

# Healthy Eating Project Report

## At Redbank Community Home, St Helen's Council Children & Young People's Services

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### Introduction

Jan Baxendale is Support Services Manager at a secure unit for forty juvenile offenders. She had become increasingly aware that diet, lifestyle and environment may influence mood and behaviour in susceptible teenagers, and wanted to improve general health and influence anti-social tendencies evident at Redbank. She contacted me in November 2004, requesting suggestions for healthier eating practices that would appeal to the young residents, all within her budgetary constraints.

Recurring health concerns of the young people at Redbank included asthma, colds, skin problems, undetected hearing problems, excess or low weight and growth. There was a high proportion of learning and behavioural problems, including dyslexia, dyspraxia, ADHD, Asperger's, and sexually inappropriate behaviour. A doctor is on call, the Community Homes Health Team is on site for mental health needs and there is full time nursing cover during the week

### 1.1 Background

It is scientifically accepted that the kinds of food we eat affect not only our physical well-being, but also the way we think and behave<sup>1</sup>. Along with nutrient deficiencies in the food supply, the unprecedented levels of sugar, salt, toxic metals, hormones and synthetic chemicals in food may prevent nutrients being absorbed or actively promote their loss<sup>2,3</sup>. The consequences of nutrient deficiencies are well documented. Trace minerals, such as zinc and magnesium, are required for enzyme reactions in the human body, including energy production, proper functioning of nerves and muscles, bone and teeth formation, growth and reproduction and immunity. Along with essential fatty acids, they are crucial for the development and functioning of a healthy central nervous system and brain.

As people are biochemically different, some children may have special dietary needs and some may have higher requirements for certain nutrients. An imbalance or deficiency of such nutrients may adversely affect physical and mental well-being.<sup>4</sup>

Since the 1970s there has been evidence of a link between antisocial behaviour and poor diet<sup>5</sup>. More recently (2002), researchers at Oxford University found that simply adding vitamins, minerals and essential fatty acids to the diet of 231 young offenders at a maximum security institution in Aylesbury resulted in a 26% reduction in serious offences.<sup>6</sup>

### 1.2 Proposed Aims and Objectives at Redbank:

To provide the young people with a basic foundation for improved health and growth, concentration, learning and behaviour, improved quality of sleep and resistance to infections through healthier eating practices (including main meals, snacks and beverages).

### 1.3 Monitoring of Project Outcome

Measuring criteria regarding improvements in the behaviour (and general health) of the young people need to be clearly defined. I suggested that, at the earliest opportunity, a format for project feedback for monitoring purposes should be agreed. However, at this point, there was no formal measurement of behaviour or way of objectively assessing behaviour that could be used to monitor and isolate improvements. For the purpose of this project, unit managers were relied upon to rigorously record violent incidents (i.e. assaults on staff and young people). Incident forms were completed after each event and reported monthly to the Youth Justice Board.

I made clear from the outset that a degree of commitment was required from the staff as behaviour may deteriorate in the short term in some children, due to withdrawal reactions from specific foods (e.g. sugar, caffeine, additives).

#### 1.4 Project Agenda:

- Immediate report with recommendations and ideas for menus after visiting Redbank.
- Thereafter, a nutrition seminar for the staff - topics included:
  - Nutrition basics
  - how to improve digestion
  - how to balance blood sugar
  - how to increase resistance to disease
  - how to use diet to improve mood, concentration and behaviour.
- Follow-up consultations with Jan Baxendale after the staff seminar were conducted by telephone.

## 2. Redbank Community Home – Initial Arrangements & Facilities as at November 2004

Red Bank Community Home offers care for up to forty young people (between the ages of 10 and 16) in three secure and three open units with education provided on site. The daily time-table is as follows:

Breakfast

School: 9.00 am - 10.45 am

Short break with drink and snack

School: 11.00 am -12.50 pm

Lunch: 12.50 pm – 2.00 pm

School: 2.00 pm - 3.40 pm

Drink and snack

Organised activities or sport 4.00 pm – 5.00 pm

Tea (Dinner): 5.00 pm

Group work / TV / Key-work sessions / Visits

Supper: 8.30 pm – 9.00 pm

There are three kitchens in the secure and three kitchens in the open units and each follow the menu of the day, although cooks are encouraged to improvise or change the dish if the group dislike the main dish. All meals are prepared and cooked on site and healthier eating habits had already been introduced. These included: home-made cakes, reducing sugar and cutting out chocolate (except for purchasing with own pocket money at the weekend). Crisps were allowed only at the weekend. Redbank have preferred suppliers designated by the council for dry goods, fruit and vegetables, milk, bread and frozen goods. These tend to supply the same produce, regardless of season, and there is limited choice. There are no vending machines on site. The young people have no access to cigarettes or alcohol.

