

Family Medicine Grand Rounds

December 2, 2020

**Presentation: Management of Eating
Disorders Update**

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Scientific Planning Committee Disclosure

- Faculty: Dr. Stephen Wetmore
Dr. Scott McKay
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- Relationships with commercial interests:
No conflicts of interest.

Disclosure of Commercial Support

- This program has received no in-kind support.
- This program has received no commercial financial support.

Faculty/Presenter Disclosure

Presenter: Dr. Robbie Campbell

Relationships with commercial interests:

- None

Relationships with not-for-profit organization:

- **President & Founder, Eating Disorders Foundation of Canada**

Mitigating Potential Bias

Presenter received a detailed letter from the Organizing Committee outlining the learning objectives and content expectations for each presentation.

Presentation have been reviewed by a member of the Scientific Planning Committee to ensure balance in content and the absence of bias.

Learning Objectives

1. **Comprehend the complex interplay between body image and Eating Disorders;**
2. **Comprehend the medical complications of Eating Disorders; and**
3. **Understand evidence-based and supportive therapies for Eating Disorders.**

Objective 1;

To Comprehend the complex interplay between body image and eating disorders;

THE BIG PICTURE

Body Image

Comorbidity

Media

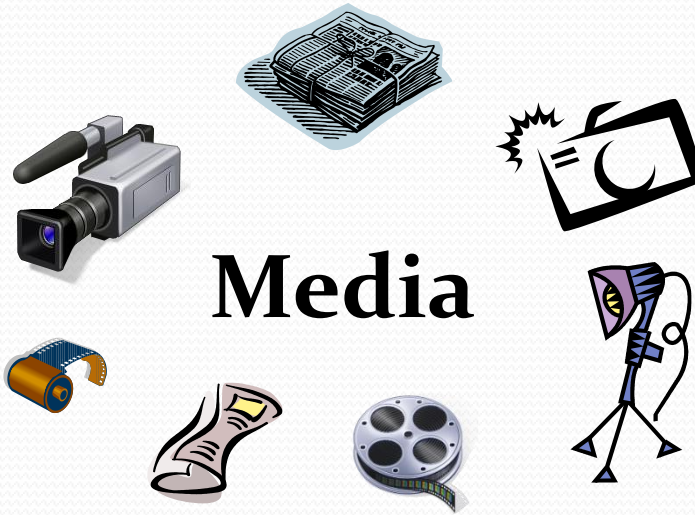
Genetics

Personality Factors

“Thin is Beautiful”

Social Media

Relationships





Body Image & Process of Identification

With whom do we identify

- Family
- Friends
- The stars
- Heroes (sports, music, academic)
- Social media – text, video, email, Facebook, etc.

We compare ourselves to others
(Fairburn)







befter.net



Identity Confusion (Disturbance)

- Unique self
- Boundary setting
- Self-esteem / Self appraisal / Intact reality testing
- Emotion control (express / tolerate / regulate)

“The search for control”
(Battling Media Images)

Identity Confusion (Expression)

- Hypersensitivity / Impulsivity / Self harm
- Feelings of inadequacy / Worthlessness / Emptiness
- Anxiety / Depression / Uncontrollable urges
- Shame / Disgust / Self critical
- Secretiveness / Self conscious
- Preoccupation with body weight and shape / Extreme weight phobia

Identity Confusion (Results)

- Loss of control / Over control
- Sense of perfection / Fear of failure
- Altercation in emotional perception of anger
- Misinterpretation / facial emotion recognition
- Increase difficulty identifying feelings → suicidal ideation
- Delusional body image disturbance

Shape & Weight

Preoccupation with shape / Weight
Weight checking / Food Restriction

- If you look for fatness, you will find it
- Shape checking – mirror – highly misleading
- Comparing to others – Superficial account of others / super critical of self
 - Over-evaluation of shape and weight
- Development of maladaptive coping strategies

Feeding and Eating Disorders

1. Anorexia Nervosa
 2. Bulimia Nervosa
 3. Binge Eating Disorder (BED)
- PICA
 - Ruminative Disorder
 - Avoidant / Restrictive Food Intake
 - Other Specified Feeding or Eating Disorder
 - Unspecified Feeding or Eating Disorder

Anorexia Nervosa

symptoms include:

- Food restrictions leading to low body weight
- Intense fear of gaining weight or becoming fat
- Self-evaluation unduly influenced by body shape and weight
- Restricting Type: primarily dieting, fasting excessive exercise for 3 months
- Binge Eating/Purging Type: recurrent binge eating, vomiting, use of laxatives, diuretics or diet pills at least for 3 month.

