

# TREATMENT RECOMMENDATIONS FOR EATING DISORDERS IN TYPE 1 DIABETES



## It's Intertwined<sup>1,2</sup>

- Comorbid T1D and ED must be treated as a single disorder rather than treating the eating disorder and managing the diabetes separately.
- T1D must be an integral part of the eating disorder treatment plan.
- Patients with T1D with comparable psychopathology and receiving comparable eating disorder treatment showed higher drop-out rates, poorer outcomes and higher relapse rates.

## It's Personal<sup>3</sup>

- Providers need to understand a person's diabetes background and experience, and how they may contribute to the person's feelings about diabetes, insulin, food and body image. For example,
  - Diagnosis story
  - Early diabetes education
  - Family's and friends' reactions
  - Experiences with doctors, nurses and educators
  - Experiences within the diabetes community
  - What is it like to have diabetes?

## It's a Team Effort<sup>3</sup>

- All team members should have experience with or at least knowledge of both T1D and ED, including non-medical members such as therapists and patient assistants.
- At a minimum, team members would include a Therapist, Endocrinologist and Dietitian. The team may also include a Psychiatrist, Nurse, Diabetes Educator and Physician Specialists.
- The multi-disciplinary team needs to communicate frequently and align on small, achievable goals.

## Treatment Strategies<sup>4,5,6</sup>

- Address perfectionism directly – both the client's and the provider's – with respect to both eating disorder behavior and diabetes management. Set realistic goals.
- Address feelings about chronic illness and insulin – known risk factors for developing an eating disorder.
- Treat comorbid depression/anxiety – people with T1D have a 30% higher incidence.
- ACT or Radical Acceptance therapy can help with feelings toward chronic illness and complications.
- CBT/DBT can help replace maladaptive behaviors related to diabetes care.
- FBT can be easily adapted with parents or family members taking charge of diabetes care along with eating. If insulin omission is occurring, use the same methods with "insulin" instead of "food" and "injecting" instead of "eating."
- Arrange a chronic illness support group within the ED program where people with similar experiences and challenges can process their eating disorder and recovery (or refer to one nearby).



- Diabetes self-management education from a qualified provider is an important component of the treatment plan.
- Remember to include diabetes supplies when planning for outings.

### Food<sup>7,8</sup>

- Offer low carb options at meals and snacks for occasions when blood glucose is high.
- Initially have someone else measure food and calculate carb count; then gradually add back client's involvement as appropriate.
- Clients should eat normally and dose based on blood glucose and carb counts; clients should not be allowed to restrict food.
- If the treatment plan includes weight restoration, use a diabetes specific plan, e.g. higher protein and fat rather than higher carbs.
- Work with client to discern whether a meal or snack decision is ED driven or T1D driven.
- Incorporate diabetes into intuitive eating principles, recognizing that most people with diabetes lose their hunger and satiety cues after several years.

### Medical Management<sup>9,10,11</sup>

- In Residential level of care:
  - If client uses an insulin pump and/or continuous glucose monitor (CGM), remove the devices in residential care.
  - Medical staff should assume complete control of diabetes care – testing, calculating doses, administration - then gradually add back client's involvement as appropriate.
  - 24/7 nursing care.
- In PHP level of care:
  - If client uses an insulin pump and/or continuous glucose monitor (CGM), evaluate client to determine whether they should continue to use the devices.
  - Staff should monitor blood glucose as soon as patient arrives and throughout the day such as before snacks and meals. If blood glucose has been running consistently high, check for ketones.
  - Staff may oversee or verify dose calculations and administration of insulin.
  - Nurse, CDE or medically trained staff available during program hours.
- Frequent changes in insulin dosages and ratios will be necessary as client goes through insulin reintroduction and/or changing food plans, thus the involvement of an endocrinologist who is familiar with eating disorder treatment is a critical component.
  - If insulin omission is occurring, insulin reintroduction must align with evidence-based guidance, particularly with respect to slowly lowering average blood glucose.
  - Intensive glycemic management is not an appropriate early treatment goal for anyone with comorbid diabetes and eating disorder.
  - Constantly shifting insulin requirements also means more frequent blood glucose testing.
- New or worsening diabetes complications should be anticipated and a plan for addressing them put into place.
  - Insulin edema, neuritis/neuropathy, retinopathy, gastroparesis, nephropathy



