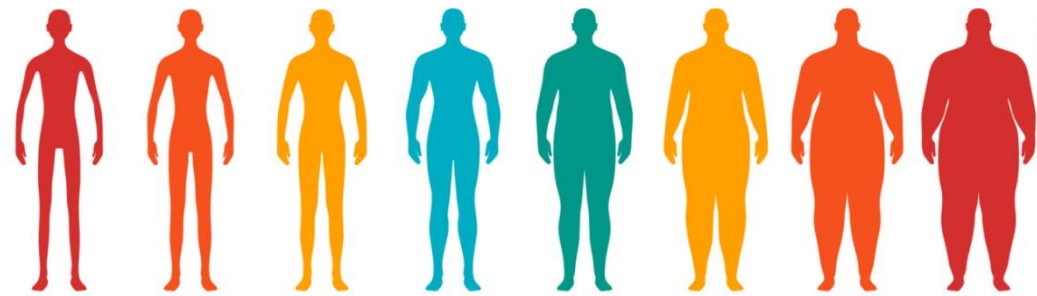
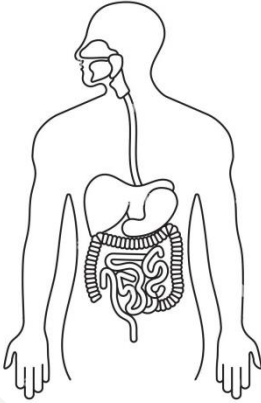


# Neuroendocrine tumours and diet



< 16	16 - 17	17 - 18.5	18.5 - 25	25 - 30	30 - 35	35 - 40	> 40
Severe Thinness	Moderate Thinness	Mild Thinness	Normal	Overweight	Obese Class I	Obese Class II	Obese Class III



**Portia Rees-Jones**  
**Registered Dietitian**

# NETs and Diet

Diet considerations for:

- Maintaining a healthy weight
- Pre and post surgery
- Symptoms associated with NETs
- Appropriate supplementation



