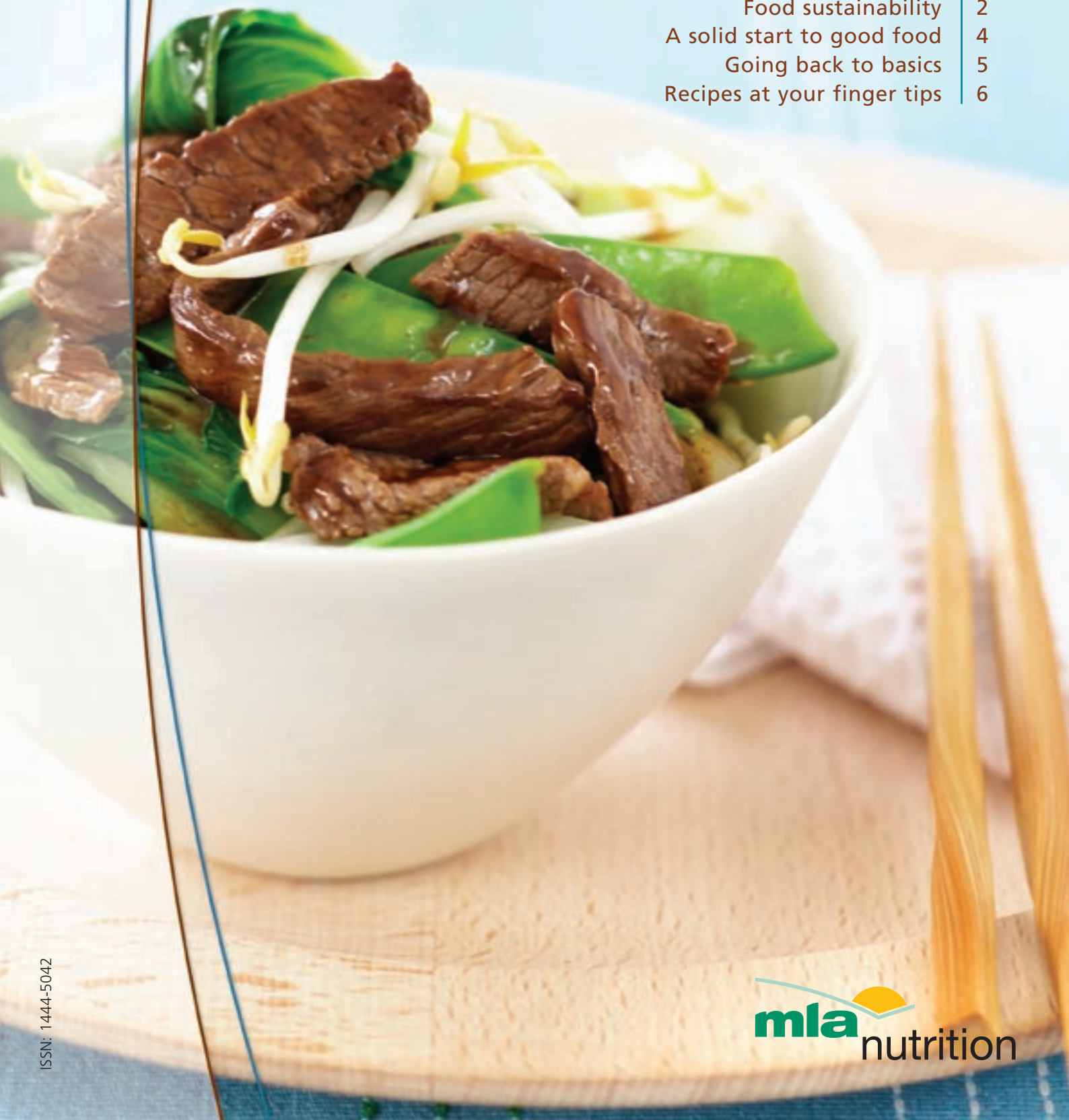
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NEWS, VIEWS & INFORMATION FOR NUTRITION PROFESSIONALS

BROUGHT TO YOU BY MEAT & LIVESTOCK AUSTRALIA, NUTRITION

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Welcome to the Spring issue of *Vital*.

At the recent annual conference for the Dietitians Association of Australia, Professor Nick Costa spoke about the environmental challenges facing the agricultural sector. In this issue of *Vital*, Professor Costa provides an interesting insight into the way different food production systems in Australia, impact on water and fossil fuel use, greenhouse gas emissions and biodiversity. He also shares with us the need to focus on the bigger picture in our pursuit of a more sustainable industry.