- All staff needs to be well versed in the recognition and treatment of both hyperglycemia and hypoglycemia.
- Have simple carbohydrate foods and drinks, and glucagon kit, available for hypoglycemia.

### Assessment<sup>12,13,14</sup>

- Periodic eating disorder labs, including orthostatic blood pressure and electrolyte balances, should be conducted in accordance with client's condition and stage of recovery.
- Additional labs specific to T1D should be run at the same time including fructosamine or HbA1c, creatinine and albumin.
- Frequent eye exams to check for retinopathy are important if client is going through insulin reintroduction or experiencing frequent and wide swings in blood glucose.
- To assess baseline and progress, conduct a diabetes specific questionnaire instead of a standard ED questionnaire, for example, DEPS or DEPS-R.

### Recovery Challenges<sup>15,16,17,18</sup>

- Exercise is not recommended during traditional eating disorder treatment, but is beneficial for insulin effectiveness.
- Overcoming family beliefs about diabetes management.
- Biological disruption continues after ED recovery, including absence of amylin and reduction in other key metabolic hormones and neurotransmitters.
- Psychological pressures and triggers from having and managing diabetes continue after ED recovery, particularly diabetes burnout.
- Attention to food values and reading labels is still required for managing diabetes after ED recovery.
- Resuming diabetes care contributes to feeling less "normal," e.g. no-one else has to test their blood sugar, do mental math and bolus insulin every time they want an apple or go to the gym.

<sup>1</sup>Custal N, et al. BMC Psychiatry. 2014;14:140.

<sup>2</sup>Colton P, et al. Diabetes Care. 2015 Jul;38(7):1212-1217.

<sup>3</sup>Critchley S, et al. Practical Diabetology. 2014 Mar/Apr;18-24.

<sup>4</sup>Roy T, et al. Journal of Affective Disorders. 2012;142(Suppl):S8-S21.

<sup>5</sup>Wisting L, et al. PLoS One. 2015;10(11):e0141386.

<sup>6</sup>Stewart SM, et al. Pediatrics. 2005 May;115(5):1315-1319.

<sup>7</sup>Booth DA. Appetite. 2008;51:433-441.

<sup>8</sup>Wheeler BJ. Appetite. 2015;96:160-165.

<sup>9</sup>Gibbons CH and Freeman R. Brain: Brain. 2015 Jan;138(1):43-52.

<sup>10</sup>Goebel-Fabbri A, et al. Diabetes Spectrum. 2009 Jun;22(3):147-152.

<sup>11</sup>Bermudez O, et al. Diabetes Spectrum. 2009 Jun;22(3):153-158.

<sup>12</sup>Markowitz JT, et al. Diabetes Care. 2010 Mar;33(3):495-500.

<sup>13</sup>Pinna F, et al. BMC Psychiatry. 2017 Jul;17:262-272.

<sup>14</sup>Powers MA, et al. The Diabetes Educator. 2013 May;39(3):387-396.

<sup>15</sup>Colton PA, et al. Diabetes Care. 2015 Jul;38(7):1212-1217.

<sup>16</sup>Singer J, et al. Multidisciplinary Management of Eating disorders. (Springer, Cham) 2018.

<sup>17</sup>Paspala I, et al. Open Cardiovascular Medical Journal. 2012;6:147-155.

<sup>18</sup>Brennan AM, et al. Clinical Practice Endocrinology & Metabolism. 2006;2:318-327.