INFANT & TODDLER FORUM

Feeding young children:
practical advice from experts

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SUPPORTING FAMILIES OF YOUNG CHILDREN TO DEVELOP HEALTHY EATING HABITS

A report from the Infant & Toddler Forum
Study Day 2012

Sharing Best Practice

Supported by an educational grant from Danone Baby Nutrition

INTRODUCTION

The foundations for good health are laid during the infant and toddler years. This is why early intervention is integral to so many of the Government's strategies to tackle health inequalities.

Healthy eating is a crucial part of this. It is well recognised that breastfeeding and early years nutrition provide the basis for growth, development and good health that lasts beyond childhood, through adolescence and into adulthood. The toddler years form a vital window during which lifelong dietary preferences and eating habits are created.

However, practical guidance on how to achieve good nutrition through these early years can be difficult to find.

This is why the Infant & Toddler Forum (ITF) was established eight years ago. By offering healthcare professionals (HCPs) and early years practitioners (EYPs) evidence-based guidance and practical resources, we have been working to ensure that parents receive the best possible advice on how to feed their children. Resources offered by the ITF include Factsheets, reports, interactive web-based tools and Study Days devoted to specific issues pertinent to the nutrition of young children.

This year's Study Day, held in London, focussed on how HCPs and EYPs can work together with families to promote and support healthy eating in children. Clearly this is a topic of paramount importance. We know that toddlers' eating habits are largely influenced by their home environments and tend to fall into one of three categories: Junk Food; Traditional British; or Health Conscious. These patterns are already established by the time the child is four years old, so the toddler diet is critical for long-term health.

We also know there are some serious nutritional challenges that we need to address within this age group.

Challenges such as vitamin D deficiency are growing in prevalence throughout the UK and this is now estimated to affect 20 to 40 per cent of Asian children. Vitamin D supplements are recommended for all toddlers from six months, yet only around 20 per cent currently receive them.

Iron deficiency, less prevalent than vitamin D but also a problem, is known to have a major impact on a child's cognitive development.

Then, of course, there is the issue of overconsumption and childhood obesity. It has been projected that by 2050 one quarter of all children in the UK will be overweight or obese, and that obesity will cost the NHS £10bn a year.

Addressing these challenges will require action both at the level of Government policy and through the personal choices made by individual families.

It can be easy to be judgmental when parents make poor choices for their children. But, as discussed during Dr Ruth Bell's presentation, these personal choices are highly influenced by the social contexts in which they are made.

Helen Dent's presentation on the work of Family Action offered a fascinating insight into how even the most disenfranchised families can be supported to lead healthier lives.

HCPs and EYPs also influence parents' decisions over their children's diet. But to offer effective advice HCPs and EYPs need to know what a 'healthy diet' means for a child of toddler age. What should it contain? In what proportions? And what portion sizes? These questions were answered in Judy More's interactive workshop.

HCPs and EYPs also need to be able to offer practical advice on dealing with dietary problems such as overeating, undereating and fussy eating. Dr Gillian Harris' presentation and Professor Paul Gately's workshop on obesity addressed these issues.

Finally, HCPs and EYPs need to be able to get their message across in a way that parents understand. This may require using a number of different communication styles, depending on the parent. Nick Booth's workshop offered some amusing tips on how to tailor your approach.

Once again the ITF Study Day was well attended by a range of HCPs and EYPs who vigorously contributed to the many question and answer sessions. For those who were there, we hope this report offers a timely reminder of the key issues discussed during the day. For those who weren't, it should serve as a useful summary and, perhaps, an encouragement to attend our next Study Day.

Dr Atul Singhal
Professor of Paediatric Nutrition, Institute of Child Health, UCL and Chair of the Infant & Toddler Forum

DELEGATE INTERACTION

Are you aware of the revised Scientific Advisory Committee on Nutrition (SACN) energy recommendations for toddlers?

69 per cent of delegates were unaware of the revised SACN recommendations.

What do you think are the main preventable health issues faced by toddlers?

23 per cent of delegates answered overweight and obesity; 19 per cent said vitamin D deficiency; 16 per cent said a lack of physical activity; 16 per cent said iron deficiency, 18 per cent answered tooth decay, whilst 9 per cent said underweight.

How many hours of physical activity is currently recommended for under 5s per day by the Department of Health?

Only 35 per cent gave the correct answer of 3 hours.

Do you feel well equipped to discuss toddler feeding with parents and families?

91 per cent of delegates said yes they feel well equipped.

What are the main obstacles to toddlers receiving nutritious diets?