Bulimia Nervosa

Symptoms include:

- Eats larger amount than normal
- Lack of control over eating
- Recurrent inappropriate compensatory behaviour to prevent weight gain (e.g. self-induced vomiting, misuse of laxatives, diuretics, diet pills, fasting or excessive exercising)
- Self-evaluation unduly influenced by body shape and weight
- At least 1 time per week for 3 months

Binge Eating Disorder

Symptoms include:

- Eats larger amounts than normal
- Lack of control over eating
- Feels embarrassed and may eat alone
- Feelings of disgust or guilt
- Marked distress
- At least once a week for 3 months

Parkwood RAI

(Resident Assessment Instrument)

Study

- Retrospective electronic review of 8,000 patient charts
- Indication of eating disorders on RAI 0.4%
 - Significant predictor in diagnosis of eating disorder
 - Incidence unbelievably low
 - Either not screened / not diagnosed / not recorded
- Process of screening and recording needs a review to develop a comprehensive management plan

Parkwood Screening Study

- Prospective study of 91 randomly selected patients (44 males, 47 females)
- Given EAT 26 screening tool and SIS-MAP suicidality scale
- 16.5% had EAT > 20 (3% male / 29.8% females)
- EAT >20 showed significant higher suicidality scores

Objective 2;

To comprehend the medical complications of eating disorders;

Complications

Dehydration & Electrolyte Imbalance:

- K^+ ↓, Na^+ ↓, Cl^- ↓ (arrhythmia, convulsion)
- Metabolic Alkalosis (H^+ ions ↓ - vomiting)
- Metabolic Acidosis (serum bicarb ↓ - lax abuse)
- Edema (aldosterone in response to b & p. cycle)
- Renal Blood Flow ↓
 - GFR ↓
 - renal concentration capacity ↓
 - hypokalemic nephropathy
 - renal calculi
 - BUN ↑

Complications

Cardiovascular

- Arrhythmia (e.g.) QT interval
- Cardiomyopathy – ↑ Ipecac (28%)
- Atrophy – ↓ Left ventricle & chamber size
- Mitral valve prolapse
- Hypotension, Bradycardia

Complications

Gastrointestinal:

- Esophageal Dilation/Erosion → Tear
- Gastric Dilation → Rupture
- Flaccid Non Responsive Bowel → Resection
- Fullness, Bloating, Constipation
- Abdominal Pain (cramping) → Delayed gastric motility
- Bloody Diarrhea/Steatorrhea (lax)

Complications

Metabolic System

- Serum Glucose ↓
- FFA ↑
- Cholesterol ↑ [A]
- Noradrenalin ↓
- Beta Hydroxy Butyric Acid ↑
- Serum Protein Electrophoresis (A/G ratio)
- Cold Intol/Energy Fluctuation ↑ ↓
- Dryness of skin
- Resting Metabolic Rate ↓

Complications

Endocrine System:

- TSH ↑
- Gonadotropin ↓
- G.H. ↓
- A.M. Plasma Cortisol
- FSH ↓, LH ↓, Estrogen ↓ (Testosterone ↓)
- Amenorrhea/Osteoporosis/Fractures/Lanugo Hair
- Leptin ↓, Ghrelin ↑, Peptide Y ↑ (AN) – (opposite BED)

Complications

Trace Element/Enzymes

- Zinc ↓ (alopecia/nausea/irritability [A])
- Magnesium ↓
- Carotene ↓ (skin) [A]
- Amylase ↑ (salivary/pancreatic) – parotid hypertrophy
- CPK ↑ (ipecac) – arrhythmias
- Calcium ↓ (osteoporosis, enamel)
- Phosphorus ↓
- Liver Function ↑