At present, £4.70 per day is spent on each young person, which provides 4 meals from breakfast through to supper (the amount also includes meals for carers). The meals are subsidised by St Helen's Council and the Youth Justice Board.

### 2.1 Menu choices (on a 5 weekly rota basis):

Four meals were provided per day (breakfast, lunch, dinner, supper). Alongside meals, there was always a choice of salad, sandwiches and jacket potatoes which the young people had to order at breakfast time each day if they did not wish to eat the daily menu main meals. Fruit and yoghurt were available after each meal on a daily basis; and there were vegetarian and halal options if requested but these choices were mostly Quorn substituted for meat.

**Breakfast:**

Choice of toast, cereal, fruit juice. Eggs available on Wednesdays. At the weekends, full fried English breakfast .

**Lunch:**

Chicken wraps, veggie wraps, cheese and tomato pizza, crispy pancakes, cheeseburgers, mini waffles, hot dogs, various savoury pastries, pies, doner steaks, soup, sandwiches (turkey/ham), jacket potatoes, salad.

**Dinner:**

Chicken nuggets, gammon, scampi, tuna pasta bake, chicken curry, stew and dumplings, fish fingers, pork chops, minted lamb chops, hot pot, Cajun chicken, beef in black bean sauce, fish, chilli, pork ribs, cottage pie, lasagne. All available with fresh or frozen vegetables, chips, white rice, noodles, pasta.

**Puddings** included gateau, ice-cream, fruit crumble, trifle, cheesecake, sponge and custard – these are a mixture of home-cooked and bought/frozen.

**Summary:**

The meals were generally very heavily wheat and dairy-based, according to government guidelines. The young residents had a high intake of sugar and preferred junk food, with little intake of fruit and vegetables (one child didn't know what a banana was). Toast and cereal were provided as snacks. They drank little plain water, choosing squash, juice, tea or coffee instead with biscuits at break-times.

**3. Nutritional Recommendations**

To ensure optimum physical and mental development and a healthy immune system, a growing child requires a balanced, varied diet of foods low in sugar, salt and processed fats and high in vitamins, minerals, essential fatty acids, protein and fibre. The distribution of meals and snacks were to remain in place, the emphasis, however, was on nutritional quality, and keeping meals simple with natural home-cooked ingredients. Unhealthy options were to be gradually replaced with healthier alternatives to limit power struggles, rather than taking away "treats" all at once.

The whole exercise needed to be structured with well-defined objectives and mutually agreed success criteria over a defined time period. I initially suggested a six-month project (with hindsight this was overoptimistic!). It was important to proceed in stages rather than making too many radical changes all at once. Then, after the 6 month stage, the aim was to conduct regular reviews to keep on track.

Healthy eating projects in individual units were organised to explain to the children, cooks and staff how some foods help them to look better and feel well, strong and focused. If they refused to eat items, a different healthy option was offered and tried again at another time. Health education/promotion alone is unlikely to change people's diet and behaviour, but parents and carers who keep trying have a higher success rate<sup>7</sup>. It is immensely helpful if the whole community adopts a healthy eating approach and sets a good example.

A substantial part of the responsibility at Redbank was to remove choice and provide quality. Too many food choices were considered confusing and counterproductive. If, for example, bread and butter or toast were on offer, the young people might be side-tracked from eating fruit or the main course.

Following my recommendations, Redbank made the following changes:

- Higher water intake instead of highly sugared or artificially sweetened and coloured juices or caffeine-containing beverages.
- Home-made dishes and vegetarian options each mealtime.
- Reduction of sugary breakfast cereals, bread and baked goods containing refined "gluey" carbohydrates, sugar, salt, high yeast, calcium propionate and other additives. Suggestions for alternatives and replacements were provided.

- Replacement of excessively sugary desserts with healthier puddings, fresh fruit crumbles, baked fruit with custards, home-made cakes and biscuits.
- Removal of sugar bowls on dining tables. Sugar sachets provided instead and controlled by staff.
- Reduction of salt in cooking and removal of salt cellars on dining tables. Salt sachets provided and controlled by staff.
- New local meat supplier delivers fresh higher quality meat (daily, if necessary).
- Chips once a week rather than 3 times a week.
- Fish once or twice a week. Tuna in sandwiches or with baked potatoes.
- Fruit and vegetables from a new local supplier bought fresh from the market twice a week, taking advantage of seasonal prices. Reduction in frozen vegetables (peas only).
- Healthy tuck shop providing fresh juices and low fat crisps, dried fruit and selected chocolate bars and confectionery. No fizzy drinks, no additives or artificial sweeteners.

