

Main meal repertoire

New consumer research, commissioned by MLA, suggests a varied main meal repertoire and a desire for flexibility and convenience

Gone are the days when Australians ate to a limited weekly repertoire with fish on Fridays, roast lamb on Sundays and the rest of the week's menu known well in advance. Instead, the research found that there is no typical repertoire.

Australians prepare a wide variety of meals for dinner. The number of meals in the repertoire varies from 14 to 46 different meals in a six-month period. Life stage, income, cooking skills and food involvement influences the number of meals prepared in the main meal repertoire.

Meal planning

Weekly meal planning is a rare occurrence today. The majority of main meal preparers, irrespective of age and lifestyle, plan on the day or have a few meals planned a couple of days ahead. Rigid and predictable meal plans do not provide the variety and flexibility required by today's main meal preparers.

Just over half of all main meal preparers purchase ingredients typically used to make a range of different meals without knowing in advance what they might make with them. Most preferred the improvisational opportunities of a flexible fridge and pantry.

Meal frequency

Although there is no typical repertoire, some meals tend to be cooked more frequently than others.

Weekly choices include: chicken breast, steak, spaghetti bolognese, scrambled or fried eggs, fish, vegetarian salads and 2-minute noodles. Fortnightly options include: beef casserole, chicken schnitzel, lamb chops, pizza and vegetable soup. Meals more likely to be prepared on a monthly basis were roasts, lasagne, Mexican, fish fingers and fried rice.

Main meal preparers see different dishes as meeting different needs in relation to taste preferences, convenience, cost and cooking ability. Meals, such as spaghetti bolognese, are a 'favourite' for all ages, inexpensive, quick and easy to make and a meal most enjoy making. Basic meal options, particularly sandwiches, are specifically chosen as 'quick and easy' options when a 'proper' meal isn't required.

Changes through life

The makeup of a household influences both the number of meals in the repertoire and the type of meals. As children enter the household, the number of meals in the repertoire peaks. This reflects the need to provide families with a wide variety of meals that meets different tastes. Not surprisingly, singles reported preparing the least number of meals because cooking for one is 'not worth the effort'.

ABOUT THE STUDY

An on-line survey was conducted amongst 928 main meal preparers in June 2010. Questions referred to meal choices and meal frequency over the last six months; meal planning and purchasing; and cooking skill and food involvement.



Young singles are more likely to prepare scrambled eggs and 2-minute noodles, older singles prefer fried eggs and beef sausages while vegetarian options seem more popular among young couples. As children arrive into the home, casseroles, roasts, lasagne and rissoles appear more often on the menu and as children become older, mothers reported becoming more adventurous.

Uses of takeaway

Takeaways are generally not factored into the repertoire as a regular item. They are typically seen as a 'treat' at the end of the week or an option when there is no time available to prepare a meal.

The most frequently consumed takeaways were chicken (as nuggets, burgers and fried chicken), pizza and Asian. Fish and chips are more popular in older adults and Asian in young adults.

Cooking skills and food involvement

Cooking skills and food involvement are directly linked to a larger repertoire and a greater use of vegetables. The cooks with the greatest number of dishes in their repertoire and the greatest inclination to introduce new meals rate their food skills and interest the highest. These cooks are typically aged under 40, male or female, with higher education and income status.

Those with low cooking confidence and skill and the least interested in food have the most limited repertoire and the least number of vegetables in a meal. This group was skewed towards females over 50 years, single and with lower education and income.

Planning style does not appear to influence the size of the meal repertoire or the number of vegetables in a meal. However, those who plan meals weekly have takeaway less often and those with a high intake of takeaway report less vegetables in a meal.

Details will be summarised in a brochure and distributed with the next issue of *Vital*.

More of the beef

Masterpieces is a new program from MLA which offers chefs information and inspiration about secondary cuts of beef and lamb.

Traditionally our favourite cuts of beef are referred to as the sweet cuts: fillet, scotch fillet, T-bone, rump and sirloin. Because they are so popular they are the most widely available. Yet a beef carcass is much more than simply a selection of prime steaks on legs. A growing interest in what is called nose-to-tail eating, which aims to use the whole carcass, has awakened curiosity from chefs about lesser-known, less-popular cuts of beef.

MLA's new program; *Masterpieces* is underpinned by the philosophy of whole carcass utilisation and combines technical cut information with creative inspiration for menu development.

In partnership with wholesalers, MLA is running masterclasses to teach the skills and recipe ideas to help chefs get the most from each cut. These cuts tend to be less expensive and generally require slow cook methods. The first slice in the *Beef Masterpieces* program focuses on brisket, bolar blade, oyster blade and flank). Global cuisines are used as references to showcase how these cuts are used in national dishes.