29 per cent of delegates felt that a lack of knowledge and skills in home cooking was the main obstacle, whilst 23 per cent said it was a lack of parental knowledge about healthy lifestyle. 18 per cent said there is too much conflicting information, and 11 per cent said that HCPs simply do not have enough information on portion sizes for toddlers. 10 per cent said that toddlers are often fed by different people, and 9 per cent suggested that HCPs don't have enough training on communicating health messages.

WHAT THE DELEGATES SAID

"Very informative and interesting!"
Nursery Nurse

"Excellent speakers and venue. Very informative day. Would recommend to all."
Dietitian

"Very helpful and lots of new information; good networking too. Very positive to hear about new research."
Family Learning and Outreach Worker

"Great day's training. Very good value, very informative sessions and fantastic hand-outs and booklets."
Development Worker

"'How to effectively communicate' was excellent – it got me reflecting on my clients and what I could change about me to deliver my message to them."
Health Visitor

"Afternoon seminars were both absolutely excellent."
Health Visitor

"A well organised day with great speakers."
Change4Life Team Leader

"Excellent Study Day again. Very stimulating."
Paediatric Research Nurse

"'Promoting positive eating habits' session gave very helpful and useful advice. Seminar 2 was also excellent."
Family Nurse

"A useful day to reinforce what you know."
Dietitian

STUDY DAY SPEAKERS

Dr Atul Singhal
Professor of Paediatric Nutrition, Institute of Child Health, UCL and Chair of the Infant & Toddler Forum

Dr Ruth Bell
Senior Research Fellow, Department of Epidemiology and Public Health, UCL, London

Helen Dent
Chief Executive, Family Action

Dr Gillian Harris
Consultant Paediatric Clinical Psychologist, The Children's Hospital, Birmingham and member of the Infant & Toddler Forum

Nick Booth
Learning and Development Consultant, Leading Edge Training and Coaching

Judy More
Paediatric Dietitian and member of the Infant & Toddler Forum

Professor Paul Gately
Leeds Metropolitan University and Founder of MoreLife

INFANT & TODDLER FORUM RESOURCES

Factsheets
Free downloadable Factsheets providing evidence-based information and best-practice guidance on the feeding and nutrition of children aged one to three years.

Guidance & Tips for Parents
Practical sheets for use with parents and families, to help guide them through feeding their toddler.

Ten Steps for Healthy Toddlers
A practical, easy-to-follow guide on what food to offer, what behaviour to encourage, and how best to manage mealtimes.

Tot It Up calculator
An easy-to-use food calculator providing personalised analyses of toddler diets, so you can see if they are getting a good balance of foods to help them lead a healthy life, both now and in the future.

Portion Size Tables
A practical and easy-to-use guide to portion sizes for children aged one to four years; designed to ensure that each child's energy and nutrient requirements are met (except vitamin D).

ITF Reports
Reports and discussion documents commissioned by the Forum.

All of these resources and more are free to access and download at **www.infantandtoddlerforum.org**

THE IMPORTANCE OF NUTRITION IN THE EARLY YEARS FOR FAIR SOCIETY, HEALTHY LIVES

Dr Ruth Bell
Senior Research Fellow, Department of Epidemiology and Public Health, UCL, London

Early years nutrition has a major impact on health in later life and therefore contributes to the inequalities in health that occur across society. However, the intricate interaction between socioeconomic status, the social and material environment, and personal choice, can prove a significant barrier to improving the diets of young children.

Dr Ruth Bell presented the findings of the Marmot Review – *Fair Society, Healthy Lives* – which investigated the causes of health inequalities in England and made recommendations to tackle them. This review showed a clear link between socioeconomic status and good health *(see Fig 1)*.

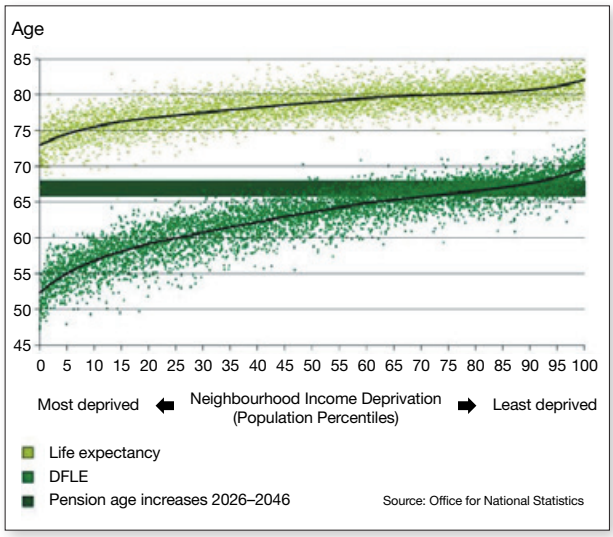
"Life expectancy in the most deprived areas is seven years lower than in the least deprived areas," said Dr Bell.

