

# Eating Disorders and Type 1 Diabetes

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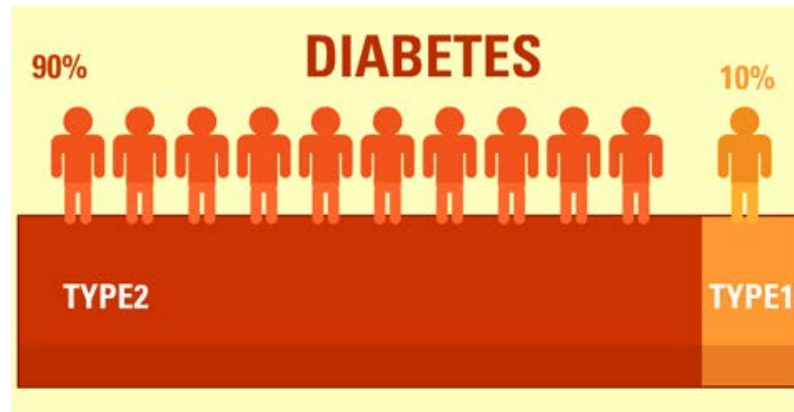
  
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# Objectives

- To understand **type 1 diabetes and how it can lead to eating disorders**
- To learn about **medical complications** of ED-DMT1 (co-occurring eating disorder and diabetes mellitus type 1)
- To be able to **recognize eating disorders in individuals with type 1 diabetes.**
- To become familiar with **ED-DMT1 treatment**

# 2.1 Million People in the US have Type 1 Diabetes

(aka insulin dependent diabetes or juvenile diabetes)



- Most common chronic disease of childhood (15,000 diagnosed each year)
  - Peak diagnosis in early adolescence (age 12-14) and in early 20s
- Latent Autoimmune Diabetes of Adulthood (LADA)
  - Peak diagnosis in 40s
  - Often misdiagnosed as type 2 diabetes

# ED-DMT1 Prevalence & Risk

- 1 in 3 women and 1 in 6 men omit or restrict insulin to lose weight
- Women with type 1 diabetes are 2.4 times more likely to develop an eating disorder than people without type 1 diabetes
- Diabetes complications are 3 times more likely in people with eating disorders
- Death Rates:
  - Type 1 Diabetes: 2%
  - Anorexia Nervosa: 6.5%
  - Type 1 Diabetes and Anorexia Nervosa: 38%

# Eating Disorders 101

## Health

- Body acceptance
- Intuitive eating for both fuel and pleasure
- Moving body for enjoyment
- Energy, strength, normal labs
- Stable weight



## Disordered Eating

- Preoccupation with weight & shape
- Restriction (cleansing, fasting, calorie counting, fad diets, chronic dieting)
- Overeating or compulsive eating
- Occasional use of substances to control weight
- Obligation and guilt attached to exercise
- Exercise avoidance
- Weight cycling



## Eating Disorder

- Anorexia Nervosa
- Bulimia Nervosa
- Purging through self-induced vomiting, diuretics, laxatives, exercise, etc.)
- Binge Eating Disorder

