



Management Options

Diabetes and Pancreatic Cancer

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Overview

- ▶ Therapeutic management
- ▶ Nutritional management and considerations
- ▶ Challenges and importance of glycaemic control
- ▶ Diabetes and end of life care

Treatment and Management of Type 3c diabetes

NICE guideline [NG104] - Pancreatitis

- ▶ Assess people with type 3c diabetes **every 6 months** for potential benefit of insulin therapy.
- ▶ For people who are **not using insulin** – refer to NICE guidelines on type 2 diabetes
- ▶ For people **who need insulin** – refer to NICE guidelines on type 1 diabetes

Therapeutic
Treatment Options
for
Type 3c Diabetes

- ▶ **Glucose lowering agents**
e.g. Metformin
- ▶ **Insulin therapy**
e.g. basal bolus, biphasic/mixed,
pump therapy

Therapeutic Treatment Options for Type 3c Diabetes

- ▶ Treatment depends on level and the cause of the damage to the pancreas
- ▶ If the whole pancreas has been removed, insulin therapy is required
- ▶ Otherwise, individual assessment needed to determine which treatment is most appropriate
- ▶ No direct studies to help guide management of hyperglycaemia in diabetes secondary to pancreatic cancer
- ▶ Progression to insulin more likely than in type 2 diabetes
- ▶ Estimated 50% of those with Type 3c diabetes may require insulin therapy
- ▶ No clinical studies to determine what is the most effective insulin regimen for type 3c diabetes secondary to pancreatitis

Nutritional Management of Type 3c Diabetes

Principles

- Prevent/treat malnutrition
- Control malabsorption symptoms
- Stabilise blood glucose levels

Nutritional Management of Type 3c Diabetes

Strategies

- ▶ Regular meal pattern - avoid skipping meals. Consider “little and often” approach if appetite poor
- ▶ Regular starchy carbohydrates
- ▶ Minimise high sugar / high glycaemic index foods and drinks with little to no nutritional value
- ▶ Adequate dosage and correct use of PERT
- ▶ Avoid alcohol and smoking
- ▶ Frequent blood glucose monitoring
- ▶ Dietitian assessment and review

Table 3. Suggested Self-Monitoring Regimen for Blood Glucose Testing in T3cDM*

Minimum 6-10 blood glucose testing occasions per day:

- Prior to all meals and snacks
- Occasionally post-prandially
- Before bed
- After physical activity
- In the presence of suspected hypoglycemic symptoms
- After treating for hypoglycemia until normoglycemia is maintained
- Before critical tasks e.g. driving, swimming, using dangerous equipment, etc.

**Based on ADA self-monitoring blood glucose testing for T1DM and T2DM patients on intensive insulin regimens³⁸*

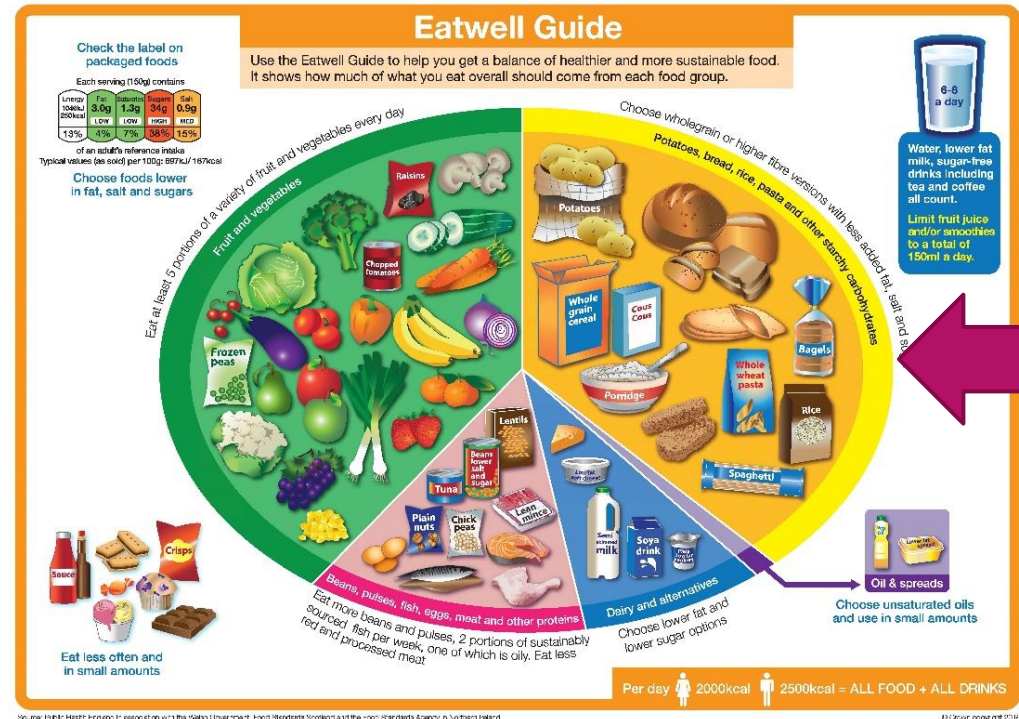
(Duggan & Conlon, 2017)