"Health inequalities are systematic differences in health outcomes between groups according to education, income/wealth, occupation, geographic area, by race or ethnicity, and between men and women. There are biological and genetic explanations for differences in health between individuals, but systematic health inequalities in society are largely determined by political, social, economic, environmental and cultural factors. Having said that, there's still a lot that can be done to raise the health of everybody regardless of their social status. The message of the social gradient in health means that focussing solely on the most disadvantaged will not reduce inequalities sufficiently – action is needed across the social distribution."

The Marmot Review made recommendations across six key areas:

- Give every child the best start in life
- Enable all children, young people and adults to maximise their capabilities and have control over their lives
- Create fair employment and good work for all
- Ensure a healthy standard of living for all
- Create and develop healthy and sustainable places and communities
- Strengthen the role of ill health prevention.

Fig 1



Life expectancy and disability-free life expectancy (DFLE) at birth by neighbourhood income deprivation, 1999-2003[1]

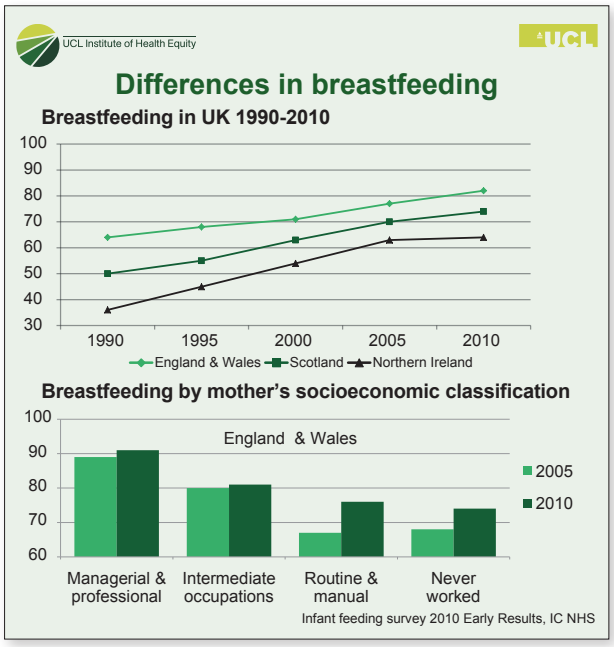
Dr Bell outlined a number of nutritional factors that appear to be influenced by socioeconomic status and which could affect a child's later health. These included:

- Maternal malnutrition – associated with poor physical development of the foetus, including brain development
- Early teenage motherhood – associated with decreased nutrient delivery to the foetus
- Low birth weight – associated with increased risk of coronary heart disease
- Breastfeeding – protects against childhood obesity
- Childhood obesity
- Type 2 diabetes among children
- Rickets – due to vitamin D deficiency.

Dr Bell pointed out that while breastfeeding rates in the UK were rising, they were also significantly affected by social class *(see Fig 2)*.

"There's been a steady increase in breastfeeding in the UK over the past 20 years but there's still a huge amount of work to be done," she said. *"Those from lower socioeconomic backgrounds are less likely to breastfeed than mothers from professional and managerial backgrounds. Overweight and obese women are also less likely to breastfeed."*

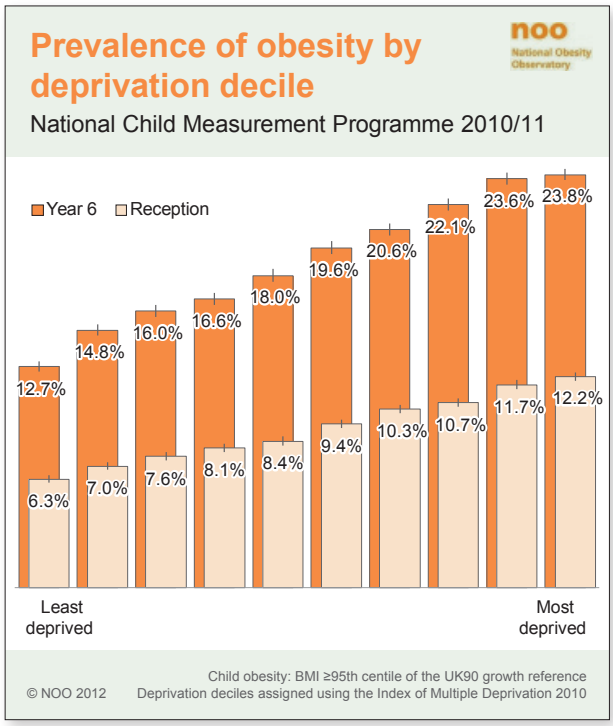
Fig 2



***Differences in breastfeeding*[2]**

Childhood obesity was also significantly more likely to occur in children from more deprived backgrounds *(see Fig 3)*.