Bolar blade, for instance, is the cut of choice for Koreans cooking bulgogi, eaten as a thin slice of marinated grilled meat atop a small amount of rice, wrapped in a lettuce leaf and accompanied by spicy

BEEF Masterpieces™

pickles. Flank is a South American barbecue favourite. Flavoursome and juicy, it makes a more chewy steak than prime cuts and doesn't perform well when cooked more than medium. Flank is also a good cut for slow cooking, or for stir-frying. Oyster blade too can do double duty, cut into chunks and slow-braised, or butchered in such a way as to provide what is known in the US as 'flatiron steak'. Tender, lean and full of flavour, Brisket's unique texture and flavour are best brought out with marinades and long slow cooking.

Some retail outlets offer these secondary cuts, along with those that are more familiar such as chuck steak, gravy beef and osso bucco-style shins pieces. For a copy of the *Beef Masterpieces* brochure including recipes, go to www.chefspecial.com.au/Masterpieces. *Lamb Masterpieces* will follow in April.

Vietnamese Flank Steak Sandwich



1 piece flank steak – approx. 600g
1 large garlic clove
2 carrots, grated
1 cucumber, thinly sliced
1 tsp sugar
1 tbsp rice wine vinegar
½ cup fresh coriander leaves
2 spring onions, thinly sliced
¼ tsp red pepper flakes
4 Vietnamese rolls

Marinade for flank steak

⅓ cup fresh lime juice (about 4 limes)
2 tbsp soy sauce
2 spring onions, thinly sliced (about ⅓ cup)
2 tbsp fresh minced ginger
½ tsp red pepper flakes

Method for marinating flank steak

- Combine all marinade ingredients in a plastic bag and place flank steak into bag.
- Seal bag and place in fridge to marinate for 30 minutes, turning occasionally.

To prepare

- In a small bowl, stir together garlic, sugar, red pepper flakes, rice vinegar and 1 tbsp water.
- In another bowl, toss together the carrots, spring onions, coriander and cucumber. Toss with half the vinegar mixture
- Heat grill or pan to high, remove steak from marinade and drain excess liquid. Season with salt & pepper and place on grill.
- Cook turning once to medium rare doneness. Rest steak then slice thinly.
- Split rolls and lightly toast.
- Layer with the carrot mixture and steak.
- Drizzle with the remaining vinegar mixture if desired.

Serves 4

This publication is published by Meat & Livestock Australia Limited ABN 39 081 678 364 (MLA). Care is taken to ensure the accuracy of information in the publication, however, MLA cannot accept responsibility for the accuracy or completeness of the information or opinions contained in the publication. Readers should rely on their own enquiries in making decisions concerning their interests. Reproduction in whole or in part of this publication is prohibited without prior consent of MLA. ©2010. Published April 2011.

Contact details: MLA Nutrition, Locked bag 991, North Sydney NSW 2059 Tel: 02 9463 9361 Fax: 02 9463 9173

VITAL

Issue 48
autumn
2011

NEWS, VIEWS & INFORMATION FOR NUTRITIONAL PROFESSIONALS

Cooking for health

2 Food as meals

4 The ABC of healthy eating

5 Main meal repertoire



ISSN: 1444-5042

mla nutrition

Food as meals

There is increasing interest in the role food knowledge, skills and confidence play in healthy eating.

This issue of *Vital* considers meal consumption and behaviours related to the preparation of meals in the Australian diet. Since meat is primarily consumed at dinner time, our interest is specifically on the main meal.

Findings from the *2007 Australian National Children's Nutrition and Physical Activity Survey* on meat consumption combined with insights from our *Main Meal Repertoire* Study provides useful information on the type of meals consumed by Australian families for dinner.

Considering food consumption within the context of a meal is necessary for providing meaningful advice on healthy eating. It is also necessary to determine the type of cooking skills required to support the adoption of healthy eating.

MLA is well placed to provide advice on cooking. Our magazine, *Entice*, is popular amongst consumers because it provides simple advice for mastering basic cooking techniques. Our *Masterpieces* program targeting chefs provides inspiration for secondary cuts, thereby encouraging use of the whole carcass.

We would appreciate your feedback on topics covered in this issue of *Vital* as well as advice on the type of resources required to facilitate cooking for health.



Veronique Droulez
Accredited Practising Dietitian,
MLA Nutrition
vdroulez@mla.com.au



Secondary analyses of the 2007 Australian National Children's Nutrition and Physical Activity Survey, together with consumer research commissioned by MLA, adds to our understanding of how foods come together to make a meal.