**What is an optimal diet?**

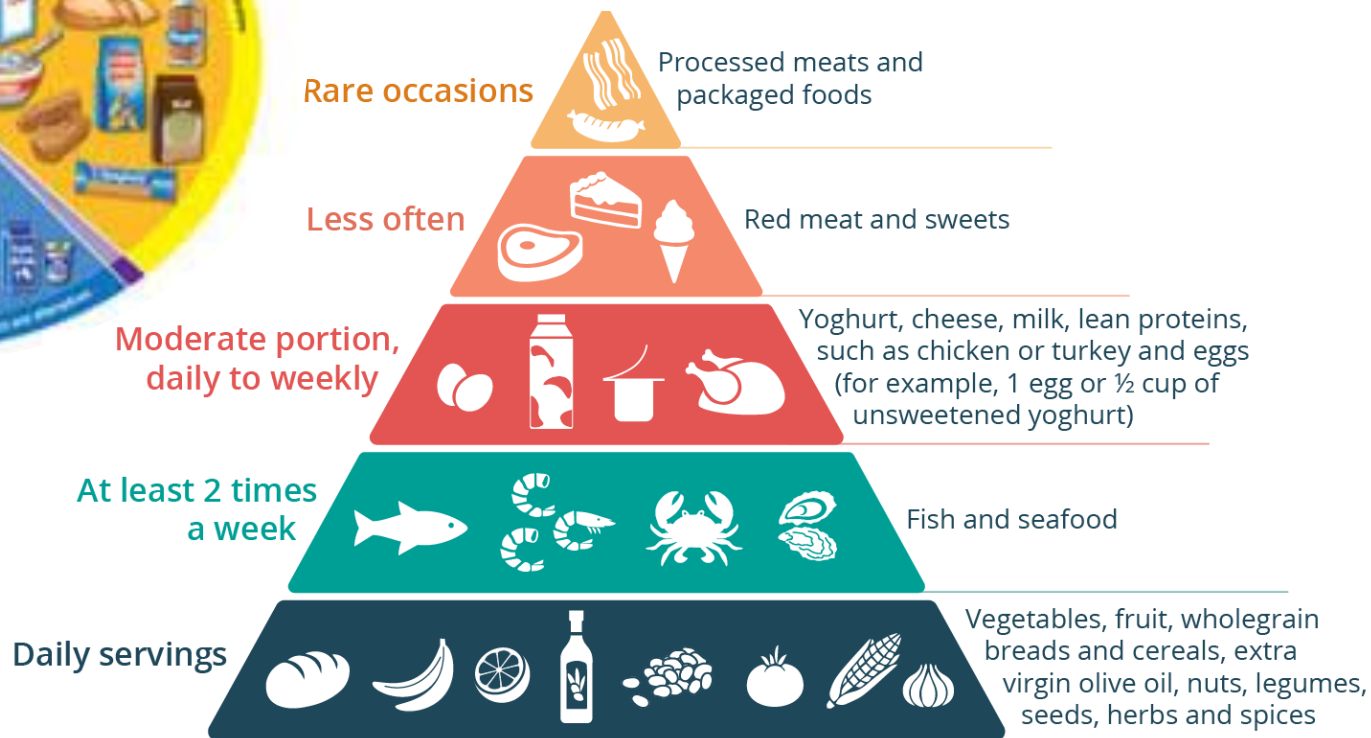






**Is this right for  
you?**

# A “Healthy diet”



# A Healthy diet along the NET Journey

Carcinoid  
syndrome  
trigger foods

Diet before  
surgery and  
recovering  
after surgery

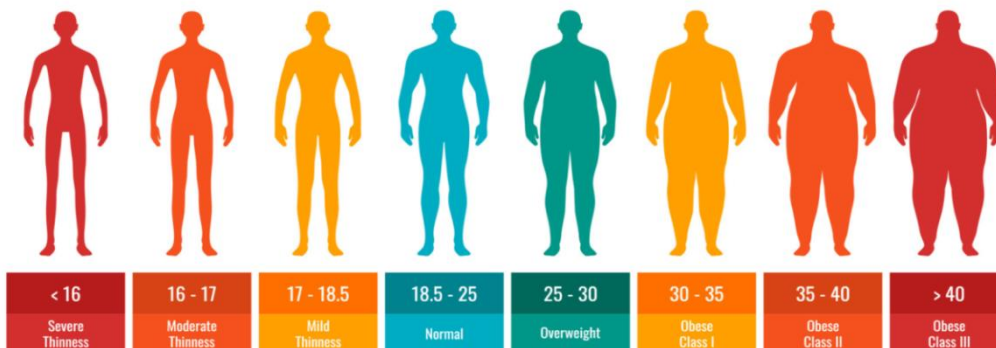
Diet to cope  
with  
treatments  
and  
potential  
side effects

Maintain a  
healthy  
weight

Diet to try  
help with the  
side effects  
of the NETs

# Maintaining a healthy weight

BMI (Weight ÷ Height ÷ Height)



LOSS OF APPETITE, ONLY ABLE TO EAT SMALL AMOUNT OR STRUGGLING TO SWALLOW FOOD OR FLUID

FEELING WEAK OR TIRED

UNPLANNED WEIGHT LOSS OR FEEL YOU ARE UNDERWEIGHT

CLOTHES, JEWELLERY, OR DENTURES BECOMING LOOSE OVER TIME

A BUILD UP OF FLUID AROUND YOUR ANKLES, LEGS OR STOMACH



# A healthy weight

- Undernutrition & malnutrition – can affect more than 50% of people with gastroentero- pancreatic NETs

<b>Carcinoid Syndrome</b>	Increased protein requirements with elevated 5HIAA (using up tryptophan stores)
<b>Surgery</b>	Reduced absorptive capacity due to pancreatic insufficiency or surgeries increasing energy needs/interrupting intake
<b>Symptoms</b>	Diet restrictions eg lower fat or avoiding “trigger foods”
<b>General</b>	Smaller appetite because of diarrhoea and GI symptoms, hospital appointments, treatments and fatigue