Fig 3



***Prevalence of obesity by deprivation decile*[3]**

The reasons for the socioeconomic influence on dietary choice were complex, said Dr Bell. But they included both financial and societal pressures.

"It's not just about personal choice," she said. *"Family poverty and the ability to afford good food is a definite concern. People on low incomes report skipping meals so that they can feed their children or heat their homes. The poverty line is set at 60 per cent of the national median income, but more than that is needed by most families for a healthy life. There has also been an increase in the use of food banks since the economic downturn."*

Dr Bell pointed out evidence on the clustering of fast food outlets and the lack of green public spaces in more deprived areas.

"So people are encouraged to eat fast foods and then have nowhere to work off that energy," she said.

Dr Bell outlined options for action at the policy level. These policy options could include:

- Standards for food in schools and children's centres
- Tighter regulation of advertising of food and soft drinks to children
- Town planning to encourage physical activity, safe, green and social spaces in urban areas, walking and cycling
- Fiscal policies to encourage healthy eating.

Dr Bell emphasised the strong message from *Fair Society, Healthy Lives,* that it is important that people become empowered to have control over their lives.

"Individuals do have choices in what they eat, but those choices are made in very different social contexts," said Dr Bell. *"So how much control do they really have given their socioeconomic constraints?"*

DISCUSSION

Question:
"Can you explain the big jump in obesity between reception and year 6? What goes wrong?"

Answer:
"I don't know of any specific research on this, but one explanation is that as children become older, they eat more frequently outside the home, and are exposed to many more influences and peer pressure that may affect their dietary choice."

Question:
"I work with young parents and I meet a lot of young girls who simply don't know how to cook. They are scared of even trying."

Answer:
"I'm sure you are absolutely right. Cooking seems to have dropped completely out of the national curriculum. It looks like there is a need for a return to more hands on cooking for boys and girls in schools."

Question:
"Isn't one problem that supermarket pricing makes it very difficult for parents? All the high-sugar foods are really cheap, while the fruit and vegetables are really expensive."

Answer:
"I would agree to a certain extent, although I don't think you can put all the blame on supermarkets. Most do have a huge range of foods on offer. They could do more to incentivise customers to buy more fruit and vegetables, rather than sugary foods.

"Currently the Government expects food manufacturing companies to take responsible, voluntary action to reduce the amount of sugar in food products, for example, in children's cereals. Where this is not happening there is a role for regulatory standards or fiscal measures, especially when it comes to products largely consumed by children."

SHAPING POSITIVE FUTURES FOR FAMILIES

Helen Dent
Chief Executive, Family Action

You might think that the strong association between socioeconomic status and health means that HCPs and EYPs are fighting a losing battle when offering dietary guidance to families from poorer backgrounds.

You would be wrong.

Helen Dent told the meeting that her charity, Family Action, had been working with some of England's most disadvantaged and socially isolated families for over 100 years. Many of these families faced huge social challenges, such as domestic abuse, mental health issues, learning disabilities and severe financial hardship. Yet most could be supported to make positive steps to improve their own health and the health of their children.

"Most of the parents we work with do want the best for their children," she said. *"It's just that they don't always know how to go about it. That's where we come in."*

Ms Dent described the work of the charity's children and day care centres which offered a range of services including:

- Children's centres
- Home-based family support, parental outreach
- Job centres and work skills
- Work with young families
- Work with fathers
- Partnerships with health visitors/midwives
- Parenting support
- Financial advice
- Relationship support, summer schemes, i.e. targeted support in a universal setting.

Ms Dent said early intervention had been shown by Ofsted and independent research to improve children's social skills, learning, language and reasoning and primary school performance in reading, numeracy and science. All of these benefits were still evident when the child reached 14 years of age, she claimed.

"Day care works, there's a huge amount of evidence for it. And the impact is still there at 14 years."

However, Ms Dent acknowledged there were some families with complex needs who were difficult to reach through children's centres. For instance, families affected by mental health problems, postnatal depression, learning difficulties, substance misuse or those living chaotic lifestyles, needed targeted and tailored support often in their own home.

She said that parenting difficulties could be divided into two categories: those that were acquired, such as postnatal depression, mental health difficulties, substance abuse and domestic abuse; and those that were inbuilt, such as poor parenting knowledge, lack of family support, learning difficulties and lack of parenting aptitude.

"It is important that we do intervene in families with complex needs because the children are at risk, developmentally, educationally, socially and cognitively," said Ms Dent.

"The greatest impact is in the early years, so the earlier you intervene, the better."

