

## Written evidence from Think Through Nutrition

### Introduction

Women in prison have long been known to have rates of mental ill-health and self harm far higher than their non-detained peers. While there are many reasons for this, we know that a good diet with the range of essential nutrients that are necessary for good physical and brain health can help to mitigate against this. Relatively simple changes to the menus accompanied by education, as shown by our intervention in HMP Eastwood Park, can have a transformative effect on the physical and mental health of women in prison.

Our 2020 *Think Through Nutrition in Prisons* programme in HMP Eastwood Park worked with a pilot group of 33 women to enhance their nutritional knowledge and habits and help them to meet their individually set goals, as well as to:

- › Improve their mental and physical health with emphasis on wellbeing
- › Learn about nutrition and the brain and take ownership of their learning
- › Change food habits and knowledge
- › Make positive long-term changes for themselves and their families through new skills, enabling greater independence and broader career opportunities

Robust research demonstrates the impact of improved nutrition on both behaviour and mental health of those within the criminal justice sector. Our own research, and that of others, in addition to our practical interventions have shown the significant impact that improved nutrition can have on individuals and their physical and mental health. This underscores the importance of proper nutrition to prisoners, staff and the prison service as a whole. A report on our *Think Through Nutrition in Prisons* pilot at HMP Eastwood Park and a summary of two other important studies can be found at the end of this submission, along with a testimonial from the Governor of HMP Eastwood Park.

Built on a long history of pioneering science, Think Through Nutrition was established as a charity in 1983 and has been setting a gold standard in research for over three decades, examining the link between nutrition, brain health and behaviour. We understand the importance of nutrition and have provided important evidence about how crucial certain nutrients are for improving mental health and behaviour, especially in prison.

### Think Through Nutrition in Prisons

The pilot programme at HMP Eastwood Park built on our decades long work to demonstrate the impact of improved nutrition on both behaviour and mental health of those within the criminal justice sector. At YOI Aylesbury, in a ground-breaking randomised control trial, we found that increasing prisoners' intake of crucial nutrients led to up to 37% fewer violent offences and 26% fewer offences overall.

We are now working with the Ministry of Justice in a pilot to improve nutrition in HMPs Wayland and Berwyn, led by Al Crisci, with support from us at Think Through Nutrition and with Oxford Brookes University. The programme combines nutritional education and menu changes. A roll-out across the whole prison system has the potential to dramatically transform the physical and mental health of prisoners in general.

### Specific questions

Other organisations are better placed than we are to comment on initiatives to reduce the number of women in custody; we will restrict our evidence to the critical role that good

nutrition can play in supporting women in custody, and to support their knowledge and learning as to how this could help them, and their families, after release. We will highlight gaps in provision where relatively simple, sustainable change can be easily made.

### **Supporting women in custody**

**6. Does the female prison estate take a Whole System Approach (that considers all of the offenders needs) to those in their care?**

- **What does this look like in practice?**
- **Are there any barriers in achieving a Whole System Approach to female offending?**

A whole system approach to the female prisoner state requires the integration of education with improved menu offerings to enable women to choose diets that will aid their rehabilitation, help them after release, build relationships with their families and ultimately result in vastly improved physical and mental health.

**7. How are women supported to maintain family ties in prison? What progress has been made on improving family ties since the Farmer Review? What effect has Covid-19 had on maintaining family ties for women in custody?**

- **What support is available for mothers to maintain contact with dependent children?**

Think Through Nutrition is interested in working with women to develop their skills and knowledge around nutrition and how to feed their families the best possible diets after their release.

We know that good nutrition is crucial to improve life chances and give children the best possible start in life. When women are confident in their knowledge of nutrition and healthy eating they will be able to provide good quality meals to their families and help their children understand why eating well is so important for their physical and mental health.

Simple initiatives such as cooking workshops and tasting experiences can have a huge impact on how families react to changes in diets that will give them the optimum nutrition for their bodies and brains. These are simple to implement and highly effective as our experience at HMP Eastwood park demonstrated.

**8. What factors contribute to the high levels of self-harm in the female estate?**

- **What is being done to address the high levels of self-harm in the female estate?**
- **What more could be done?**

Prisoners' behaviour often follows from their mental state; their rage and frustration leads to attacks on others, as well as their likelihood to self harm. More and more evidence showing the importance of essential nutrients in supporting good mental health of those in custody is continuing to accumulate; and we are proud that our studies in YOIs Aylesbury, Lancaster Farms, Hindley and Polmont, the results of our recent HMP Eastwood Park pilot and the preparation for the imminent commencement of our trial at HMPs Berwyn and Wayland have contributed to these advances. These findings underscore the importance of proper nutrition not only for prisoners, but also for staff and the prison service as a whole.