Data on food consumption tends to report on intake of individual foods or food groups and their contribution to nutrient intake. What is often missing from this data is the context in which these foods are eaten – how they form meals and when and where those meals are consumed. The *2007 Australian National Children's Nutrition and Physical Activity Survey (2007 Children's Survey)*, the first national data on food intake in Australian children since 1995, provides times and locations at which different foods were consumed. This has allowed researchers to track which foods were eaten together and to deduce the meals and circumstances in which they were eaten.

MLA commissioned CSIRO to conduct a secondary analysis of the *2007 Children's Survey*, focussing on meat intake. The analysis will be published as a supplement in the *Nutrition and Dietetics Journal*. It builds on the secondary analysis conducted by Flinders University on eating patterns in young girls, reported previously in *Vital* 44, Summer 2010. Consumer research commissioned by MLA and reported in *Last Night's Dinner* in 2010, and the recent research on *Main Meal Repertoire* (to be released with the next issue of *Vital*) help fill the gaps left by the analysis. Taken together this work provides useful insights into the type of main meals consumed by Australian children and their families.

Average* cooked amount, in grams, consumed per eating occasion

	Boys	Girls
Red meat	75	66
Pork	38	32
Poultry	85	74
Fin fish	88	74

*Average all age groups

What's for dinner

The secondary analysis of the *2007 Children's survey* found that most children ate some kind of meat between 6pm and 7pm, at home, suggesting that meat is mainly consumed as part of the evening meal. The intakes of meals containing meat as a minor ingredient peaked at lunchtime, as did intakes of ham and bacon. Poultry intake spiked at dinner, and particularly among 9-16-year-olds, again at lunchtime.

The portion sizes of meats eaten on the day of the survey seem to be influenced by the type of meat chosen. This is possibly a reflection of the types of meals in which those meats appear. Portion sizes were largest for poultry, followed by fish, then red meat. Pork, which is usually consumed as ham or bacon, was eaten in the smallest amounts.

Meats and fish are generally served as either meals of single cuts with vegetables and boiled or baked potatoes, or as mixed meals. The most popular mixed dishes for all meat types were tacos/pizza/burger-style meals. However, there were some differences in the type of meals prepared with the different types of meat.

Red meat is more likely than other meats to be served in casserole-type dishes or with pasta. Findings from *The Main Meal Repertoire* indicate that red meat meals commonly prepared in households with children are spaghetti bolognese, beef casserole and rissoles. Red meat was less likely than other meats to be consumed in sandwiches, rolls and wraps.

Chicken was more likely to be served with rice than with pasta: most likely as a stir fry or curry, as indicated in the *Main Meal Repertoire* research. Chicken and fish were more likely than red meat to be eaten with fried potatoes, such as chips, wedges and gems. This may be explained by findings from the *Main Meal*

MAKING A MEAL

Accompanying food (grams)	Type of cut	Average all ages
Potato total	Red meat	62
	Pork	14
	Poultry	44
	Finfish	40
	Red meat	5
	Pork	3
Chips, wedges, gems etc	Poultry	15
	Finfish	18
	Red meat	98
Vegetables other than potatoes	Pork	36
	Poultry	66
	Finfish	65
Rice	Red meat	13
	Pork	9
	Poultry	31
	Finfish	19
	Red meat	19
	Pork	7
Pasta/noodles	Poultry	13
	Finfish	23

* Finfish – excludes canned fish and shellfish

Repertoire than chicken options and fish and chips are more frequent takeaway choices than burgers and kebabs.

Pork was associated with the lowest vegetable consumption, possibly since it is mainly consumed as sandwiches, which both the *Main Meal Repertoire* survey and the Flinders University study have found is a common main meal choice.

Changes 1995-2007

In many ways, the findings of the 2007 survey are consistent with those of 1995 for adults and 1985 for children. It is difficult to compare the studies directly as different methodologies were used, however, it appears that the amount of red meat consumed has not changed significantly. The association between red meat and increased vegetable consumption reported in the analysis of the 1995 adult survey is consistent with 2007 findings. These findings are also supported by our knowledge of the types of meals consumed.

Alongside these parallels, one finding does stand out as a change, says CSIRO's Katrine Baghurst. "We saw that the contribution of iron and zinc from red meat

had fallen. A drop in consumption of red meat could not explain this finding, as the contribution of red meat to energy and to total fat was not much different from one survey to the next."

Cereals and cereal products are now the largest contributor to total energy (39.7%) and also make the largest contribution to total iron and zinc (22.4%).