In 2003, the National Health and Medical Research Council (NH&MRC) released *Clinical Practice Guidelines for the Management of Overweight and Obesity in Children and Adolescents* which identified a key research priority – to better understand the “role of effective parenting in treatment approaches to childhood and adolescent obesity”. In this issue of *Vital*, we share with you the background behind two NH&MRC-funded trials currently underway, each exploring parent intervention programs aimed at instilling healthy feeding behaviours in children.

Australians are eating more takeaway, eating more processed foods, cooking less and eating on the run. Right? In this issue of *Vital*, we report on five years worth of consumer data collected by Roy Morgan Research which says otherwise.

Finally in response to your requests we launch our new recipe fact sheets. We hope you find these helpful in inspiring your clients to eat nutritious and delicious meals.

We hope you enjoy this issue of *Vital* and we look forward to your feedback and ideas for future issues.

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Food sustainability

To understand the environmental issues associated with food production we need to have an understanding of Australia’s food production systems. Professor Nick Costa, Chair in Sustainable Agriculture and Head of the School of Environmental Science at Murdoch University provides some insights.



Nick Costa,
PROFESSOR OF
SUSTAINABLE
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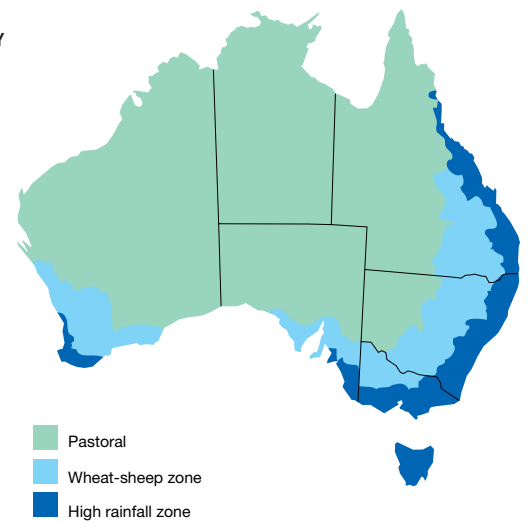
All food production has impacts on the environment, and to understand what those impacts are, it’s important to understand how food is produced. Food production systems differ from country to country because conditions, resources and cultures are so different. At the recent annual conference for the Dietitians Association of Australia, Professor Nick Costa gave some insights into food production in Australia which delegates found interesting and useful in understanding environmental issues for the Australian food supply.

Matching food and climate

Professor Costa pointed out that Australia’s drier climate and limited amount of arable land defines our food production possibilities. “The vast majority (75 per cent) of the Australian continent is arid or semi-arid,” explained Professor Costa. “This area includes some pastoral regions for grazing and some temperate zones for mixed farming including beef, sheep and dryland wheat farming. When thinking about food sustainability, it is important to keep in mind that most of Australia’s agricultural area (52 per cent) is rangeland which is useful for livestock grazing but not suitable for other forms of agriculture.”

“What we can and can’t produce is determined by our climate, soils, vegetation and topography,” he emphasised. Consequently, Australian agriculture produces wheat, barley, oats, rice, canola, lupins, fruit, vegetables,

Australian broadacre zones



Source: Australian Natural Resources Atlas

sugar cane, beef, lamb, chicken, pork, wool and cotton. Unlike the US, we don’t produce much corn, soya beans or sugar beet because these crops are either water-intensive, require fertile soils and are generally unsuitable for the Australian climate. “Australia can produce a large amount of meat from grazing cattle and sheep because they have evolved to efficiently utilise low quality native vegetation that other high volume meat-producing species cannot use,” he added.

Crops such as fruits and vegetables and some grains require high levels of water and can only be grown on the 6 per cent of arable land which receives either high rainfall or water through irrigation from inland rivers such as the Murray-Darling system. This land, which is primarily near the coast where most of our population lives, competes with housing, commercial, industrial and recreational uses.

The environmental costs of food

Sustainable natural resource management is critical in food production as resources such as water, land and biodiversity are essential for the long-term productivity of agriculture. Professor Costa identified four key areas in which food production impacts the environment:

- water use
- fossil fuel use
- greenhouse gas emissions
- biodiversity

Professor Costa explained that all types of food production impacts the environment albeit in different ways and to different extents see Table 1.