We have shown that education in custodial settings about how certain nutrients are particularly crucial for general and mental health, together with making simple, cost-effective changes to the menus on offer, can have a dramatic effect on the mental health of all

prisoners. Indeed, in many instances diet can also support the efficacy of pharmaceutical treatments for mental health. But, unfortunately, these improved menus are not yet available in all settings.

Also in prisons, the “tuck shop” offerings of ‘unhealthy’ foods (high in sugar, salt and unhealthy fats) are sold at a discount, with fresh fruit and healthy snacks actually costing more, is a clear disincentive to follow a healthy diet to support mental health.

Where menu changes were accompanied by education, a demonstrable improvement in cognitive and mental health was achieved – measured both from the perspective of those who were participating and from those who interacted with them. Participants were more likely to go to activities, felt more useful, felt closer to people, and had improved concentration. In terms of mental health, we found that participants had improved energy levels, felt more confident, had overall improved perceptions about their day, and felt more self-worth. Completing the programme left participants with a sense of personal achievement. While the relevant data was not collected due to the small group size, there were no self-reported incidents of self-harm within the group during the pilot.

We are committed to delivering further projects with larger groups of participants, where we will be able to determine more comprehensively which menu changes and educational modules can have the greatest impact on the mental health of those in custody.

### **Recommendations**

1. Change menus in all custodial settings to offer a diet containing nutrients that will support good mental health.
2. Provide education to all prisoners to develop their knowledge of nutrition for brain health and how to make food choices that will support their mental health.
3. Change ‘tuck shop’ offers to incentivise purchase of healthy snacks and treats and disincentivise HSSF foods.

### **Think Through Nutrition at HMP Eastwood Park**

#### **Our objectives**

In 2019, we started our first ‘*Think Through Nutrition in Prisons*’ programme with 33 women at Eastwood Park, focused on enhancing their nutritional knowledge and habits, and helping them to:

- › Improve their mental and physical health with emphasis on wellbeing
- › Learn about nutrition and the brain and ‘take ownership’ of their learning
- › Change food habits and knowledge
- › Make positive long-term changes for themselves and their families through new skills, enabling greater independence and broader career opportunities

In addition to the positive impact on individuals, the project aimed to benefit participants’ wider communities within Eastwood Park. We also set out to demonstrate that recipes can be scaled up for whole prison catering, providing a diet that achieves the agreed nutritional goals cost-effectively.

#### **Our activities**

This project consisted of three core elements:

- › **Learning toolkit and practical education for better self-management**  
Included sessions on nutrition basics, food for a healthy brain, food hygiene, cooking methods, label identification, shopping on a budget and eating well at home, as well as creative elements such as cookery classes, mock shopping experiences and food tastings.
- › **Menu changes to improve current health and wellbeing**  
Developed by working with the women and catering team. To encourage engagement, we analysed and adapted recipes suggested by the women, adjusting them in consultation with the catering team for mass catering.
- › **Defining and measuring outcomes and impact**  
Outcomes formed a core pillar of this work, and a three-tiered approach to building the project outcomes framework was taken which considered individual, organisational and Criminal Justice System needs. The five outcomes areas were defined as:
  - › Food preferences and habits
  - › Brain health and wellbeing
  - › Physical health and wellbeing
  - › Levels of activity
  - › Personal thoughts and goals

All outcomes were co-produced directly with participants, staff and existing partners to empower those involved in this work, enabling ownership for setting project goals, influencing project delivery, and shaping assessment of impact. We used focus groups throughout, along with pre and post-programme questionnaires to capture experiences and progress over time.

## **Our findings**

### **Food preferences and habits**

We found that the programme led to improved knowledge about nutrition and its impact on other aspects of health. Pre-programme, participants displayed varying levels of knowledge about nutrition and its health impact. After completing it, all participants passed the post-programme nutrition quiz and demonstrated improvements in knowledge of nutrition, confidence around food, and food selection and preparation skills.

This increase in knowledge was reflected in changes in nutritional habits –particularly when it came to snacking habits. We found that the programme led to improved dietary habits, such as reading food labels to inform food purchases and swapping out sugary foods for healthier alternatives. Participants that consistently chose the programme menu for their main meals were also more likely to snack healthily.

*“I have a different snack relationship. I feel a lot better when I have a healthy snack.”*

### **Brain health and wellbeing**

Our project was particularly successful at demonstrating an improvement in cognitive and mental health – both from the perspective of those who were participating and from those who interacted with them. Participants were more likely to go to activities, felt more useful, felt closer to people, and had improved concentration.

*“My mood’s not up and down.”*

In terms of mental health, we found that participants had improved energy levels, felt more confident, had overall improved perceptions about their day, and felt more self-worth. Completing the programme left participants with a sense of achievement. Further projects with a larger group of participants would help us to determine whether other mood symptoms could be improved by these kinds of modules.