Complications

Neurologic

EEG

- Metabolic Encephalopathy [A]
- 14-6 sec Spike & Wave [B]
- Seizure – 10% [A]- with alcohol & purge
- Sugg. – Anti-Convulsant

CT Scan/MRI

- Ventricular Size ↑
- Brain Atrophy

Complications

Hematology

- Mild Anemia - normochromic, normocytic (lethargy)
- Leukopenia
- Thrombocytopenia (petechiae-extremities)(rare)

Others

- Dental Caries/Erosion
- Scars/Calluses on Hands
- Buccal Erosions/Peri Oral Irritation
- Aspiration Pneumonia
- Subcutaneous Emphysema
- Pneumomediastinum
- Refeeding Syndrome

Comorbidity

- Reduce favourable outcomes / refractory
- Lead to treatment resistance / adherence
- Increase the need for re-hospitalization
- Increase in relapse

Lifetime Comorbidity

- **80 to 97⁰%!**

Blinder, Cumealla, & Sanathara, 2006

Mortality Rate

Highest Mortality Rate of all Mental Illnesses

- Anorexia Nervosa
 - Up to 10 to 20% of people will eventually die from the effects!
- Bulimia Nervosa
 - Inaccurate stats (cause of death – from complications)
- Binge Eating Disorder
 - Impact of heart/stroke/blood pressure – diabetes – correlations just starting

Psychiatric Comorbidity

- Anxiety - GAD / Panic / Social
- Depression - MDD / Bipolar / PDD
- Substance use - Alcohol / Cannabis / Cocaine
- PTSD
- BPD
- OCD
- ADHD

“The Personality Factor”

Physical Comorbidity

- Bowel - Ulcerative Colitis / Crohns / IBS / Surgery
- Metabolic syndrome
- Fibromyalgia
- Special diets
- Diabetes
- Etc.

Diabulimia (30-40%)

- NONADHERENCE places adolescent at SERIOUS RISK for: SHORT & LONG-TERM health complications
- Defined as deliberate administration of insufficient Insulin to maintain glycemic control for the purpose of causing weight loss
- Intentional INSULIN OMISSION is a unique compensatory behavior in T1DM to restrict dose to lose weight
- Comorbidity of eating disorder - ↑ ADHERENCE difficulties

Eating Disorder & Diabetes Complications

(Multi Centered German/Austrian Study – Diabetes Care 2014)

- Total 52,215 T1DM 467 with Eating disorder
- ↑ Ketoacidosis
- ↑ Hypoglycemia (OD) ↑ pathological insulin injection sites
- ↑ Risk follow-up retinopathy, nephropathy, neuropathy
- ↑ Hospital; ↑ length of stay, ↑ missed appointments
- ↓ Metabolic control & ↑ rate of Diabetic complications INCLUDING DEATH

Impact of Covid 19

- ↑ symptoms ↑ comorbidity
- ↑ need for inpatient/outpatient treatment
- need for follow up-up care
- ↑ need for hospitalization
 - Virtual care
 - Treatment / supportive teams
 - Collaborative care
 - Ongoing follow up care

*Long waiting lists

Learning objective 3;

Understand evidence based and supportive therapies for eating disorders.

Management Team

- Role Definition / Interdisciplinary Approach
- NP, FP, psychiatrist, family health teams
- Psychologist, RNs, RPNs, SW, OT, RT, Dietician
- Circle of Care - coordination - team building
- Hospital / Residence / Transition (supportive) housing / Outpatient programs/ Follow-up care

Psychological Therapies

- CBT, IPT, DBT, Mindfulness
- Psychodynamic, family, psychoeducation
- Supportive – Art / Music / Yoga / Etc.
- Individual / Group
- Customized approaches