- ▶ Consider if eligible for a Flash (Freestyle Libre) or continuous (Dexcom) glucose monitor

Activity

Carbohydrates

- ▶ Main source of fuel for the body
- ▶ Broken down into “glucose”
- ▶ Two main categories
 - Sugary/simple e.g. sweets, desserts, fruit juice
 - Starchy e.g. bread, potato, pasta
- ▶ Fibre
 - Found in wholegrains, wholemeal products, fruits and vegetables, pulses
 - Helps blood glucose control as broken down more slowly
 - Keeps our digestive system healthy and other health benefits



Carbohydrate Awareness & Counting for Insulin Dose Adjustment

Initial Education

- ▶ What are carbohydrates
- ▶ Role in diet
- ▶ How different types affect blood glucose
- ▶ Hypoglycaemia – depending on treatment



Structured Meal Plan

- ▶ Basal bolus / Biphasic Insulin regimens
- ▶ Individualised – may not be appropriate for all
- ▶ Dietitian will work out carbohydrate intake based on habitual intake
- ▶ Devise plan for carbohydrate portions at meals
- ▶ Carbohydrate swaps / exchanges to allow variation in choices and build knowledge



Carbohydrate Counting

- ▶ May be appropriate for those with insulin deficiency
- ▶ Allows flexibility with diet
- ▶ Allows patient to take more ownership of insulin management
- ▶ Diabetes team will establish insulin to carbohydrate ratios e.g. 1:1 (1 unit for every 10g)
- ▶ Educate on weighing out portions, reading food labels and useful tools e.g. Carbs&Cals

Pancreatic Exocrine Replacement Therapy (PERT)

- ▶ All currently available preparations are porcine - Jewish and Muslim faith leaders consent to use as there are no alternatives available
- ▶ Various brands available e.g. Creon, Pancrex V
- ▶ Capsules available in different doses e.g. Creon 25000 units per capsule
- ▶ Recommended starting dose: at least 50,000 units with meals and 25,000 units with snacks
- ▶ Consider spreading out capsules throughout a meal
- ▶ If issues swallowing capsules - can open capsules and mix granules with a cold, soft, acidic food. Swallow straight away (do not crush or chew granules) and wash down with cool drink

(Phillips et al. 2021)

- ▶ **Very high fibre diets (>25g/day) may effect enzymes**

(Dutta 1985)

Poll Question

Symptoms of PEI

- ▶ Steatorrhea (pale, floating, oily stools)
- ▶ Loose watery stool
- ▶ Undigested food in stools
- ▶ Post-prandial abdominal pain
- ▶ Offensive smelling wind / stools
- ▶ Nausea / colicky abdominal pain
- ▶ Gastro-oesophageal reflux
- ▶ Bloating / food intolerance
- ▶ Malnutrition
- ▶ Weight loss despite good oral intake
- ▶ Vitamin deficiencies (A, D, E, K)
- ▶ Hypoglycaemia in patients with Diabetes

Other Nutritional Considerations

- ▶ Oral nutritional supplements – carbohydrate content
- ▶ Other specific dietary requirements –vegan/vegetarian, gluten free (coeliac disease)
- ▶ Sources of dietary information – online forums, magazine articles, social media

Challenges with Glycaemic Control

- ▶ Glucose lowering medication and insulin management
- ▶ PERT
- ▶ Impact of cancer treatment and chemotherapy
- ▶ Diet
- ▶ Patient's understanding
- ▶ Emotional health and well being
- ▶ Driving regulations
- ▶ Employment

Importance of Glycaemic Control

Hyperglycaemia

- ▶ Short term – osmotic symptoms, unintentional weight loss, tiredness, impaired immune system and wound healing
- ▶ Long term – retinopathy, nephropathy, neuropathy, heart disease

Hypoglycaemia

- ▶ Lack of symptom awareness, severity, frequency, fear,

Managing Diabetes At The End Of Life

- ▶ More lenient blood glucose monitoring
- ▶ Relax blood glucose targets
- ▶ Minimise/prevent symptoms of hyperglycaemia
- ▶ More relaxed diet
- ▶ Review insulin regimen

Questions?

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