Candid Discussions About Diabetes and Eating Disorders, Part 1
February 14, 2018

Anorexia Nervosa

- Calorie restriction leading to body weight less than minimally normal.
- Intense fear of gaining weight, despite the fact they are underweight.
- Disturbance in perception of body weight/shape, or undue influence of weight and shape on one's self-esteem.
- In T1DM, "perfect" BG values and A1c may mask ED until BMI dangerously low. Patients may get inadvertently reinforced and praised. Insulin restriction in AN not mentioned in DSM-5.

Diagnostic and Statistical Manual of Mental Disorders – 5th Ed. (2013). American Psychiatric Publishing.

Bulimia Nervosa

- Recurrent episodes of binge eating:
  - Larger amount of food than peers would eat under similar circumstances.
  - Sense of loss of control over eating.
- Recurrent purging to prevent weight gain:
  - Self-induced vomiting.
  - Misuse of laxatives, diuretics, enemas, or other medications. LIKE INSULIN
  - Fasting, Excessive exercise.
- Both behaviors occur once weekly for 3 months.
- Self-evaluation unduly influenced by shape and weight.

Binge Eating Disorder

- Definition of binge eating (3 or more of these):
  - Eating much more rapidly than normal.
  - Eating until uncomfortably full.
  - Eating large amounts of food when not hungry.
  - Eating alone bc embarrassed by amount.
  - Feeling markedly distressed, disgusted, depressed, or guilty after episode.
- Recurrent episodes of binge eating:
  - Larger amount of food than peers would eat under similar circumstances.
  - Sense of loss of control over eating.
- Both behaviors occur once weekly for 3 months.

Other Specified Feeding or Eating Disorder (OSFED)

- All criteria for Anorexia are met except significant weight loss.
- All criteria for Bulimia are met except that bingeing and purging occurs less than once weekly.
- Recurrent insulin restriction for hyperglycemic calorie purging (not always in response to bingeing) also not mentioned in DSM-5.

"Diabulimia" vs. ED-DMT1

The pros and cons of a name

- Pro:
  - A name indicates that others struggle with it.
  - Decreases shame and isolation.
  - Raises awareness.
  - Creates a way to talk about it.
  - Provides a community.

- Con:
  - *This* name risks conveying that it's exclusively bulimia.
  - A range of ED's occur at higher rates in T1D.
  - Thought of as only associated with insulin restriction.

Insulin Restriction in Type 1 Diabetes

- Why is it a purge symptom?
  - Without insulin or with too little insulin, body can't absorb glucose from blood, can't use or store calories.
  - As blood glucose increases, body attempts to regulate glucose by urinating out as much as it can.
  - Cells are starving, break down fat and muscle for energy.
  - Acidic ketone bodies form in blood, pH balance changes.
  - Diabetic ketoacidosis (DKA) can occur - a medical crisis, requiring ICU treatment and can be fatal.

Peters & Laffel (Eds.), 2013. *Type 1 Diabetes Sourcebook*. American Diabetes Assoc/JDRF

Eating Disorders & Type 1 Diabetes – some theorized connections

- Puberty is a dx peak for both T1DM and eating disorders.
- T1D presents with initial weight loss. Once BG's regulated, weight is restored (sometimes gained beyond restoration).
  - What is learned? "Insulin makes me fat."
- T1D tx involves attention to meal planning, portion size, exercise, and weight (can mirror the eating disorder mindset)
  - Old messages: Good and bad foods. Concepts of restriction and cheating.
  - New messages: Carbohydrate counting and portion control. All foods can fit or can feel like restriction. Depends on how it's taught.
- DCCT intensive group gained 10.5 lbs more than conventional group but T1D management tools were not as advanced as today.

Goebel-Fabbri et al. (2002).

Eating Disorders & Type 1 Diabetes

- 2.4 times the risk than women without diabetes.

  Jones et al. (2000).

- 31% of 341 female Joslin patients (ages 13-60 years) omitted insulin for weight loss.

  Polonsky et al. (1994).

- Strong relationship to microvascular complications of diabetes – especially Retinopathy.

  Rydall et al. (1997).

- Self-reported insulin restriction conveyed a three-fold increased risk of mortality during 11 yr follow-up.

  Goebel-Fabbri et al. (2008).