Cognitive Control Suggestions

Stimulus Control

- Cartoons, reminders

Urge/Craving Control

- Private rehearsal

Excuse – Thought Control

- Positive writing

Decision Making – Anxiety Control

- Meal planning

Belief/Attitude Change

- Preparing meals

Relapse Prevention

- Role play lapses

Relapse Pattern

Bite of Favourite Chocolate Cake

↓
Violates the Abstinence Principle

↓
Guilt

↓
Perceived Loss of Control
(RE) Lapse

- Distinguish between Lapse, Relapse, Collapse
- Outlast the Urges & Cravings

Coping Strategies For Families

- Be patient
- Seek help
- Family support
- Prepare for denial
- Don't lay blame
- Don't let it interfere
- Don't dwell on food
- Don't compare
- Avoid body comments
- Be aware of control
- Non-food activity
- Learn all you can

“Understanding is a key to coping”

Medication Management

- Anxiolytics - benzodiazepines, buspar
- Antidepressants - fluoxetine, citalopram, sertraline, escitalopram
- Antipsychotics - quetiapine, risperidone, aripiprazole
- Mood Stabilizers - lamotrigine, gabapentin
- Sedation - trazadone, zopiclone, prazosin (nightmares)

Supplemental Medications

- Zinc 100 mg OD x 3 months
- Thiamine 100 mg/day x 5 days
- Calcium Carbonate 500 mg BID
- Vitamin D 1000 IU daily
- Folate 0.5 mg/day x 3 months
- Omega 3 Fatty Acid 1 gm BID
- Multivitamins daily

Medications - Complications

- Electrolytes - K⁺ / Na⁺ - phosphates
- Hypoglycemia - orange juice
- Bowel Function - fluids, Colace, Restoralax
- Ensure / Boost - fibre supp., glycerine supp., dietary supplement
- Consult - internist re: complications

BED Considerations

- ADHD / BED
 - impulsivity / lack of control
- Lisdexamfetamine
 - approved for BED – psychostimulant
- Topiramate
 - ↓ craving for food – anti-convulsant/mood stabilizer
- Metabolic Clinics
 - Diabetes Management
- Bariatric Surgery
 - Toronto, Hamilton, Windsor, London

Common neuromodulation techniques

Type	Invasiveness	Mechanism of action
Transcranial magnetic stimulation (TMS)	Non-invasive	Electromagnetic induction leads to modulation of underlying cortex and neural activity.
Transcranial direct current stimulation (tDCS)	Non-invasive	Weak current alters neuronal excitability. Neural effects depend on the direction of current.
Vagus nerve stimulation (VNS)	Surgery	Electrical stimulation of vagus nerve conveyed to other areas of the brain.
Deep brain stimulation (DBS)	Surgery	Electrical pulses delivered to specific brain area central to condition.

McLelland, J., et al. (2013). A systematic review of the effects of neuromodulation on eating and body weight: evidence from human and animal studies. *Eur. Eat Disorders Rev.* 21, 436-455

Hospitalization

- BMI below 16.5 - referral to Credit Valley/
TGH/Homewood
- Hospitals not admitting (Below 13.5 a must)
- Low Weight Clinic at LHSC, laxative tapering
- Refeeding Syndrome - N/G - G/J - IV
Form - Sometimes necessary
- Hospital → Residence → Transition (supportive) housing
→ Home
- Coordinated discharge planning

Early Intervention

The ability to detect, intervene and treat eating disorders in time can minimize risk to the life of the patient.

An untreated patient can become vulnerable to physical illness and even suicide.