Midwives, health visitors and EYPs all had an important part to play in identifying families with complex needs and ensuring they got the extra support they needed, said Ms Dent. However, effective intervention was a lengthy process and beyond the remit of most HCPs and EYPs. The families need help to achieve what the health visitor says is needed.

"You can begin to work with these families, but it does take time, they need to be shown what and why to do things and their learning reinforced. This is why health visitors find it difficult. Midwives and health visitors have huge workloads and are quite an expensive resource."

In contrast, Family Action family support workers (FSWs) are paid around £15,000 less than a health visitor and can offer a long-term commitment to help parents learn and succeed.

Ms Dent described an initiative currently underway, in which Family Action support workers and health visitors worked together from a children's centre in Mansfield. Whenever the health visitor identifies a family in need of extra support, the FSW visits the family and works with them on a range of issues identified by the health visitor such as weaning, poor diet, hygiene, development milestones and other issues that Family Action might identify such as poverty, housing and relationship issues. The health visitor monitors the family's progress and remains the key worker throughout.

Other Family Action projects currently underway include five pilot projects initially developed with the Maudsley Hospital in London to support women through the perinatal period, with a particular focus on helping relieve postnatal depression.

"This is important because we know from our work in children's centres that a lot of the parent/child relationship difficulties stem from postnatal depression," said Ms Dent.

She concluded with a plea to the Government to continue investing in parenting and early intervention services.

"It's cost effective and it is evidence-based so we know it works," she said.

"We need to invest in a range of perinatal services and in children's centres. Health visitors and midwives need to work with family support workers to affect change in families with complex needs. We need quality services, universal services and easy access."

"Our early years services are a national treasure. We need to keep valuing them and building on them."

DISCUSSION

Question:
"Where do you get your funding?"

Answer:
"Mostly from local authorities, although our work on postnatal depression has received some health service funding and Trust Fund income."

Question:
"What indicators do you use to measure your results?"

Answer:
"We use a number of outcome and output tools that you can find on our websites – the Family Star and Building Bridges for instance. We also deliver to targets."

WORKING WITH FAMILIES TO PROMOTE POSITIVE EATING HABITS

Dr Gillian Harris
Consultant Paediatric Clinical Psychologist, The Children's Hospital, Birmingham and member of the Infant & Toddler Forum

Most children learn which foods to eat by watching their parents. However, many parents are unaware that their own eating behaviour may influence their children's dietary choices for life. Moreover, when a child's diet becomes a problem – through overeating, undereating or fussy eating – many parents use highly ineffective strategies to deal with it.

Dr Gillian Harris gave the meeting a thorough account of the feeding strategies likely to be used by parents, with some guidance on which should be encouraged and which are the least likely to work.

The strategies tended to fall into three categories, she said:

- Authoritative – high warmth, some demand
- Authoritarian – low warmth, high demand
- Permissive – low demand and lack of rules (eat what you like).

Of these, the authoritative was likely to be the most effective, said Dr Harris.

She said the most effective ways of encouraging a child to eat certain foods were through 'modelling' – seeing the parent or others eating the food; 'exposure' – being repeatedly exposed to the food; or by simply prompting the child to eat.

Most parents would use these methods without necessarily being aware of it, said Dr Harris. This was fine as long as the food being encouraged was healthy. But if the parents were both eating biscuits for breakfast it was hardly surprising if the child followed suit.

"You can model the wrong foods and we need to remember that," said Dr Harris.

Parents who were concerned about their child's eating patterns tended to use a number of strategies, said Dr Harris. These included:

Coercion or forceful feeding – *"These strategies do not work and are associated with subsequent food refusal, increased anxiety levels and growth faltering,"* said Dr Harris. *"These effects can be long-term".*[4, 5, 6]

Bribery or reward – *"Parents will say 'eat up your vegetables and then you can have your pudding or you can go out to play'. This can sometimes be effective but the danger is that it can lead the child to devalue the healthy food. The reward is seen as nice and the thing you have to do to get the reward is seen as not nice. It may be better to use a tangible reward such as a sticker."*

Pressure to eat – *"Pressurising a child to clean up their plate is not usually a good idea,"* said Dr Harris. *"It tends to be unsuccessful in underweight children, but pressure to finish meals can lead to overeating in overweight children."*

Restriction – *"Overt restriction, where sweets or chocolate are sometimes given but not usually allowed, leads to an increased desire for the restricted food,"* said Dr Harris.[7] *"It's better not to overtly restrict food. If things are freely available, they are less likely to be used as comfort foods, although some sensible restriction is necessary in the diets of children without feeding dysfunction in order to maintain intake of healthy foods.*[8] *Covert restriction, where the food isn't allowed into the house, works until the child enters the real world."*

Hiding or disguising food – *"Hiding or disguising food is not effective and often leads to a disgust response,"* said Dr Harris.[9] *"If you hide an unliked food within a liked food there is a danger of losing the liked food."*

Distraction – using the TV to distract a child while eating is not usually a good idea, said Dr Harris. *"TV viewing while eating is linked to obesity,"* she said. However the technique could be useful in avoidant children who find the sight or smell of others eating disgusting. *"Some children with learning disabilities may benefit from this."*

Dr Harris concluded with some practical advice for parents dealing with a range of feeding difficulties in their child.

