

OVERVIEW OF AN EATING DISORDER PROJECT:

In 2002, after 22 years as a full service family physician in rural practice in Gibsons, BC, my wife, a registered nurse, and I faced a crisis in our family. At the age of 14, our middle daughter developed anorexia nervosa.

As her weight rapidly declined, my physician's mentality of stepping in, taking control, and "fixing the problem" became more of a detriment than an effective treatment and recovery plan.

Little did I know that both anorexia nervosa and bulimia nervosa would dominate the lives of everyone in our entire family over the next 6 years, until our daughter eventually recovered in 2008 at the age of 20.

Over this time, both as health care professionals and parents, we were given the opportunity of gaining first-hand experience in dealing with an eating disorder affecting a loved one, leaving us with a much deeper understanding of these very complex biopsychosocial mental illnesses and their affect on families.

Our objective, to assist family doctors in raising awareness, sensitivity, and knowledge about eating disorders and reviewing the funded resources for treatment in the 5 health regions of BC, has resulted in a comprehensive report that will become available to family doctors on line in the near future.

Unlike physical illnesses, mental illnesses in general, and eating disorders in particular, are often attributed to moral failure, lack of willpower, or personal choice. Stigma arises and creates a vicious cycle of alienation and discrimination that all too often prevents patients from seeking help.

Shame, guilt, fear, anger and denial experienced by those suffering frequently manifests in parents, partners, and siblings as well. Consequently, the family physician must not only be knowledgeable about eating disorders, but must also be skilled at addressing the myriad of negative emotions that arise during the course of an illness and which may come to affect both patient and family members alike.

Eating disorders cannot be classified as true addictions, since unlike all other addictions, food is essential for life and abstaining would be fatal. However, the 3 compulsive behaviors common to all eating disorders, purging, restricting, and bingeing, and the belief systems that drive these maladaptive behaviors become so entrenched in affected patients that significant morbidity and mortality may occur.

We as physicians must come to better understand the predisposing risk factors, dispel the myths and misconceptions as well as the stigma surrounding eating disorders, recognize the early signs of disordered eating before a full blown DSM IV diagnosis becomes obvious, be skilled at developing an effective therapeutic relationship, and most importantly, view our patients and their families with understanding and compassion such that we can be effective in helping them along the oftentimes long road to recovery.

Eating disorder treatment however is beyond the abilities of any single practitioner, and requires the knowledge, skill, and expertise of a team, and as family physicians we have the opportunity to be effective members of such a team.

This may be a “real” team consisting of counseling therapists, family therapists, nutritionists, occupational therapists and medical doctors (pediatricians, psychiatrists, internists and/or family doctors) working together treating youth, adolescent, and adult outpatients. Such complete and well functioning teams exist only in BC’s larger urban areas, and even many of them experience under-funding, waitlists, incomplete staffing, and poor awareness amongst community family physicians.

If you practice in a remote or rural community, you may be called upon to create your own “virtual” team, consisting of a counseling therapist from your local Child and Youth Mental Health or Adult Mental Health team, together with your hospital dietician as the nutritional expert and yourself as the medical doctor.

DISORDERED EATING AND EATING DISORDER SCREENING IN FAMILY PRACTICE: A HIGH INDEX OF SUSPICION MAKES FOR EARLY RECOGNITION.

In clinical practice, the diagnosis of an eating disorder should be considered in any youth, adolescent, or adult patient who engages in potentially unhealthy weight control practices and/or demonstrates obsessive thinking about food, weight, shape, or exercise and not only in one who meets established diagnostic criteria as established in the DSM 1V.

Coinciding with the rising rates of eating disorders is the staggering prevalence of obesity in youth and adolescents. It is no surprise that body shape and body size (weight) dissatisfaction is the common thread that links both ends of the spectrum, from obesity on one end to restrictive anorexia nervosa on the other.