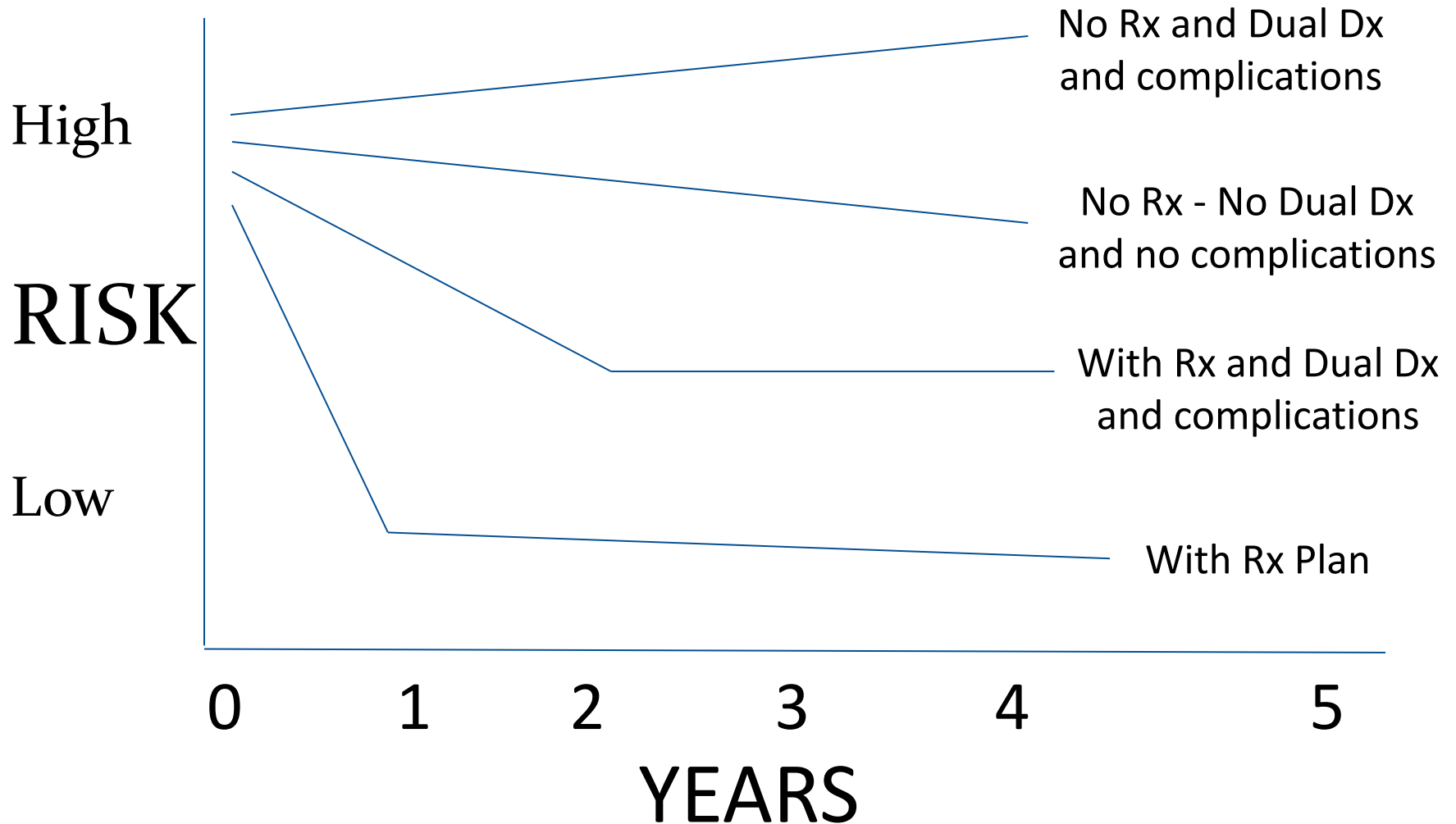
Covid 19 – Impaired Access

Risk Assessment

RISK OF RELAPSE

- Significant decrease in risk with appropriate risk assessment and ongoing management
- 30-50% chance of relapse in first year without appropriate follow-up
- Significant decrease in relapse after 4 years of being symptom free