For a child who does not eat enough (especially if growth faltering), Dr Harris advised:

- Low anxiety mealtimes
- Short frequent meals or snacks
- Giving the foods that the child prefers
- Paying attention to the child while they eat (but not when they don't eat)
- Possibly using TV or DVD to distract the child while eating.

To get a child to try a new food, she advised:

- Modelling – allowing the child to see the parent or sibling eating the food
- Exposure – offering the food at repeated servings
- Prompting – gentle suggestion to try the new food (but not repeated pressure)
- Reward – offering tangible rewards such as a sticker for trying a new food.

Particularly fussy children would respond best to modelling, exposure and possibly reward, said Dr Harris.

For overweight children she advised:

- Some restriction of high calorie foods
- Exposure to healthy foods
- Prompting to try new foods
- Tangible rewards to try new foods.

Whichever strategy was used by the parent, it was important to tailor it, both to the nature of the feeding problem and to the characteristics of the child, said Dr Harris.

"So are you looking at an overweight child, an underweight child or a child with limited range of foods? Is the child a plate clearer, or is the child extremely sensory sensitive or neophobic?"

FURTHER READING

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Newman J, Taylor A. *Effect of a means-end contingency on young children's food preferences.* Journal of Experimental Psychology. 1992; 64: 200-216

Powell F, Farrow C, Meyer C. *Food avoidance behaviours in children. The influence of maternal feeding practices and behaviours.* Appetite. 2011; 57: 683-692

Rolls BJ, Engell D, Birch LL. *Serving portion size influences 5 year olds but not 3 year old children's food intakes.* Journal of American Dietetic Association. 2000; 100: 232-234

DISCUSSION

Question:
"Is there any research to link feeding problems with colic?"

Answer:
"Not that I'm aware of. With reflux, yes. But colic, no."

Question:
"Is the prevalence of fussy eating rising?"

Answer:
"Unfortunately we don't have an agreed definition of 'fussy eating' so it's difficult to do a study on this. But just from my experience in the clinic I would say it seems to be going up."

HOW TO EFFECTIVELY COMMUNICATE WITH FAMILY MEMBERS

Nick Booth
Learning and Development Consultant, Leading Edge Training and Coaching

People respond to information in different ways. Some simply want the facts, delivered clearly and concisely. Others like to feel involved in the decision process. Some will respond emotionally while others are more reserved.

If HCPs are to deliver healthy eating messages effectively then they need to be aware of these different communication styles and how and when they should be used.

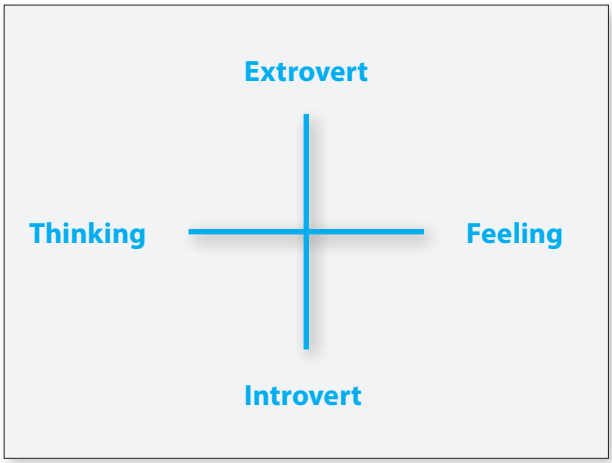
Nick Booth offered some helpful tips on how to do this.

First, he put the participants at his workshops through a series of tasks to identify their own communication preferences.

Participants began by standing in the centre of the room. They were then asked to respond to a number of questions by taking a step forward, backwards, to the left or right, depending on whether they were predominantly extrovert, introvert, or whether their decisions were made on gut feeling or through careful thinking.

This divided the room into four distinct quadrants *(see Fig 4)*.

Fig 4



Participants then allocated a colour to each quadrant.

The extrovert thinkers were labelled **Fiery Red**; extroverts in touch with their feelings were **Sunshine Yellow**; introvert thinkers were **Cool Blue**; with the final quadrant labelled **Earthy Green**.