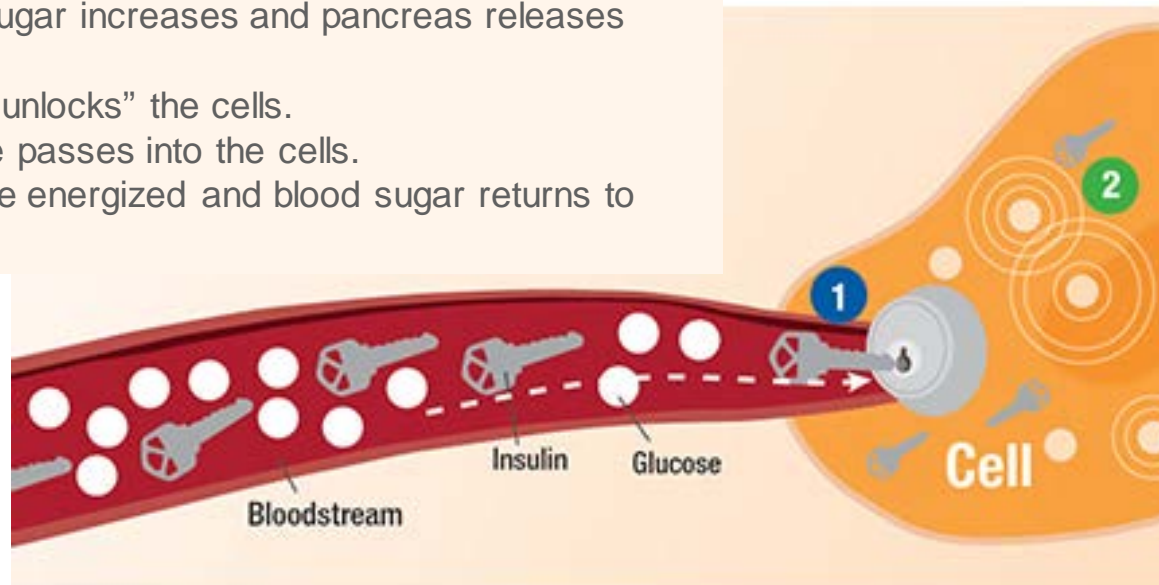
# Type 1 Diabetes 101



- Immune system sees islet (pronounced EYE-let) cells in the pancreas as foreign and destroys them.
- Islet cells detect glucose in the blood and, in response, produce the amount of insulin needed to turn that glucose to energy for the body's cells

# How insulin works:

1. Food is broken down absorbed into the bloodstream.
2. Blood sugar increases and pancreas releases insulin.
3. Insulin “unlocks” the cells.
4. Glucose passes into the cells.
5. Cells are energized and blood sugar returns to normal.



# Without insulin:

- Malnutrition: Glucose cannot get into the cells
- Purging: Glucose is filtered through the kidneys into the urine, leading to caloric loss
- Dehydration: High blood sugar is like taking a high-dose diuretic
- Ketosis: Body breaks down its own fat and muscle tissue as it believes it is starving



# Diabetes ~~Control~~ Management

- Insulin
  - Multiple Daily Injections or Insulin Pump Therapy
- Blood glucose testing
  - 4-12x/day
  - Glucometer or Continuous Glucose Monitors (CGMs)
- Things affecting blood glucose
  - Food intake
  - Activity and exercise
  - Illness
  - Medication
  - Scar tissue
  - Weather
  - Mood and stress
  - Hormones
  - For women, where they are in their menstrual cycles



## Dangers of High Blood Sugars

Short Term	Long Term
Extreme hunger and thirst Frequent urination, bedwetting in children Weight loss Urinary Tract Infections, Yeast Infections	Kidney disease and failure
Lethargy, fatigue	Autonomic neuropathy: blood pressure problems causing dizziness, incontinence,
Nausea	Gastroparesis: slow emptying of the stomach, leading to vomiting, pain, and bloating
Blurry vision	Eye damage: retinopathy, macular edema, cataracts
Wounds that are slow to heal	Neuropathy and amputation
Diabetic Ketoacidosis (DKA)	Heart attack and stroke

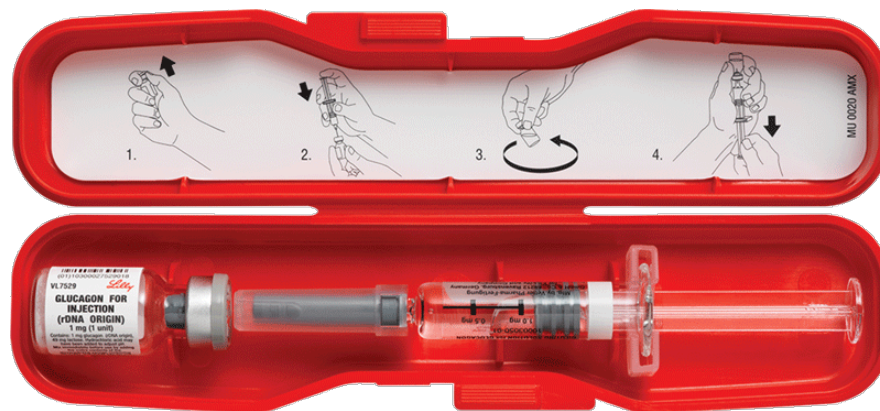
# Dangers of Low Blood Sugars

(less than 70 mg/dl)

Symptoms differ for everyone and can be different during each low blood sugar episode. They include:

- Temperature changes: sweatiness, become hot, become cold
- Shakiness
- Confusion
- Hunger
- Tingling of mouth
- Fatigue
- Mood swings and/or uncharacteristic behavior

Can lead to loss of consciousness, seizures, dangerous accidents, and death



**Teaching a person to be a good diabetic is akin to teaching them how to have an eating disorder.”**

*–Ann Goebel-Fabbri, PhD*

Life is dependent upon constant mental calculation of carbohydrates, insulin units, time exercised, etc.