# Carcinoid Syndrome & Diet

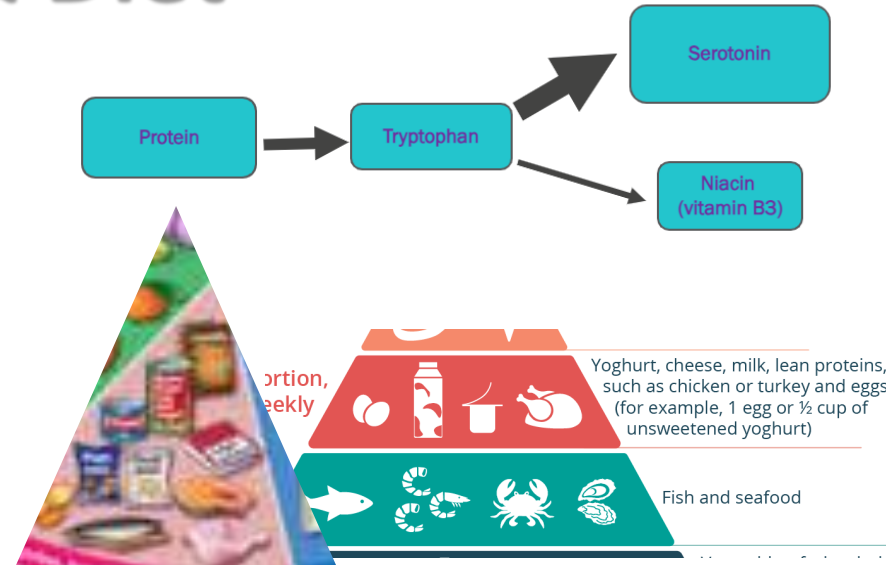
Diarrhoea, abdominal pain  
and flushing

Trial reducing the trigger of  
additional serotonin:

- A large meal
- High fat content meal/food
- Spicy food
- Alcohol/Caffeine

Some foods high in amines :

Aged cheeses, smoked meats, alcohol, tofu,  
yeast extracts ,chocolate, avocado, bananas,  
soybean products



These are common triggers  
but not necessarily yours!

# Pre Surgery & Diet

## Pre-Surgery

The goal of pre-operative nutrition is to ensure you have adequate energy stores to meet the demands of the “stress” state



Being a **healthy weight** and having a good nutritional reserve pre operatively can:

1. Improve wound healing
2. Reduce the chances of getting infections
3. Reduce the length of stay in hospital & get you back to where you were pre op quicker



- Surgery = A “race”
- “Carb Loading” \* \*NB liver shrinkage diet
- For at least the week prior to surgery

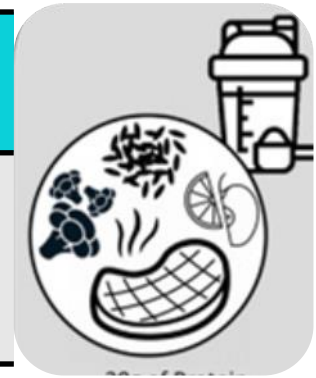
Up to 2/3 of people will lose weight whilst in hospital



# Post Surgery & Diet

## Post- Surgery

The goal of post-operative nutrition, is to promote nitrogen balance, reduce the loss of lean muscle mass, and facilitate rapid healing and recovery