Next, participants were asked to think of words that might describe each group.

Confident • Forceful • Impulsive **Hot-headed • Decisive • Clear** **Passionate • Enthusiastic • Logical** **Authoritative • Easily bored • Dynamic** **Leader • Manipulative • Bully**	**Passionate • Warm • Approachable** **Irrational • Emotional • Empathetic** **Sociable • Expressive • Impulsive** **Doers**
Frustrated • Cold • Analytical **Methodical • Observant • Logical** **Thoughtful • Interested • Reflective** **Organised • Aloof • Independent**	**Considered • Reflective • Reserved** **Passive • Guarded • Shy • Dedicated** **Good listener • Anxious • Quiet** **Strong morals • Caring • Understanding**

Finally, participants were asked how they thought each group might prefer their communication.

• Facts **• Focus on me** **• Concise** **• Be bright, be brief, be gone**	**• Enthusiastic** **• Honest** **• Face-to-face** **• Pleasant** **• Involve me**
• Clear **• Concise** **• Bullet points** **• Give me the detail**	**• Calm** **• Sensitive** **• Considerate** **• Respect** **• Show me you care**

Mr Booth stressed that there is *"no such thing as a Red, Blue, Green or Yellow person."*

"The descriptions apply to communication styles and have to be tailored to the situation. For instance, most midwives describe themselves as falling into the Earthy Green group. But the minute they get into the delivery suite they become Fiery Red."

THE BUILDING BLOCKS OF A HEALTHY BALANCED DIET

Judy More
Paediatric Dietitian and member of the Infant & Toddler Forum

Judy More's interactive workshop began with a quiz designed to test participants' knowledge of how to plan a menu for children during the toddler years. This threw up some interesting anomalies.

For instance, most participants were aware of the five food groups – starchy foods; fruit and vegetables; milk, cheese and yogurt; meat, fish, eggs, nuts and pulses; foods high in fat and sugar. Many had used tools such as the Eatwell Plate, or five-a-day advice for fruit and vegetables. However, there was confusion over how this advice, designed for adults and older children, should be applied to the toddler diet.

"The Eatwell Plate is not applicable to the under-5s," said Ms More.

"We use the same food groups but in different proportions. The evidence for the five-a-day advice is also based on research in adults. It is not necessary for young children to eat five servings and it is sometimes very difficult to get children to eat vegetables – you shouldn't try to force them. You should offer them at meals and in snacks, but don't get too anxious if they don't eat them."

There was also some confusion over official advice being given on the use of vitamin D supplements.

Ms More said that the Department of Health's advice is to give vitamin A and D supplements to:

- All breastfed infants from the age of six months or from the age of 1 month if there is doubt about the mother's vitamin status during pregnancy
- All formula fed infants from the time they begin drinking less than 500ml formula milk per day.

"But some local authorities are now giving it to all infants from birth. There's certainly no harm in everybody being given vitamins A and D from birth."

The workshop then moved on the practicalities of menu planning for toddlers. Ms More urged participants to consider a number of aims when planning their menus.

These included:

- Providing adequate nutrients and energy for health, growth and development
- Providing pleasurable mealtimes and snack times
- Providing an opportunity for learning to like a wider range of foods
- Providing information for catering staff for ordering, cooking and budgeting.

Each one-day menu should include:

- 3 meals and 2-3 snacks
- 2 courses at each meal
- Bread, rice, potatoes, pasta or other starchy foods at every meal and some snacks
- Fruit and vegetables at every meal and some snacks
- 3 servings of milk, cheese or yogurt
- Meat, fish, eggs, nuts or pulses at both main meals
- Small amounts of high-fat foods
- 6-8 drinks
- A supplement of vitamins A and D.

Ms More acknowledge that getting the portion size right for a toddler is not always easy.

"Young children don't eat set portion sizes and the amount they eat tends to vary from day-to-day."

She recommended using the ITF Factsheet 'Portion Sizes for Children 1-4 Years' as a useful guide for a portion size range for each food item listed. If toddlers eat a quantity within this range then they will be eating enough.

WORKING WITH FAMILIES TO PREVENT OBESITY

Professor Paul Gately
Leeds Metropolitan University and
Founder of MoreLife

Childhood obesity not only damages physical health, it can also have a devastating effect on a child's mental health and psychological wellbeing.

Prof Paul Gately, whose MoreLife programme offers specialist weight management services for families, told the meeting that the teasing, bullying and stigma often associated with childhood obesity could be as damaging as the obesity itself.

"One of the common themes that we see in the context of obesity is very poor interpersonal skills, particularly at the high end of the spectrum," he said.

"Obese children who are teased and bullied for their weight have significantly lower levels of self-esteem than their obese peers who have not been teased or bullied. So it's not the obesity that drives low self-esteem, it's how those kids get treated."