It's important to remember that disordered thinking leads to disordered eating which may or may not lead to an eating disorder, and at any time a patient's BMI may be low, normal, or high, whether they are experiencing disordered eating (DE) or suffering from a full blown DSM 1V classified eating disorder. In other words, we must take our focus off of weight if we are to successfully identify patients early in the development of an eating disorder as well as recognize those eating disorders that are weight neutral or cause weight gain, such as BN or BED.

As eating disorders arise out of maladaptive coping mechanisms to deal with issues such as stress, anxiety, depression, loneliness, abandonment, and low self-esteem, rarely will youth or adolescents present directly to their family doctor with a clear diagnosis, and in most instances concerns will come from non-specific physical or emotional complaints from the patient, or from parents, guardians, teachers, school counselors, coaches, or friends. In the case of adult presentations, it is partners who may express concerns to their doctors. We must seriously consider any and all of these concerns.

Subtle Ways Disordered Eating and Eating Disorders May Present:

1: Physical:

- Low energy, fatigue, or cold intolerance
- Menstrual disturbances or amenorrhea
- GI complaints such as dyspepsia, nausea, acid reflux or irritable bowel
- Low BMI compared to age norms OR equally important, fluctuations in weight, either up or down and particularly if without any medical reason
- Poor treatment adherence in Type 1 diabetics.

2: Psychological:

- Anxiety, depression, mood swings
- Substance use/abuse (more so with BN)
- Insomnia
- Lack of concentration and declining school marks and/or attendance
- Obsessive symptoms, particularly involving food , weight, body image, and/or exercise
- Dieting behaviors, such as skipping meals, fasting, omitting food groups, rigid rules or rituals involving food or eating
- Self-harming behaviors such as slashing

3: Social:

- Change in social pattern, particularly isolating from friends
- Problems at school or work
- Problems with relationships with family and friends
- Involvement with the criminal justice system, such as shop lifting
- Co-existing involvement in high risk sports or activities, including dancing, gymnastics, ballet, modeling, acting, cheerleading, figure skating, distance running, wrestling, and rowing

Behaviors to Ask Parents and Other Informants About:

- Diet books and magazines and/or dieting behavior in children or adolescents
- Evidence of visits to pro-anorexia or other pro-eating disorder websites, such as “ pro-ana “ or just “ana” and pro-bulimia or pro-mia or just “mia” as they have come to be called
- Sudden conversion to vegetarian diets
- Sudden onset of increasingly “picky eating” behavior, particularly insisting on only “healthy foods”, or pushing food around on the plate without consuming it and taking an inordinate amount of time to eat
- Frequent trips to the bathroom immediately after meals, followed by toilet flushing or showering
- Skipping meals , lying about having already eaten elsewhere, reluctance to eat meals with the family, or not eating lunch at school
- Frequent complaints of stomach pains or stomach “flu”, or statements like “I am not hungry” despite having not eaten for long periods

- Large amounts of food missing from the kitchen during binge episodes

ACT NOW SIGNS AND SYMPTOMS: YOUR PATIENT ALREADY NEEDS ASSESSMENT AND TREATMENT:

- Regular fasting and skipping of meals
- Episodes of purging behavior (vomiting)
- Russell sign (callus on dorsal surface of dominant hand index and/or long finger from pressure on the upper teeth during self-induced vomiting)
- Discovery of diet pills, laxatives, or diuretics
- Complete refusal to eat non diet foods, and exclusive consumption of only diet foods
- Extreme calorie counting or portion control (weighing and measuring out small amounts)
- Refusing to allow others to prepare foods, or preparing foods for others and then refusing to eat
- Excessive exercising, any more than an hour a day and particularly if associated with weight loss
- Fainting or dizzy spells without features of any underlying medical illness
- Dental concerns such as enamel or gingival erosion and temperature sensitivity of teeth
- Regular refusal to eat at family meal times or to eat with friends
- Any episodes of binge-eating behavior
- Family history of an eating disorder

THE KEY TO EFFECTIVE OFFICE MANAGEMENT OF AN EATING DISORDER: THE THERAPEUTIC ALLIANCE

The most challenging task now is to establish from the outset a therapeutic alliance such that you can confirm an impression of either disordered eating or an eating disorder and if necessary, arrange appropriate referral for expert assessment and opinion, ongoing therapy, provided you have ready access to a multi-disciplinary team in your region.