Risk Assessment RECOVERY



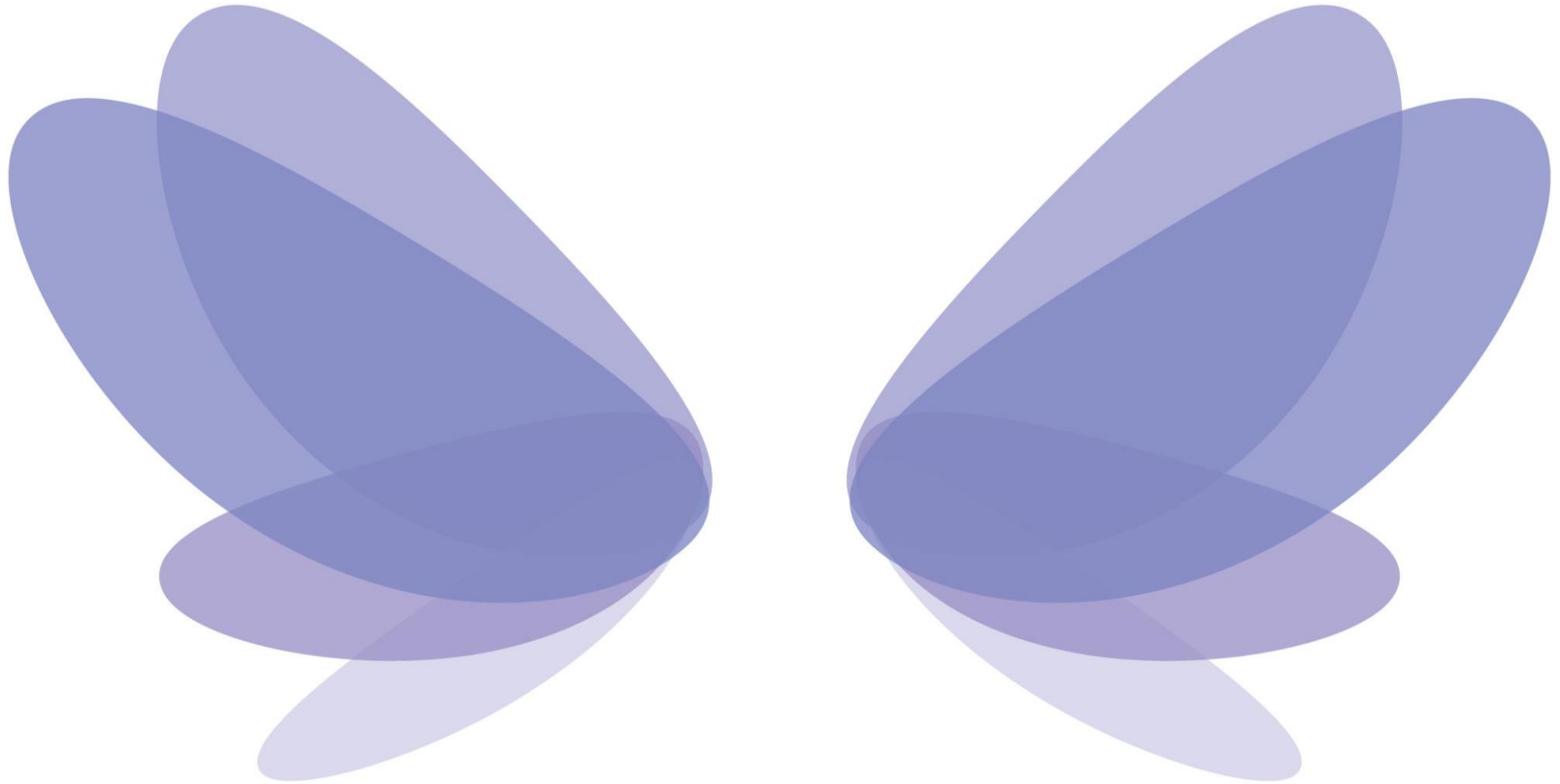
Research Areas of Interest

- Genetics
- Cannabis – CBC/THC – Impact on appetite
- Leptin – inflammatory process of fat cells
- Microbiome and Probiotic intervention
- Role of social media
- New iphone management applications
- Impact of Covid 19

Charlottes Hope

- A transition house pilot project
- Research grant application in progress
- To provide an evidence based supportive housing model to bridge the gap between treatment and follow up supportive programs
- To assist family medicine in the management of eating disorder patients when needed

EDFC Website



edfc.ca/about-edfc