This weight bias and discrimination led to a number of social, educational and health consequences, said Prof Gately *(see Fig 5)*.

Prof Gately stressed that the problem of childhood obesity was both serious and growing.

"There are 13 million kids in the UK," he said. *"Of these, 33.4 per cent (4.3 million) are overweight or obese. Out of this number 13.4 per cent (1.76 million) are overweight, 19 per cent (2.5 million) are obese and 1 per cent (140,000) are severely obese."*

He went on to describe how MoreLife works with the families of children who are obese or at risk of obesity using a staggered approach of residential camps, community camps, community clubs and self care.

The intervention uses a multidisciplinary team of physiotherapists, lifestyle coaches, exercise physiologists, teachers, health trainers, psychologists, GPs and dietitians.

Fig 5

Social Consequences

- Inequalities in employment
- Barriers in education
- Compromised healthcare
- Barrier to obesity being viewed as a medical condition.

Health Consequences

- Poor self-esteem
- Poor body image
- Depression, anxiety
- Increase in maladaptive eating behaviours and exercise avoidance
- Avoidance of healthcare services.

Educational Consequences

- Poor school functioning
- Poor academic performance
- Poor attendance
- Reduced future academic goals.

Consequences of weight bias and discrimination.

Studies into the outcomes of these interventions had produced encouraging results, said Prof Gately *(see Figs 6 & 7)*.

Fig 6

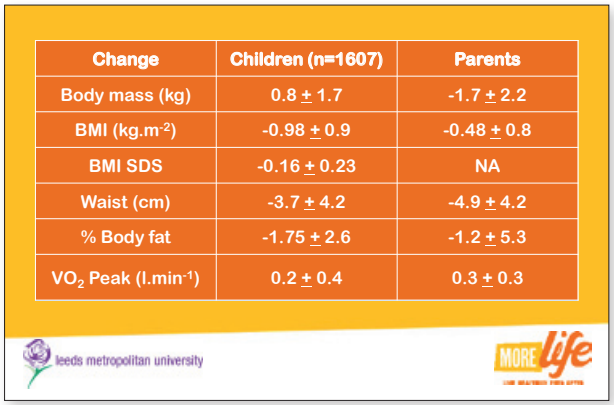
	Pre	Post	Change
Body mass (kg)	89.6 ± 23.9	83.2 ± 21.7	-6.4**
BMI (kg.m^{-2})	33.7 ± 6.2	31.4 ± 5.8	-2.3**
BMI SDS	3.03 ± 0.6	2.74 ± 0.7	-0.3**
% Body fat	47 ± 6	44 ± 7	-3*
Waist (cm)	96.4 ± 12.5	90.2 ± 10.4	-6.2**
VO^2 Peak (l.min)	2.08 ± 0.60	2.3 ± 0.5	0.22**
Self Esteem	2.56 ± 0.6	2.77 ± 0.6	0.21**

leeds metropolitan university

MORE life

Residential Camp Outcomes (n=1182)[10]

Fig 7



Change	Children (n=1607)	Parents
Body mass (kg)	0.8 ± 1.7	-1.7 ± 2.2
BMI ($kg.m^{-2}$)	-0.98 ± 0.9	-0.48 ± 0.8
BMI SDS	-0.16 ± 0.23	NA
Waist (cm)	-3.7 ± 4.2	-4.9 ± 4.2
% Body fat	-1.75 ± 2.6	-1.2 ± 5.3
VO_2 Peak ($l.min^{-1}$)	0.2 ± 0.4	0.3 ± 0.3

Club Outcomes (n=1607)[11]

Prof Gately said that the MoreLife approach worked on the general principle of controlling the child's environment to reduce the cues to unhealthy behaviour.

"We identify routines which cause increased calorie intake, inactivity and sedentary behaviour. We then try to identify alternative routines that will reduce calories and increase activity."

The programme worked by setting short-term goals that were challenging but achievable, said Prof Gately. Parents were also set goals for their own behaviours.

It was important to reward successful behaviour, said Prof Gately.

"Reward is a powerful motivator. It takes five positive comments to cancel out one negative."

The programme also stresses the importance of parents setting their children a good example.

"Role modelling is important," said Prof Gately. *"Parents are the most powerful influencer of their children's behaviour."*

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GENERAL INFORMATION

The Infant & Toddler Forum brings together representatives from paediatrics, neonatology, health visiting, dietetics and child psychology who share a common professional interest in infant and child health and nutrition.

A goal of the Forum is to improve the access of healthcare professionals to reliable, evidence-based nutritional information relevant to their practice, which will equip them to advise and support the parents of infants and young children.

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