These changes were introduced gradually but consistently over a two year period. There are now many more “home-made” dishes and vegetarian options. Simple meals such as porridge with honey and fresh vegetable soups served with home-baked warm bread rolls are proving very popular. The effect of tastier main meals is that the children eat fewer sandwiches and baked goods. Redbank have not, so far, been able to cut out white bread completely. Cakes, biscuits and crisps have been removed at break times and replaced with a variety of fresh fruit or smoothies. Strawberries, melon, kiwi, plums and clementines are the most popular fruits; and purchasing from the local market guarantees fresh, seasonal and more nutritious produce.

Due to better quality oils and deep-frying restricted to chips and fish in batter only, youngsters comment that “*it smells like you are cooking proper food, whereas before you could smell the awful stale cooking oil*”.

#### 4. Additional Measures

Redbank have introduced an Advanced Ordering System which has had the effect of reducing wastage by 75%. The budget is under control and surprisingly, savings have been made - even with higher meat costs. By preparing a monthly menu carefully and ordering in a more proactive way, food with a higher nutritional quality is being provided to the young residents.

A food council has been set up with regular monthly meetings. Each unit sends a representative along, accompanied by a carer. The young people are asked which meals they have enjoyed, which ones they have not enjoyed and any changes they would like to see (for instance additions to healthy tuck). This is a negotiation process with some requests being denied, e.g. a recent request for pork scratchings was refused, but fish fingers (grilled) were considered a compromise.

Healthy eating is now an accepted policy, but Jan Baxendale is by no means complacent. She reports that it is hard work and an on-going project. “*We have had to educate cooks, staff and children and constantly review our processes. We have to keep the young people involved and interested with attractive, colourful food presentations. However, the youngsters are much more conscious of what they are eating. The results speak for themselves and I am convinced that a healthier diet contributes to a healthier mind.*”

#### 5. Results

It takes newcomers about one month to adapt to the healthy eating regime. Staff report a visible change in physical appearance with noticeably less weight gain (previously, children used to put on considerable weight within 3 months of arrival). Staff also report that bedtimes and weekends are calmer with less aggravated behaviour.

As these are entirely subjective observations, it is encouraging to have a useful measure of monitoring behaviour (all assaults on staff or young people are recorded on incidence forms). There has been a significant reduction in violent incidents at Redbank: a recent monitoring report by the General

Manager states that ***“the use of physical restraints is down by 60% from 2005/6 to 2006/7”***.

It is unlikely that these positive behavioural changes can be attributed to dietary changes alone. Improved management techniques and staff training in emotional health and wellbeing will also have contributed to the positive outcome.

## 6. Conclusion

Dietary factors need to take a high priority when addressing the current crisis in the physical, mental and emotional health of children and adolescents. There are several reasons why the healthy eating project at Redbank was effective:

1. Committed, informed individuals willing to gradually and consistently drive through the required changes over a two year period. Changing the working practices in any organisation is likely to be challenging.
2. Less choice, or choices that are equally healthy. As Redbank is an “enclosed” community, the children are entirely dependent on the food choices provided.
3. Systematic planning and good organisation, e.g. an Advanced Ordering System and the setting up of discount schemes with local suppliers to guarantee nutritional quality at affordable prices.
4. Education and involvement of all members of staff as well as the young people.

In future, Redbank could be used as an effective model for other secure units or detention centres. To improve scientific validity, setting up a control group (e.g. in one of the secure units) would be desirable, as well as collecting data on weight and establishing specific criteria with regard to general health status. There may also be positive knowledge to be gained from testing for vitamin and mineral deficiencies and other biochemical imbalances (essential fatty acids/toxic metals), since many young offenders have nutritional deficiencies that may adversely affect their behaviour. These could be addressed by providing tailored supplementation programmes for those young people staying long-term.

This project shows how simple nutritional changes may lead to considerable improvement in antisocial behaviour and general health, making life easier for carers. In addition, healthier meals and snacks, far from being more expensive, can actually lead to savings in costs and wastage.

### About the Author

Martina Watts BA (Hons) Dip ION is a Nutritional Therapist with special experience in working with children and adults suffering from digestive, behavioural and immune problems. She runs a private practice in Brighton and works as an independent Nutrition Consultant for schools and local government with special focus on school meals. Martina has convened 5 major conferences looking at how the impact of our technological age on food and environment may lead to physical and mental health problems, and how this trend can be reversed. She is a regular newspaper columnist and is currently on the MSc Nutritional Medicine programme at Surrey University.

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