For example:

- **Water use** – the production of fruit, vegetables and dairy have a higher impact on water than grain and red meat production which rely mainly on natural rainfall.
- **Fossil fuel use** – this tends to increase as the amount of food produced increases. The production of dairy and grains uses a high amount of fossil energy through the use of fuel, electricity and fertilisers.
- **Greenhouse gas emissions** – both red meat and dairy production have high impacts on greenhouse gas emissions because of the methane produced as part of the ruminant digestive process. The production of grains and vegetables has a moderate impact, mainly arising from land clearing which releases large amounts of carbon stored in forests or woodlands.
- **Biodiversity** – broadacre cropping involves land clearing followed by cultivation, which has a major impact on biodiversity. Biodiversity helps maintain soil health, provides habitat for animals and plants and helps control pests and weeds.

Land clearing

Land clearing has now almost stopped due to changes in legislation. Tree planting (including significant planting on grazing lands) and land use changes has decreased greenhouse gas emissions from agriculture and forestry by 41.7 per cent in the 16 years from 1990.

Table 1: Impact of various food commodities on the environment in Australia. (The ratings are indicative only).

	Water	Fossil energy	Greenhouse gas	Biodiversity
Red meat	L	L/M	H	L/M
Grains	L	H	M	H
Fruit	H	M	L	M
Vegetables	H	M	M	H
Chicken	M	M	M	M
Dairy	M	H	H	L

H = high; M = medium; L = low

Sustainable agriculture

Sustainable agriculture requires a more holistic approach to food production. It involves appropriate use of the land and appropriate management of resources. Separating the issues and concentrating on individual environmental impacts may lead to 'solutions' with unintended consequences.

The pitfalls of isolating one issue were highlighted in the 'food miles' debate in the UK where it seemed environmentally responsible to encourage the consumption of locally produced lamb rather than lamb imported from New Zealand. However, a comparison of production practices revealed that, overall, the New Zealand product had a lower environmental impact, even with food miles taken into consideration.

It is necessary to understand Australia's ecosystems and landscapes to find the most efficient and sustainable use of land and water resources for the production of food. It has been shown that a mix of farming crops and grazing livestock is environmentally sustainable and also beneficial for productivity in certain, suitable areas. In these areas rotating land between cropping and grazing allows for efficient use of the land and aids soil health by allowing time for soil nutrients to recover with lower use of chemicals.



Productivity

From an environmental perspective productivity is important because an increased yield can mean a reduced environmental impact. To illustrate this point, Professor Costa gave the example of kangaroo farming. Although kangaroos have a lower impact on greenhouse gas emissions than cattle, it yields only a tenth of the edible meat produced by a steer and therefore would require a much larger herd. Evaluation of the environmental impact of kangaroo farming must consider not just practical issues of managing the undomesticated herd and harvesting but also meat eating quality, food safety, and sustainability within the supply chain.

Future challenges

Climate change is likely to change the agricultural profile of some regions. The impact of climate extremes and variability will depend on the sensitivity of the agricultural crop. Factors that may affect food production could include unpredictable weather eg. drought, floods; specific growth requirements eg. chill factors; and changes in pests and diseases. The challenge for agriculture is to adapt to the changing conditions to secure the long-term and regular supply of food which meets the nutritional needs of populations in the future.

Key points

Food sustainability incorporates:

- Most appropriate use of land.
- Management of resources – water, fossil fuels, greenhouse gas emissions and biodiversity – to reduce environmental impacts.
- Productivity issues that balance minimum inputs of resources and environmental impacts, against maximum outputs of food volume and nutritional quality.
- Resilience of food production systems in adapting to unpredictable climate and conditions.

A solid start to good food

There is a compelling case that parents can play a vital role in either preventing or promoting childhood obesity. Two new NH&MRC-funded trials are testing interventions that aim to give parents the information and skills they need to establish healthy feeding and eating practices.



Lynne Daniels,
PROFESSOR OF NUTRITION
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Childhood obesity is not just a social, psychological and physical problem for overweight children today, the problem continues for them right into the future. We know that overweight children are at a substantially increased risk of growing up to become overweight adolescents and overweight adults. The apparent inevitability of cascading ill-health gives urgency to research aiming to develop interventions that prevent overweight occurring.

A recent Cochrane Systematic Review of evidence¹ identified 19 studies targeting obesity prevention in children, all but one on primary school-aged children. However children don't suddenly develop their food and eating behaviours when they go to school. There is evidence that unhealthy food habits start early, even in infancy.