To do so, it is important to understand where your patient is at with their illness, so it is necessary to review the Transtheoretical Model of Change (TCM), first developed for use in the field of addiction medicine.¹

Pre-Contemplative Stage: patient is not experiencing the issue as a problem and/or is not wanting to make changes.

Contemplative Stage: patient is experiencing the issue as a problem and is seriously thinking about or wanting to work on change.

Action Stage: patient is actively working to reduce the problem

Maintenance Stage: patient is actively working to maintain previously made changes in order to prevent relapse

Most patients will present to their family doctor at the “pre-contemplative” stage, characterized by either the “I don’t need to change. I don’t have a problem---they do!” attitude of anger, or the complete denial and lack of insight into how the “voice “ of the eating disorder has completely taken over their thinking. Occasionally patients may present in the contemplative stage, as they may have attempted to stop or control their eating disorder behaviors and found they are no longer in control. At this point anxiety levels may be very high, but ambivalence towards treatment may still exist, as the “voice” of ED still prevails in their thoughts.

Even if the patient’s illness has progressed to an advanced stage however, rarely will there be a crisis situation that requires emergency hospitalization and stabilization on your first contact with a patient, so it’s best to take the time right from the beginning to establish rapport by asking thoughtful questions to help understand the patient as well as the parents or partners perspective, and to avoid the mistake of making assumptions or expressing negative judgments, which will only destroy any hopes of establishing rapport. Remember, most patients who develop eating disorders are very sensitive and intuitive; if you ignore, condemn, criticize, or judge them harshly, or if you lack compassion and understanding, at best you will be ineffective in helping them to recover, and at worst, you will precipitate further alienation and isolation that will prevent them from receiving the intensive therapy necessary to prevent progression into a chronic treatment resistant or even fatal illness.

There will always be a variety of biological, psychological, and social reasons for the beliefs and behaviors the patient has developed up to this point, and you will be ineffectual in helping initiate change unless you take the time to develop a collaborative stance and be considerate, curious, and compassionate in your approach.

You can only just begin the process in a standard 10-15 minute office visit, so once you have assured yourself there is no medical instability (pulse and supine/erect BP check, blood work, and an EKG if there are concerns raised by significant weight loss or obvious cachexia) or suicidal ideation, there is time to set up a series of “prolonged visit” appointments once or twice a week. The first long appointment is with the patient alone, and the second one includes parents or partner, if the latter did not consult you first and if you have been able to establish rapport and emphasized to the patient the importance of family involvement and support.

Knowing you are limited financially to 4 “prolonged visit” sessions annually, one must use the time efficiently and effectively to establish a relationship that allows you to provide supportive care and medical supervision in subsequent 10-15 minute regular office visits. Being chronic illnesses that typically last several years (average duration of 7 years and 10 years for AN and BN respectively according to literature), an effective therapeutic alliance helps not only the patient and their family members, but you and the other members of the healthcare team that will be caring for them.

The works of Strober on “Consultation and Therapeutic Engagement in Severe Anorexia Nervosa”, as summarized by R Manley, S Jones, and K Stoilen

in the BCMJ, ² as well as work by J Geller ³ on the Readiness and Motivational Interview (RMI) contain very useful ideas on attaining the necessary therapeutic alliance to enable you to take an effective supporting role in your patients recovery.

