

# Exclusive Enteral Nutrition

## The 7-day challenge



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### The challenge

Exclusive enteral nutrition (EEN) is defined as: *'Providing complete nutrition using a liquid feed while excluding usual dietary components for a defined time period.'*<sup>1</sup> It is well established that EEN induces remission in children with Crohn's disease (CD).<sup>2</sup> Poor compliance with EEN can occur because of the large volume of feed required, feed palatability and the disruptive effects to patient lifestyle. We decided to take up the challenge of following this diet for one week to gain an insight into the difficulties that our patients might face.

### Crohn's Disease (CD) and EEN

CD is a chronic inflammatory bowel disease (IBD) characterised by inflammation of the gastrointestinal tract which can cause symptoms such as: rectal bleeding, nocturnal stooling, abdominal pain and diarrhoea.<sup>3</sup> Diagnosis in childhood and adolescence is more common than in adulthood, contributing to approximately 25% of all cases.<sup>4</sup> Children are thought to have a more aggressive phenotype compared to adults with CD and subsequently the number of children diagnosed is increasing.<sup>4,5</sup> Nearly all children present with weight loss, faltering growth and nutritional deficiencies.<sup>6,7</sup>

Guidelines recommend that EEN should be continued for a minimum of six weeks to induce remission, but it may

be prolonged as required.<sup>8</sup> The liquid feed can be administered orally or via an enteral feeding tube. Normal diet is introduced at the end of this period.<sup>8</sup>

EEN is an effective alternative to corticoid steroids (CS) in children with CD.<sup>9</sup> As well as preventing the side effects associated with CS, the short-term advantages of using EEN include increased occurrence of mucosal healing,<sup>10</sup> altered intestinal flora,<sup>11</sup> improved growth,<sup>12</sup> improved vitamin D status,<sup>13</sup> heightened bone turnover,<sup>14</sup> and improved quality of life.<sup>15</sup> Little is known about the long-term outcomes in patients receiving EEN *versus* CS but it is proposed that EEN could increase the time between episodes of relapse.<sup>16</sup>

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## Our experience

### Intake

We sampled a number of 1.5 kcal/ml polymeric liquid feeds. We consumed an average of 1500 kcals per day, reporting a range of 4-6 bottles a day (1200-1800 kcals per day) over the week period. Compliance improved during the working hours owing to distraction from hunger and others eating standard meals.



### Exercise

We would classify ourselves as moderate to highly active, partaking in 4-5 episodes of exercise per week (running and gym-based activities) Our motivation to exercise increased during the challenge. Some of us reported that this occurred as an attempt to distract ourselves from the temptation to eat in the evening.

### Side effects

We actually found ourselves experiencing high levels of hunger while on the diet. We also responded that we felt appetite would have reduced owing to calorie and protein intakes being achieved. Unfortunately, we experienced persistent hunger and nausea.

No significant changes were reported with regards to bowel habits during the week challenge, which surprised us as we were concerned that constipation might

be a problem given that the liquid feeds used were fibre free. We were, of course, delighted that this was not the case!

### Social aspect of eating

Whether it's the chocolate croissant for breakfast or dinner out with friends, we missed every aspect of our normal dietary habits, especially the social ones. Mealtimes were shorter due to the time taken to drinking a supplement, far less time than would be spent enjoying a meal.

### Challenges

We came to realise how much our lives revolve around food, both inside and outside of work. Being without this pleasure was so much harder than we expected. Our colleagues endured five long days of our moaning and for that we are eternally grateful.

An unexpected difficulty was fear of consuming food at the end of the challenge. We did experience some abdominal pain on eating again but this quickly resolved within a few hours. From our clinical experience, the fear of food reintroduction and recurrence of symptoms is common among our patients, given the severity of their symptoms prior to the initiation of EEN.

## Summary

Although evidence supports that EEN is an effective treatment for CD, we can now say from experience that is not an easy treatment to adhere to. We are therefore much more appreciative of the difficulties faced by our patients with increased empathy towards the loss they must experience from both the physical and social aspects of eating. Our key learning outcomes are:

- Peer support from others receiving EEN helped enormously
- Where possible, avoid being around others while they are eating/cooking
- More support and reassurance are needed around food reintroduction and returning to a normal diet.

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