Parents clearly influence the feeding and eating behaviours of their children in infancy as soon as they introduce solid food. One study found that non-core foods provide around



a third of total energy intakes in 18-month-olds.² Now two NH&MRC-funded studies are testing interventions that support parents in promoting healthy food choices, intakes and behaviours, well before their babies stick their fingers into their first birthday cakes.

NOURISH

Lynne Daniels, Professor of Nutrition and Dietetics (Research) at the Queensland University of Technology is leading a multi-site randomised control trial, NOURISH, which will follow the babies of 830 first-time mothers until they turn two. The trial aims to influence healthy food preferences, healthy feeding practices, and intakes, through educating and supporting parents.

"The intervention focuses on two key concepts," she explained. "The first is exposure. We know that neophobia (fear of the new) is normal and that it may take up to 10 neutral exposures for a child to accept a new food. Yet when the child is presented with pumpkin, and spits it out for example, a conclusion is drawn, and pumpkin is never presented again. We want to let mothers know that first children learn to like, and then they like to eat, and mums can influence that process. At the same time we are emphasising the importance of limiting exposure to non-core foods, what we might call junk food, and promoting repeated exposure to core foods like vegetables, fruits, meat and dairy."

The second thread in the intervention is to promote self-regulating behaviours. "Children are able to regulate their food intake, unless we interfere. We will be telling parents that it is the parent's role to provide, and the child's responsibility to decide. We will encourage parents to recognise their child's signals of hunger and satiety and respond appropriately³. We want parents to trust their child's appetite and to avoid pressuring children to eat, or using food in an emotional way." Parents will also be encouraged to role model healthy eating, and to offer structured choices. "So instead of asking the child what they want for lunch, and the child says hot chips, offer a choice of healthy options such as a cheese sandwich or an egg sandwich," Professor Daniels advised.

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Going back to basics

Consumer research reveals new attitudes to food, cooking and health.

The way we eat is undergoing a quiet, but profound, revolution. Australians are increasingly enjoying cooking from scratch, using fresh foods sourced from independent retailers, and sharing them with their family. This new model of the typical family dinner has been monitored by consumer research commissioned by MLA over the past five years. A range of qualitative and quantitative data points to real changes in attitudes and behaviours.

The research finds that the number of people who say they love to cook has increased, while the number of people who say they don't have time to cook has decreased. Four in five claim to be eating more fresh and less ready-prepared foods than they were five years ago, and fewer people are buying takeaway to eat at home.

What does a typical meal look like in 2008?

Researchers asked respondents about what they ate 'last night' with:

- 87% eating at home.
- 65% eating no pre-packaged foods at all.
- The most common meal prepared was red meat, either beef or lamb, eaten with an average of four different vegetables, not including potato.



The tide is turning

An underlying catalyst for this change in the way we eat is the dawning realisation that 'convenience' foods come at a cost, and that cost is health. Awareness of childhood obesity as a major national health problem along with growing concerns about the impacts of diet on child behaviour are driving parents to go 'back to basics' on food. This move to 'real food' holds strong beyond households where children are the focus, and shows up across all groups, linked with a desire to take back control, of both food and health.

A real food change

Consumers have broadened their idea of healthy food from a narrow focus on nutrients, to a more holistic philosophy that sees food not simply as biological fuel, but as an important element in emotional health and wellbeing as well. 'Real food' is satisfying, not just physically, but emotionally. 'Real food' is nurturing, it allows a connection with family, and provides enjoyment.

A renewed love of cooking

Where previously consumers believed they were too busy to cook, now they are realising that there is value in choosing to spend time cooking. This is because cooking a meal to share offers an opportunity for the family to sit down together at the table and share their experiences. Mothers value the way a sit-down dinner with no TV offers the opportunity to know what's going on in the lives of their family.

More fresh

With a commitment to 'real food' households are increasingly keen to buy the best and freshest foods they can, foods that come with an inbuilt integrity due to closer links with producers. Consumers are shopping for their fresh produce less often at supermarkets, and more often at butchers, greengrocers, strip delis, and fresh produce and grower's markets.

Consumers are willing to invest both time and money in choosing and preparing fresh foods. These are seen as investments in social, emotional and physical health.