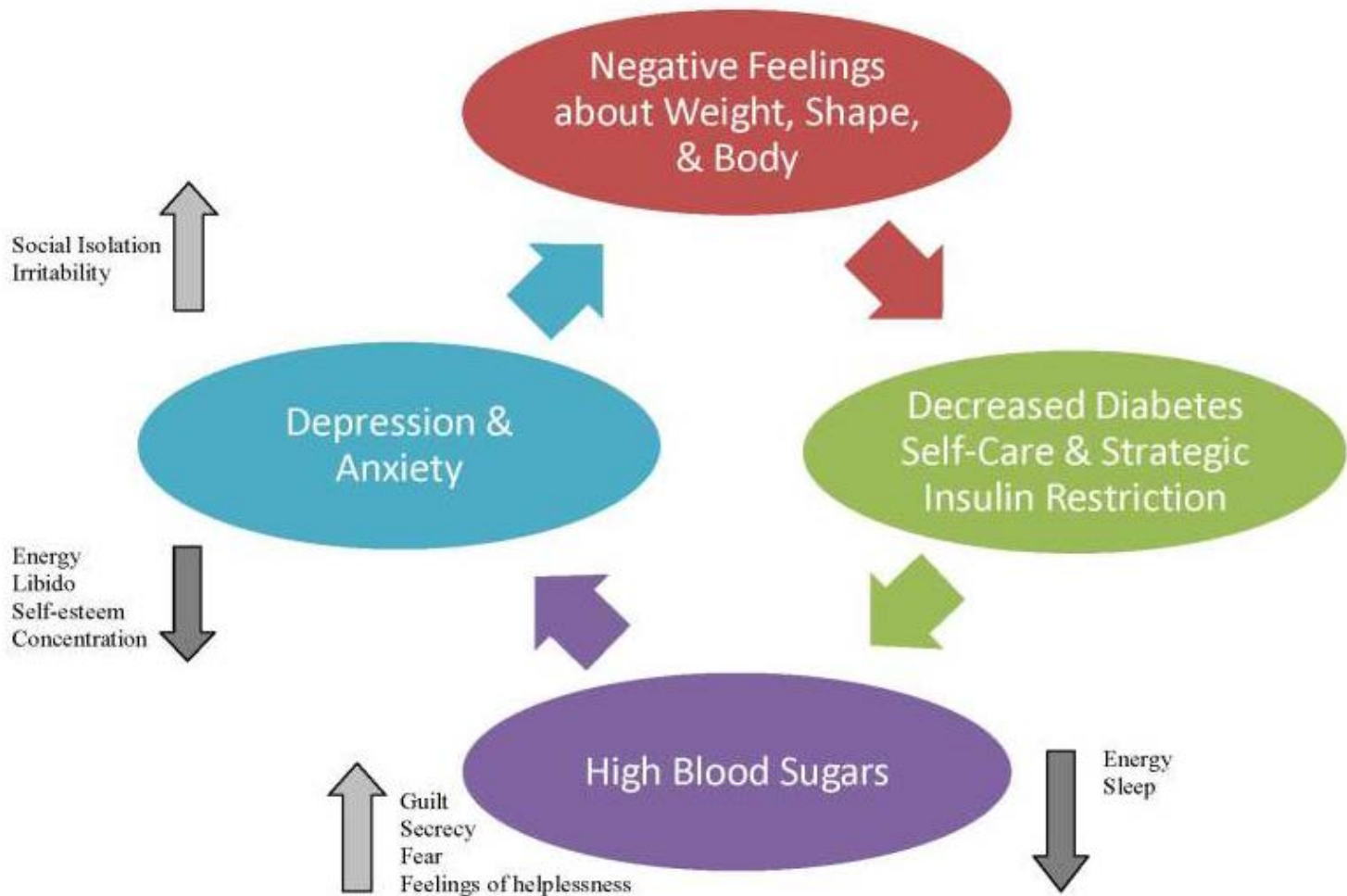
# Eating Disorders in Type 1 Diabetes

- Anorexia Nervosa: avoiding food to avoid insulin
- Bulimia Nervosa: binge eating and purging
- Purging: often with insulin omission (“diabulimia”)
- Binge Eating Disorder: overdosing insulin to create reason to binge eat
- Orthorexia: uses diabetes to avoid “bad foods”