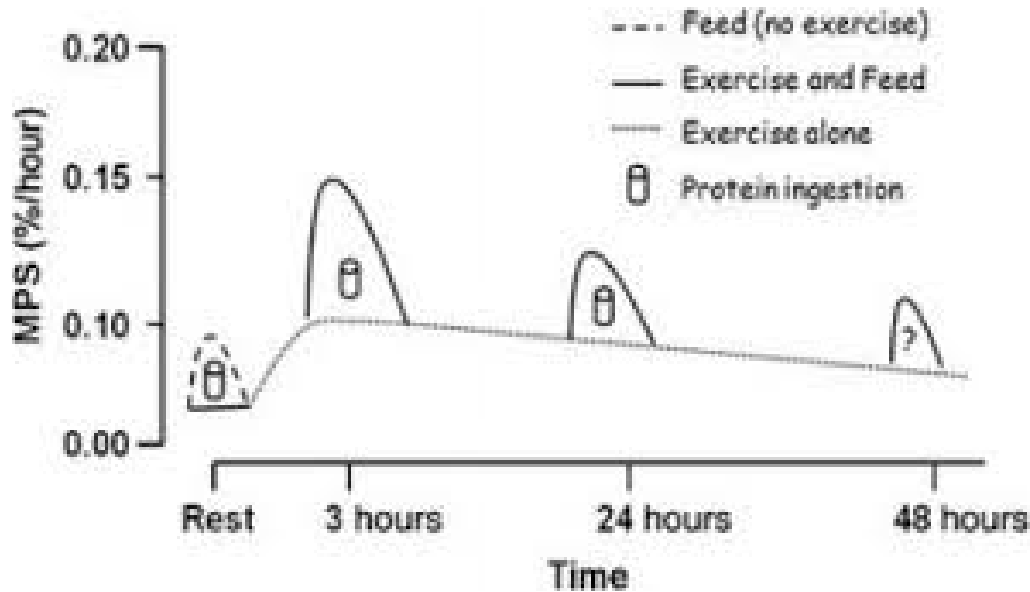


### Post-operatively

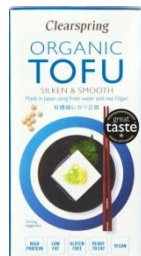
- Muscle loss is likely to occur alongside weight loss
- Reintroduction of food post op can be slow & complicated



# Maintaining muscle strength and mass



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# The effects of exercise



**Exercise interventions for people undergoing multimodal cancer treatment that includes surgery (a cochrane review)**

- We are moderately certain that exercise training during adjuvant treatment (chemotherapy or radiotherapy treatment after surgery) **reduces fatigue**. (NB >70% were breast cancer)

**Colorectal cancer surgery:**

- The combined use of aerobic and resistance exercise **pre op reduces hospital stay in**
- And “progressive relaxation exercises” performed during the pre and post op periods **reduce anxiety**.

- **Pre op step count can predict surgical outcomes following lung cancer (regardless of BMI)**

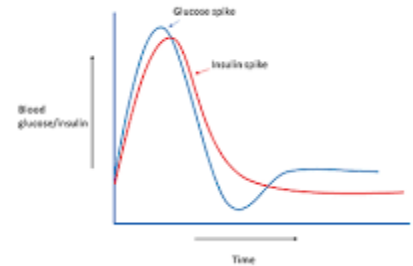
People in the highest step counts had a shorter hospital stay and had fewer complications



# Dealing with symptoms associated with NETS - Fatigue

- Iron
- Eat more often every 3-4 hours
- Reduce caffeine – as disturbs sleep and be aware its effects stay in the system for 7 hours
- Keep hydrated
- Balanced meals - Mediterranean diet, batch cook,

As well as the obvious :  
Sleep well, try and exercise regularly, engage with counsellors (Or PLANETS Cancer Coach)



# Dealing with symptoms associated with NETS








## Diarrhoea, wind, bloating

An international survey in 2017 of 1928 patients diagnosed with NETs, a significant number of patients reported gastrointestinal side effects related to their diagnosis and **58% reported the need for dietary changes**

What we consider when reviewing your bowels:

1. Carcinoid syndrome / SSA
2. What Surgery have you had? SB/Panc/IC valve/gallbladder?
3. What other things can cause diarrhoea that we haven't checked – medications, thyroid, coeliac, infection
4. What are you eating, has it changed recently?

### Bristol Stool Chart

Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on its surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges (passed easily)
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. <b>Entirely Liquid</b>

# Diarrhoea, wind, bloating



What you can consider when trying to help your bowels:

1. Stress and Exercise
2. Sugar free foods – chewing gum, sweets, fizzy drinks
3. Caffeine & “relaxing” teas
4. Foods which can increase bowel issues in some:

Apple, mangoes, prunes, chickpeas, beans, garlic, onions, cauliflower, cashews,

5. Should you avoid lactose?

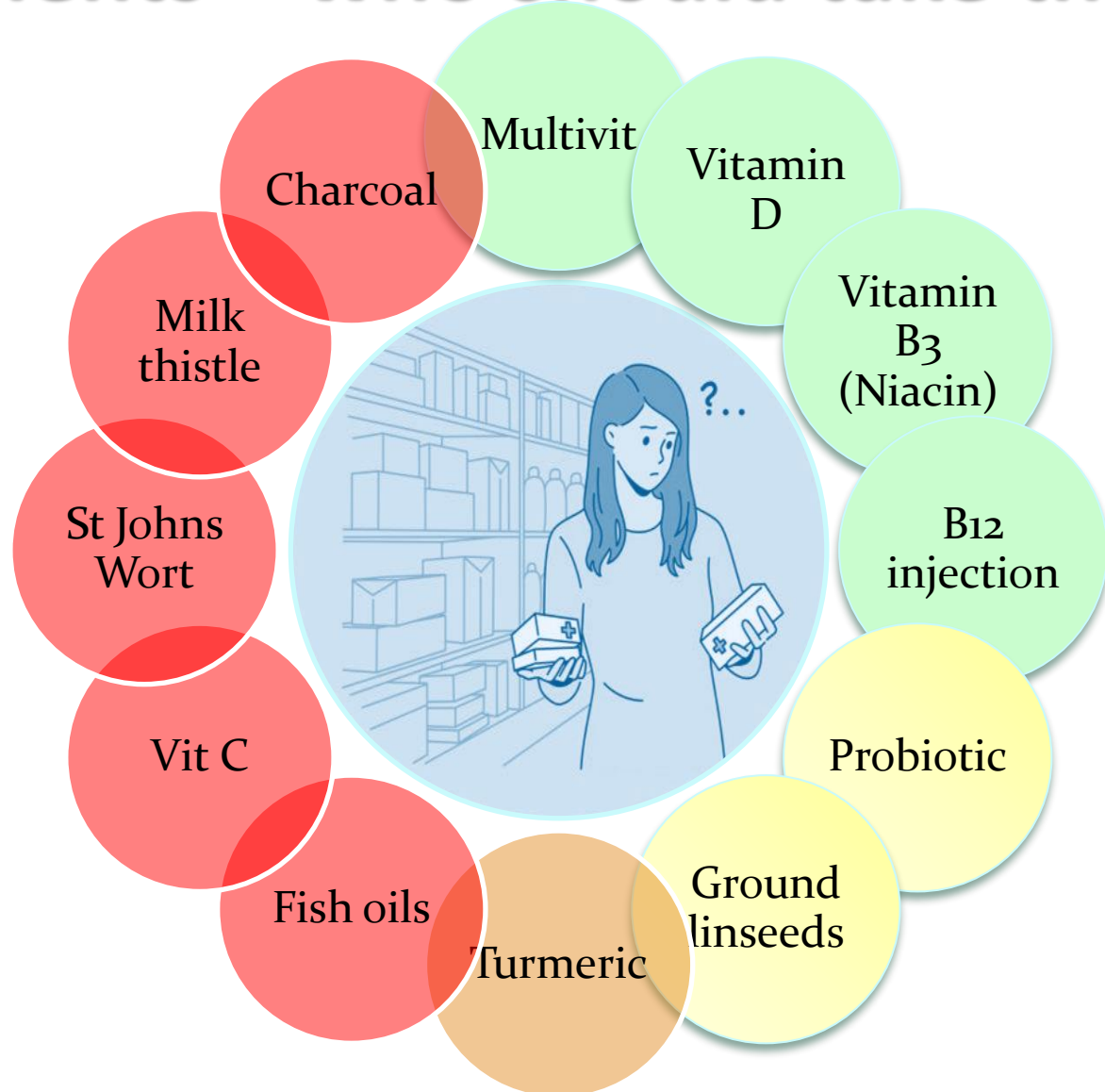


Previous foods avoided before NET diagnosis - trial reintroducing as may be due to incorrect diagnosis as symptoms may be simply due to NET



# Supplements – who should take them?

1. Do you need them?
2. Are they safe?
3. Do they work?



# Creon



## The Creon Shortage...

- Its not going away but hopefully we can learn to manage it. Likely shortages until 2026 the company reports ..

## How can we manage this?

- Understand which foods need less or more creon – Carbohydrates/Protein/Fats
- Use the oral nutritional supplements if you are losing weight
- Contact your GP – prescriptions
- Use other pharmacies & plan ahead



## What are our options?

- Imports from other countries (Hampshire & IOW specific)





# Thank you!

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