Back to basics skills

The desire for a 'back-to-basics' approach to food requires some back-to-basics skills. The philosophical change in values from prioritising 'convenience' to prioritising 'real' needs to be backed up by practical skills in cooking. Nutrition advice that reflects the trend towards home-cooked, family-shared meals needs to provide some basic cooking advice on preparing fresh ingredients in simple and tasty ways. To help, we are developing a series of fact sheets on basic cooking methods, using a step-by-step approach to a lead recipe, the first of which appears in this issue.

Key points

Consumer research identifies a new belief that real health relies on real food. Research has uncovered these major new trends in how we are choosing to eat:

1. An increase in the enjoyment of cooking and a desire to cook traditional meals.
2. A growing awareness that healthy food is not just about nutrients, but also addresses social and emotional health issues.
3. An increase in the importance of food integrity and an increasing preference for fresh foods.
4. A growth in money spent on fresh food purchases and a growth in independent fresh food retailers.

For more information on this study

If you are interested in reading more about the research report methodology and results, email info@redmeatandnutrition.com.au

A solid start to good food – part 2

Continued from page 4



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InFANT

A similar model is being tested in the InFANT (Infant Feeding, Activity and Nutrition) trial⁴ currently being undertaken in Victoria by Dr Karen Campbell and Dr Kylie Hesketh, Research Fellows in the Centre for Physical Activity and Nutrition Research at Deakin University. This randomised controlled trial involves 600 families across Melbourne and is unique in its use of parent's existing social networks (first time parent's groups) as the site for delivery of the intervention. This use of social facilitation supports a skills based intervention that aims to establish obesity protective behaviours from 3 months of age. The 15 month intervention is underpinned by anticipatory guidance – raising issues with parents before they might have considered them. It seeks to support parents to develop positive strategies for feeding, promoting fruits and vegetables, limiting energy-dense snacks, foods and drinks, limiting television viewing and promoting active play.

"We know that when parents feel at a loss to know what to do – for example, when their babies fuss and refuse food – parents tend to default to what their parents did. Parenting approaches tend to be passed on from parent to child," Dr Campbell explained. For example, children may be encouraged to finish

everything on their plate, be bribed and rewarded with food, and food preferences confirmed rather than challenged. "We are encouraging first-time parents to think about these things, to learn new strategies, and this forum also gives us a chance to explore the perceived barriers to engaging in healthy feeding, eating and active play behaviours."

In the next few years these two unique and important trials, both funded by NH&MRC Primary Health Care Grants, will provide vital information on how parenting skills can help prevent the development of overweight and obesity in our children.

Tips for positive feeding practices

1. It is the parent's responsibility to provide healthy food choices, and the child's responsibility to decide how much to eat.
2. Parents can learn to recognise and trust their children's satiety.
3. Children need structured, not open, food choices.
4. Obesity is least likely in families where parents provide a disciplined structure.
5. Food should not be used as a reward or bribe.

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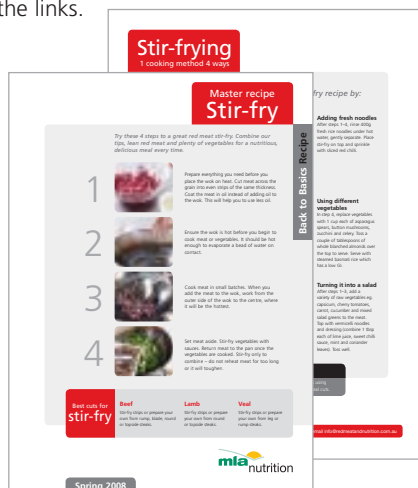
Recipes at your fingertips

New step-by-step meal inserts

Inspired by recent consumer research showing a new enthusiasm for family meals cooked from scratch, using fresh ingredients, we are developing a series of new cooking fact sheets called *Back to Basics*.

In each issue of *Vital* we'll feature a delicious, simple, healthy recipe based on fresh ingredients, including full step-by step visual instructions, a nutritional analysis as well as helpful tips. The recipe acts as a 'master recipe', and instructions will be given on how home cooks can vary it according to taste – and the contents of their fridge. The recipe will be available as an insert to photocopy and hand to clients – or to take home!

Extra copies of the recipe inserts can be downloaded at www.redmeatandnutrition.com.au. Simply click on recipes and follow the links.



Win a stir fry wok

The *Back to Basics* recipe fact sheet is our first and we need your feedback.

Be one of the first 20 dietitians to fill in our survey on the redmeatandnutrition site and you could win an Arcosteel 5-piece stainless steel wok set, valued at \$30.

Go to www.redmeatandnutrition.com.au

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