By being curious, you are less likely to encounter defensiveness and defiance, and you will also avoid the common mistake of making assumptions that only serve to alienate your patient. In taking a “collaborative” stance and asking questions about how a particular belief or behavior is “working” or perhaps “not working” for them, you avoid confronting them by giving “directive” advice that not only increases resistance but also decreases their desire to explore any ambivalence they may have about their beliefs or behaviors. (In the next section we will use “she” to mean a male or female patient)

1: Understanding the patient’s perspective: Ask about any anxiety she may have, and acknowledge it as being normal and that you understand how difficult it must be for her. Does she feel the “illness” is her fault? Does she feel she even has an “illness”? Does she feel she doesn’t deserve help? Does she fear she will lose control to authority figures? Does she fear that treatment will cause her to gain weight? Does she want you to not believe she has an eating disorder so as to intervene in conflicts with her family? Does she feel angry at her family? Does she feel there are parts of her that like what is happening to her and others that don’t? Does she fear her privacy and confidentiality will be breached? (with this last question, other than for safety issues, you must assure her you respect her privacy and no details will be discussed, but planning, questioning, or general communication with parents/partners is not breaching confidentiality),

2: Understanding the family’s perspective: Do they fear their daughter will refuse help? Do they feel guilt or shame about their daughter’s illness? Do they feel they have been bad parents? Do they fear there is no help available for their child? Do they expect a quick and easy recovery? Do they want or expect you to be the authority that will take control and “fix” their child? Do they want concrete actions like a meal plan and how to handle conflicts over food and eating? Perhaps not this early on, but it will be important at some time to ascertain if there is disordered eating in the patients family, such as acceptance of dieting behavior as evidenced by a history of frequent dieting attempts or weight fluctuations in one or both parents.

3: Assess readiness and motivation: Manley et al ³ use statements such as “People often describe two parts of themselves to us. One part is perhaps hoping for a life not spent obsessing about food, calories, and exercise, and the other part is very fearful of any change and wants only to remain in the safety provided by the eating disorder. Do you experience anything like this?” A similar, perhaps more simplistic approach would be to ask the patient if she recalls her life as a little girl, BEFORE she developed a “fear of fat” or “fear of food”, and label that part of her thinking as coming from her “higher” “real” or “true” self, and help her to differentiate her present thinking as a “newer” part of herself, labeling it as

“Ed”, “false” or “lower” self that has developed within her as she has gotten older. This conceptualization of 2 different “parts” of her “thinking” is a useful way to help start her in exploring ambivalent feelings she may have about the “newer” beliefs and behaviors she has identified with in the course of developing her eating disorder or disordered eating. If she has been your patient for a long time, or perhaps if you delivered her as a baby, this reconnection to her younger self may further strengthen your therapeutic alliance. The patient will need to be of an age able to conceptualize this process however.

4: Communicate a model for understanding eating disorders: Present to the patient as well as parents or partners that, as you see it, the eating disorder developed as a “solution” to a “problem”, and you can understand why it may be very difficult to let go of, even if it is creating more problems than it is solving. You can also express that it is a kind of “language” she is using to express to the world that she is not feeling very good about herself. At all times it is essential to communicate that she is not to blame, and that no one is to blame, unless it is the eating disorder itself. The use of myth, metaphor, and storytelling can be an even more powerful way to communicate your understanding and appreciation of what it is like for her to be ill. The following is the general outline of a story used by Dr Anita Johnston, author and psychologist specializing in eating disorder treatment.⁴

“There was once a young girl that did not know how to swim. One day she fell into a fast flowing river, but was saved from immediate drowning by a log that happened to be floating in the area where she fell into. She clung desperately to the log, but the current quickly swept her into treacherous rapids through a narrow canyon. The log saved her life, and soon she found herself floating in the middle of a wide, deep and slow moving part of the river. She panicked however when she realized the log was now beginning to sink. People on the far shore were waving and calling out for her to swim, not knowing she didn’t know how, or even that the log was beginning to sink. It was now time for her to learn to swim, and although very frightening for her, she was able to let go, only very briefly at first, and always within an arm’s reach of the log, to practice swimming, until finally, able to leave the log for longer and longer periods, she gained the confidence and ability to make the long journey safely to shore.”

5: Be emotionally oriented: Ask questions about how she is FEELING about her behaviors and beliefs, rather than focusing on descriptions of the behaviors or beliefs she is experiencing.