Eating Disorders & Type 2 Diabetes

- Far less is understood about ED's in Type 2 Diabetes.
- Prevalence rates for BED vary between 1.4 and 10% in adults with T2D and 6% in teens with T2D.

  Pinhas-Hamiel & Levy-Shraga (2003).
- Disordered eating behaviors may affect up to 40% of people with T2D.

  Garcia-Mayor et al. (2017).
- BED appears to raise the risk of T2D independent of weight.

  Olguin et al. (2017), Nieto-Martinez et al. (2017).

Eating Disorders & Type 2 Diabetes

- BED possibly associated with higher A1c, triglycerides, BMI and more hospitalizations at younger age and shorter duration of T2D.

Nicolau et al. (2015).

- Gender breakdown remains unclear but some indication more males with BED and T2D.

Raevuori et al. (2015).

- Less weight loss with binge eating. 8.2% of bariatric surgery patients had BED and T2D. Higher rates in men and African Americans.

Chao et al. (2017), Webb et al. (2011).

- Binge eating in adults and teens with T2D associated with lower quality of life.

Wilfley et al. (2011), Cerrelli et al. (2005).

Questions:

1) What are the most effective treatments?
2) How do people recover?

Answer:

Little is known about T1D and no treatment research on T2D.

What is known about treatment?

- 4 treatment outcome studies only in T1D - used CBT, were small (N<40), not all had comparison groups, only 1 with FU, 2 outpt, 1 residential, 1 inpt (mean 4 mos).

  Takii et al. (2003), Custal et al. (2014), Dickens et al. (2015). Colton et al. (2015).

- They reported: lower than expected recovery rates, increased risk of treatment dropout, lower patient motivation.

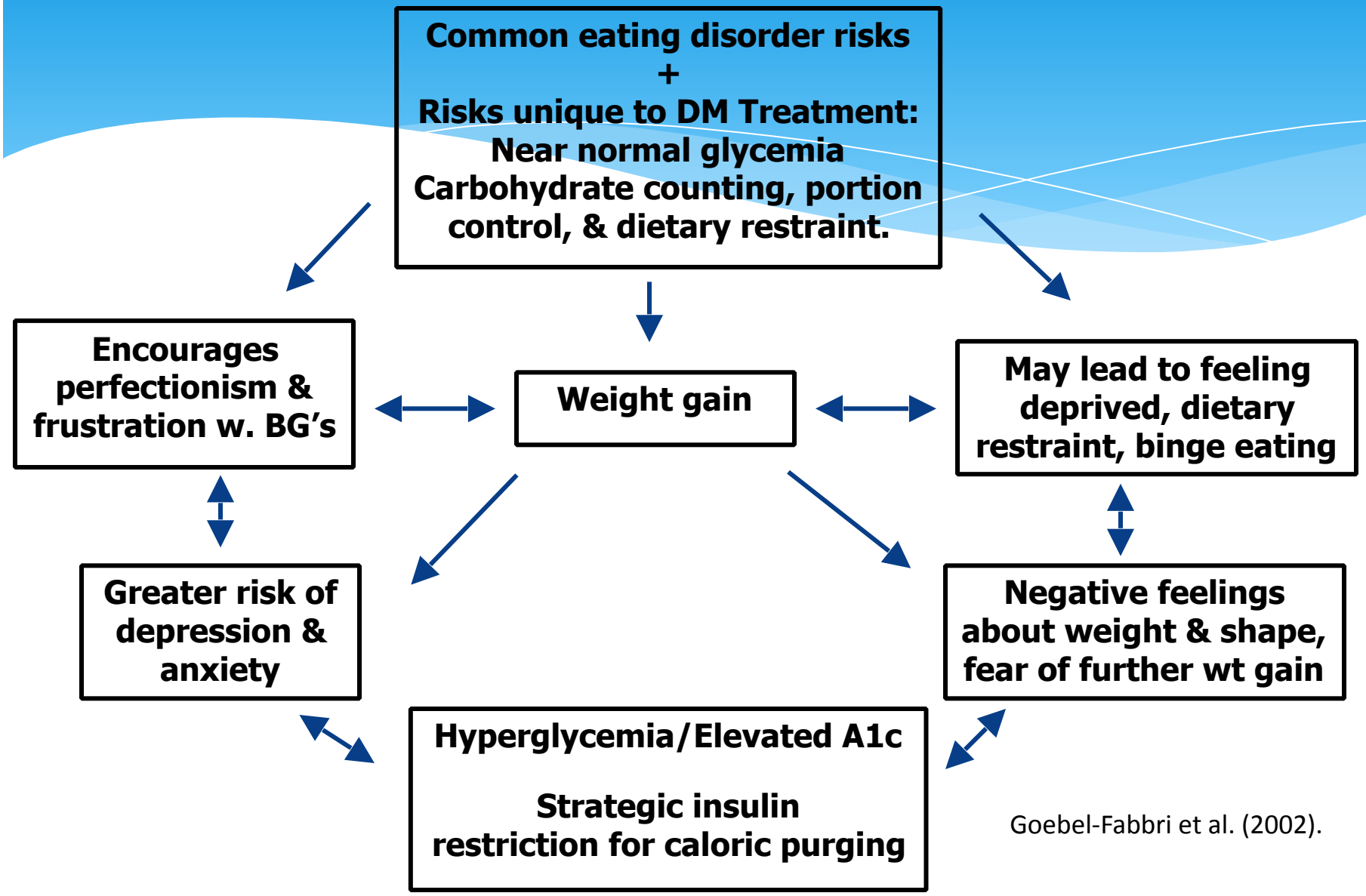
What is known about treatment?