*“The cooking class was really good for me. It gave me the confidence personally to present [food], learning about food prep and types of food... I learnt so much...”*

### **Physical health and wellbeing**

Participants also reported signs of improved physical health, such as more frequent ‘normal’ toilet use and a reduction in aches and pains. Participants – who had in majority reported gaining excess weight since entering prison – felt particularly positive about the weight loss benefits they experienced, which for some led to improvements in some chronic health conditions.

### **Levels of activity**

Participants reported higher energy levels and more physical activity, but exercised for shorter durations and slept for fewer hours later in the project. This may be due to other environmental factors in the prison. We are considering incorporating additional education about exercises that can be done in the prison setting in future programmes.

*“I have more energy and so am going to the gym more.”*

### **Personal thoughts and goals**

Participants felt positive about setting personal, health, and nutrition-related goals for the duration of the programme. Those who completed it reported that they had achieved their goals and wanted to continue setting goals for the future.

### **Participants also wanted to share their experiences of learning about food with their family members when they left prison.**

*“On the out[side] I will be cooking more from scratch. I’ll be having breakfast, which I never had before. I will eat more fruit now. I will be eating out a lot less; I used to eat out a lot before.”*

### **Our conclusions**

Results from the programme are encouraging, particularly given the significant findings achieved even with a small group of participants. They suggest that the programme could improve multiple outcomes including some dietary habits, secondary health benefits, mental wellbeing, self-worth, knowledge, skills and confidence levels – in particular in their ability to achieve goals – and sustained behaviour change. Taking the programme to other settings with larger groups will help us determine which elements are most effective in other, more varied populations.

## **Important Research**

### **Aylesbury Study**

A two-year clinical trial was run at Aylesbury Young Offenders Institution, to study the effect of nutritional supplements on offending behaviour.

#### **What we did**

We recruited 231 prisoners and reviewed their records of disciplinary incidents. Participants were then randomly assigned to take daily supplement capsules for 3 months, containing vitamins, minerals and omega-3 fatty acids or a placebo. None of the researchers, prisoners or staff knew who was in which group. At the end of the trial we reviewed the disciplinary records from the intervention period.

#### **Key findings**

The results of the trial were startling. The prisoners who received active capsules committed 37% fewer violent offences and 26% fewer offences overall, whereas the rates of disciplinary incidents remained substantially unchanged for those receiving placebos.

### **Three Prisons Study**

This study was carried out in three Young Offender Institutions at Hindley, Lancaster Farms and Polmont in Scotland. The teams recruited 856 prisoners to join a study of the effect of nutritional supplements on offending behaviour. Of this number, 771 reached the 80% compliance required to be included in the analysis.

#### **What we did**

We recorded prisoners' disciplinary incidents and assessed their nutrient status from blood samples. Participants were then randomly assigned to take daily capsules containing vitamins, minerals and omega-3 fatty acids or placebo, with neither the researchers, prisoners or staff knowing who had got which. After four months, we took blood samples again, compared the disciplinary records of those on active versus placebo capsules and related these to changes in their nutrient blood levels.

#### **Key findings**

In the prisoners who received the active capsules, their blood levels of omega 3s, vitamins and minerals increased, whereas the placebo recipients did not. In the group of prisoners receiving the supplements, serious offences decreased by 17% and all offences decreased by 12%, whereas in those receiving the placebo their offence rates remained unchanged. These results confirmed our Aylesbury study that nutritional supplementation can reduce offending in prisons.

## **Nutrition at HMP Eastwood Park - Testimonial**

### **Suzy Dymond-White, Governor, HMP Eastwood Park**

It had been apparent for a long time that we needed to change. Reports from the women were coming in that the food was too 'carb heavy' and did not contain enough variety. We embarked on a prisoner-led initiative that involved a small group of our women who worked with the team to devise a four week menu that was high on nutrient value – in particular targeted to brain health – and low on sugar, carbs and processed food.

We recruited a cohort of 33 women who participated in the programme for a period of 12 weeks. They came along to sessions that offered them information about the effects of food on the body and how to read food labels as well as prepare tasty, healthy, low cost dishes. There was a strong educational element to this programme so they could take the learning on from custody into their family lives.

The feedback from the women was generally very positive. There were, of course, some dishes they didn't like, and some days when they thought the kitchen team hadn't made a very good job of the food, but generally they really appreciated the change. It was a challenge for the kitchen team preparing a different menu for a small number of women and trying to produce new dishes and healthy snacks.

But the outcome was all worth it. I have women who have told me really positive stories such as losing three stone due to the diet and having more energy to go to the gym. Another woman told me that she has become more sociable and doesn't shut herself away so much because she feels better in herself.

We now have a team of women who take a more active role in the catering delivery at Eastwood Park and each day we have a menu choice that is identified by a green tick to denote that it is high in nutrients. There are still improvements to be made but this project has made the first big steps toward a more healthy and satisfying diet for the women at Eastwood Park.

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