Given the lower bioavailability of iron and zinc in cereal products due to the presence of phytates, this finding has implications for the iron and zinc status of young women. "We found that red meat intake decreased in girls aged 14-16 years and on the day of the survey 11% of 14-16 year old girls failed to meet their estimated requirement for iron," says Baghurst. "It's this group of young girls that has potential problems with iron, zinc and calcium. They are at an age when they need a greater amount of key nutrients, but they are restricting their intake."

More research seems to be required to understand why girls restrict their meat intake as they reach this age, and what impact their food choices have on their nutrient status, particularly for iron and zinc.



Main meals typically prepared in households with children (The Main Meal Repertoire)

Beef	Spaghetti bolognese
	Sausages
	Steak
	Casserole
	Burger
	Lasagne
Chicken	Mexican
	Stir fry
	Rissoles
	Roast
	Breast fillet
	Stir fry
Eggs	Schnitzel
	Roast
	Curry
	Casserole
	Scrambled
	Fried
Fish	Omlette
	Fillet
Lamb	Chops
	Roast
Pork	Chops
	Soup
Vegetarian	Salad
	Sandwiches
	Pizza
	2-minute noodles
	Asian noodles
Other	Fried rice

The ABC of healthy eating

Food knowledge, skills and confidence clearly play a role in healthy eating. But what role? And what knowledge and what skills form the basis of 'food literacy': what is it we need to know?

The value of food skills in a healthy diet is not a proposition that has been widely studied, yet, Professor Tony Worsley of Deakin University says that nutritionists and dietitians believe food skills to be essential and the few interventions that have been done underline their role. "We have seen in men for instance, that if you improve cooking skills you improve the diet. And just recently one of the intriguing findings in a project we are doing through RMIT on obesogenic households was that people with no cooking skills believed vegetables were expensive and difficult to deal with. Those with cooking skills, on the other hand, believed vegetables were cheap, and easy to make into a meal. Clearly some really basic skills enabled some people to see the world in a completely different way."

Professor Worsley and his team are currently conducting a study to find out what sort of food knowledge consumers require in order to live in a healthy and fulfilling manner. "There has been a distinction made recently between declarative knowledge – meaning what is, say what nutrients are in a food – and procedural knowledge – what you do with it, how you cook it. We are more interested in that procedural knowledge now. At the same time questions beyond nutrition are being asked about food. People have many concerns about food including safety and health concerns, environmental concerns, concerns about social equity, for example, fair trading terms for producers of food."

The study aims to build a consensus around the specific question "What should a school leaver know about food?" covering issues around food production, its role in a healthy diet and how it can be cooked. The results may be used to develop food education curricula and food policy. "We are asking representatives from 12 different areas, from primary producers to environmentalists, nutritionists and consumers themselves, this same question through an online qualitative survey." The result will form a broad-ranging definition of contemporary food literacy.



Skills for school children

Sandra Fordyce-Voorham, from the University of Wollongong, interviewed 51 food experts, including home economics educators, chefs, nutritionists and dietitians, community educators, homemakers and young people to determine what food skills should be included in a skills-based healthy eating program in secondary schools.

Food skills identified

1. Knowledge of different cooking methods.
2. How to equip a kitchen, and how to use that equipment, including knife skills.
3. Exposure to a wide range of different foods and tastes.
4. Meal planning knowledge, incorporating dietary requirements and budget constraints.
5. How to stock a pantry, and develop a versatile cooking repertoire so that there is always something to eat.
6. Nutritional knowledge relevant to shopping, planning and portioning.
7. Meal skills, including timing of various elements on the plate, and pre and post preparation and clean-up.
8. Hygiene and safety skills.

Skills for mothers

A study by Monica Beshara of Flinders University in Adelaide looked at several factors that might predict the healthiness of a meal prepared for school-aged children by their mothers. Beshara looked at perceived time pressure, the inclination of the mothers to save time or energy and the confidence they had that they could prepare a healthy meal. It was only this last factor, the mother's confidence in their own cooking skills, that predicted meal healthiness.

The perceived time pressure was not a factor: mothers who were confident cooks prepared healthy meals despite being under time pressure. However, the women who were inclined to save time and energy on cooking and who were under perceived time pressures may rate their confidence to cook a healthy meal as low. Interventions to increase the healthiness of the meals these mothers cook may benefit from focusing on 'short cuts' and skills development that builds confidence, while also dealing with the time and energy required to cook.

References

1. Beshara, M., Hutchinson, A., Wilson, C. Preparing meals under time stress. The experience of working mothers. *Appetite* (2010), doi:10.1016/j.appet.2010.10.003
2. Fordyce-Voorham S. Identification of essential food skills for skill-based healthful eating programs in secondary schools. *Journal of Nutrition Education and Behaviour* 2010