- Consensus guideline papers (for ED-DMT1):

  1) Screening
  2) Inpatient treatment
  3) Outpatient treatment
  4) Role of diabetes educator

Diabetes Spectrum, 22(3), 2009.

Targets for treatment adaptation



Goebel-Fabbri et al. (2002).

Treatment Strategies for ED-DMT1

- Treatment requires a multi-disciplinary team.
  - Weekly therapy if outpatient, or begin with specialty inpatient treatment.
  - MD prescribing psychopharm as needed.
  - Monthly medical, nurse educator, nutrition appts.
  - Regular lab and weight checks.
  - Close communication between team members.

Treatment Strategies for ED-DMT1

- Best prognosis comes with shortest duration of eating disorders or at lower symptom levels.

- First focus on safety
  - DKA is serious – can be fatal.
  - Teach signs of DKA – to help pts know when to go to ER.
  - Discuss risk of long-term complications, but this is less critical as patients typically know this information.

- For outpt tx, daily basal insulin and DKA prevention must occur at a minimum or inpt tx is required.

Treatment Strategies for ED-DMT1

- Address perfectionism directly.
  - (the patient's and your own).
  - Realistic BG goals and self-care goals.
- Treat co-morbid depression/anxiety.
  - Psychopharmacology and therapy.
  - Medications chosen should be weight neutral.
- Develop FLEXIBLE eating routine – mindful eating has its limits.
- Mood regulation skills instead of ED behaviors (DBT) – hyperglycemia can produce affective numbing.

Aim for Incremental Improvements

- Insulin edema can be decreased w. gradual lowering of A1c. Low dose, limited duration of diuretic may also help.
- Gradual lowering of A1c also decreases risk of new or worsening of retinopathy and neuropathy (Treatment-induced complications).

Gibbons & Goebel-Fabbri. (2017).

- Ex: 14% to 12% A1c, 400 BG's to 200 BG's in 1st 1-2 months).
- Gradual decrease in A1c builds trust, decreases risk of tx drop-out, models realistic/non-perfectionistic goal.