# The Cycle of “Diabulimia”

copyright by Ann Goebel-Fabbri, Ph.D., Joslin Diabetes Center  
Eating Disorders/“Diabulimia” in Type 1 Diabetes  
[http://www.joslin.org/info/Eating\\_Disorders\\_Diabulimia\\_in\\_Type\\_1\\_Diabetes.html](http://www.joslin.org/info/Eating_Disorders_Diabulimia_in_Type_1_Diabetes.html)



## Eating Disorder Risk Factors + Type 1 Diabetes

	What it's like...	With type 1 diabetes...
<i>Diet Mentality</i>	Cutting out food groups, restrict/binge cycle	Eating at certain times leads to loss of hunger and fullness cues, creating risk for eating disorder
<i>Perfectionism</i>	Drive for success, avoiding feelings,	Message that life is dependent on being the "perfect diabetic," lack of acknowledgement of and support for emotional side of diabetes
<i>Trauma</i>	Creates need for control and difficulties with trust	Trauma of diagnosis and of medical emergencies, feeling as though "my body betrayed me."
<i>Body Image Issues</i>	Thin as ideal, media, societal pressure, not seeing body the way that others see it	Comments from friends, family, and media about weight and diabetes, Rapid weight loss and weight gain around onset and diagnosis, scar tissue, etc.
<i>Life Transitions</i>	Fear of growing up, fear of the unknown	Impact of puberty on blood sugars, switching from pediatric to adult care
<i>Anxiety and Depression</i>	Excessive worry, difficulty controlling the worry	Death anxiety, anxiety of asking for help, of being alone, diabetes burnout, rebellion

# Warning Signs of ED-DMT1

- Managing diabetes in secret, avoiding appointments, vague answers to questions related to diabetes
- A1c does not match blood sugar records
- Belief that “insulin makes you fat.”
- Not wanting to treat lows
- Unfilled prescriptions and unused diabetes supplies
- Trying to hide eating disorder by:
  - Using control solution instead of blood when testing
  - Using multiple meters
  - Disconnecting insulin pump while wearing it



# Treatment Challenges

- Unlike other forms of purging, insulin omission can make someone feel more “normal”
- Treating fear of insulin is similar to treating fear of food
- Irreversible medical complications
- MUST read labels to manage type 1 diabetes
- Is it the healthy self talking or the eating disorder talking? (i.e. am I choosing to not have carbs because my blood sugar is high right now or am I wanting to restrict food for my eating disorder?)
- Facing false information about diabetes

# Levels of Care in Treatment

People with type 1 diabetes usually need more intense treatment than other people with eating disorders with the same symptoms.

- Inpatient Treatment
  - When person is in DKA
  - For medical stabilization
- Residential Treatment
  - Interrupting eating disorder behavior
  - Team assumes diabetes care and slowly moves responsibility back to client
- Partial Hospitalization Programming
  - Treatment 40 hours/week
  - Must be willing to at least take minimum amount of insulin to stay out of DKA
- Intensive Outpatient Programming
  - Treatment 9-15 hours/week

# Outpatient Treatment Team

- Therapist
- Dietitian
- Psychiatrist
- Endocrinologist
- Certified Diabetes Educator



# What kind of treatment?

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# Tools for Recovery: Pumps and CGMs

- It was previously recommended that pumps **not** be used in patients with mental illness; however, research shows that pumps decreased eating disorder behaviors.
- CGMs help with transparency and accountability.



# Dietary Counseling



- “All Foods Fit” Philosophy
- Balance, Variety, and Moderation
- Exposure and Response Prevention (ERP)
- Dietary Phases
  1. Dietary Exchange-Based Meal Plan
  2. Meal Guidelines
  3. Intuitive Eating

# Recovery is...

- Consistently taking appropriate insulin doses and testing blood sugar
- Going to care provider appointments
- Eating with balance, variety, moderation, and flexibility
- Joyful movement
- Refraining from dieting and purging behavior
- Not acting on eating disorder thoughts, feelings, or behaviors
- Being open and vulnerable with support system

"Vulnerability is the birthplace  
of everything we're  
hungry for." DR. BRENÉ BROWN

# Questions or Assistance

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# Resources

Diabulimia Helpline

[diabulimiahelpline.org](http://diabulimiahelpline.org)

Juvenile Diabetes Research Foundation International

[jdrf.org](http://jdrf.org)

National Eating Disorders Association

[nationaleatingdisorders.org](http://nationaleatingdisorders.org)