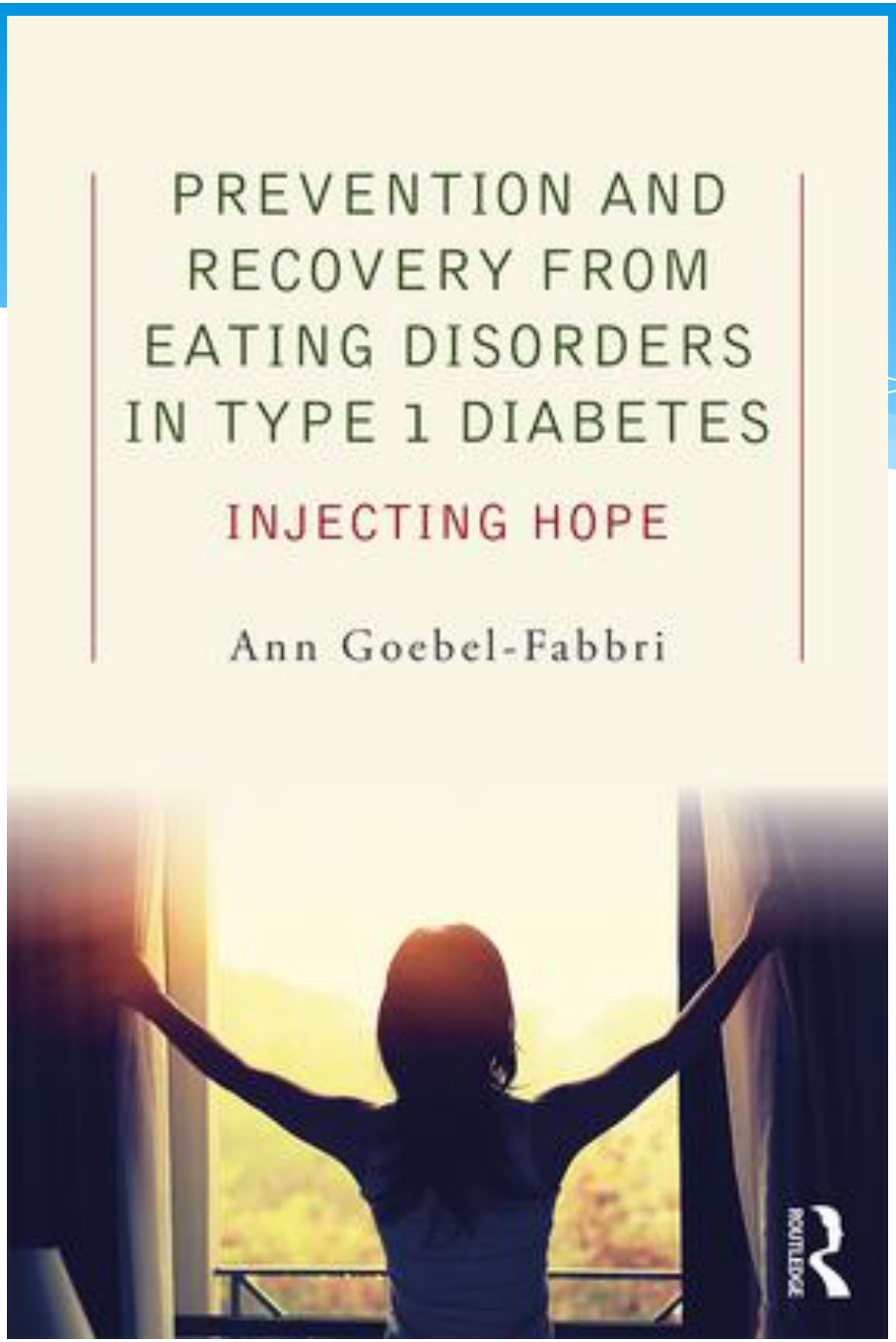
Learning from the experts

- Interviewed 25 recovered women (over age 18)
- T1D min 1 yr, ED min 1 yr, Recovered min 1 yr
- All received healthcare in the US

Defining Recovery:

1) Consistently taking appropriate insulin
2) Not engaging in rigid dieting or over-exercise
3) Not intentionally running BG's high
4) Eating flexibly most of the time
5) Not acting on ED thoughts or feelings

Goebel-Fabbri, 2017. *Prevention and Recovery from Eating Disorders in Type 1 Diabetes*. Routledge Press.


PREVENTION AND
RECOVERY FROM
EATING DISORDERS
IN TYPE 1 DIABETES
INJECTING HOPE
Ann Goebel-Fabbri
ROUTLEDGE

Essential Factors In My Personal Recovery

- Accepting treatment.
- Surrendering to change.
- Embracing recovery.
- Long-term commitment to recovery.
- Using my experience to help others.

Asha Brown,
Founder and Executive Director
of We Are Diabetes (WAD)

www.wearediabetes.org

Services offered by We Are Diabetes include:

- Referrals to credible providers and treatment centers across the United States.
- One-on-one mentorship and guidance through the recovery process.
- Unique resources designed specifically for the ED-DMT1 population.
- Education for healthcare professionals.

For More Information

www.wearediabetes.org

Recovery Toolkit
http://www.wearediabetes.org/recoverytoolkit

Resources
http://www.wearediabetes.org/resources.php

Injecting Hope

There are people that have gone through this and come out on the other side, and they're not amazing people. They're not shiny, happy people. They're just regular people who never felt like they could do it but did. Caroline