6: Use effective language: Allow yourself to be curious and ask how the ED is affecting her and how it is affecting her family. This helps her to separate and externalize the ED as being distinct and separate from whom she truly is. Never use jargon, especially words with negative connotations such as “denial” or “acting out”. This type of language, often meant to sound “clinical” or “professional” will be perceived as judgmental and critical and thus risk in alienation, even more so if you use it with parents or partners present.

7: Be transparent: Share information, be open by encouraging and welcoming questions from both patients and family members or partners. The eating disorder itself is usually a very big secret to begin with, and doesn't need any more company. A vital part of being transparent is to also relay in a non-judgmental way the very real risks to health and wellness from long term restricting, binging, or purging behaviors. However, don't ever forget to be **realistic** and convey clearly that risks to health are usually alleviated with cessation of the behavior, and **optimistic**, as studies reveal 60% of people fully recover with appropriate treatment and another 20% experience partial recovery sufficient enough to proceed with educational and vocational opportunities in their lives. Patients and families must know, as the Buddha said....."and this too shall pass!" In the midst of a long struggle with and eating disorder, everyone at times will feel hopeless and overwhelmed.

8: Be able to make "non-negotiables" work: Mandatory treatment components such as meal plans must have sound rationale, be consistently implemented, not take the patient by surprise, and maximize patient autonomy. They are neither "right" or "wrong, but they are what are required to balance patient safety, patient autonomy, and professional responsibility.

SCREENING TOOLS FOR ED'S

Below are listed some screening tools that have been developed to allow rapid assessment and diagnosis of an ED by family doctors. However, they may be of limited practical value, as the secretiveness and shameful feelings patients experience around their eating disorder often precludes honest answers, at least until you have had both time and energy to develop a therapeutic alliance as discussed above. The exception may be a patient who is experiencing a relapse and with whom you have already established good rapport, or in the collection of collateral information from parents or partners who may have discussed with you their concerns prior to the initial patient assessment.

THE "SCOFF" QUESTIONNAIRE:

Developed in London in 1999, the SCOFF questionnaire, like the better known CAGE questionnaire for alcoholism, provides a very quick, easy, and reliable screening tool for a family doctor. However, as the acronym was developed in Britain, one must remember that SICK means to vomit and ONE STONE is the equivalent 14 pounds or 6.5 kilograms. Giving 1 point for each positive answer, a score of 2 or greater makes the diagnosis of an eating disorder almost certain.

S SICK: DO YOU MAKE YOURSELF SICK BECAUSE YOU FEEL UNCOMFORTABLY FULL

C CONTROL: DO YOU WORRY YOU HAVE LOST CONTROL OVER HOW MUCH YOU EAT

O ONE STONE: HAVE YOU RECENTLY LOST MORE THAN ONE STONE IN A 3 MONTH PERIOD

F FAT: DO YOU BELIEVE YOURSELF TO BE FAT WHEN OTHERS SAY YOU ARE TOO THIN

F FOOD: WOULD YOU SAY THAT FOOD DOMINATES YOUR LIFE

THE "**ESP**" QUESTIONNAIRE:

The ESP questionnaire (**E**ating Disorder Screen for **P**rimary Care) uses 5 questions, but lacks the acronym. Specificity and sensitivity are similar between the 2 and validity and reliability compare favorably to the detailed but more cumbersome Q-EDD (Questionnaire for Eating Disorder Diagnosis). The ESP asks the following:

- Are you satisfied with your eating patterns (no is abnormal)
- Do you ever eat in secret (yes is abnormal)
- Does your weight affect the way you feel about yourself (yes is abnormal)
- Have any members of your family ever suffered from an eating disorder in the past
- Do you currently suffer with or have you ever suffered from an eating disorder in the past

A score of 0-1 rules out an eating disorder, and a score of 3 or more rules in an eating disorder. A score of 2 is possibly an eating disorder. However, the 2 questions of the ESP that have been shown to best RULE OUT the presence of an eating disorder are:

- Does your weight affect the way you feel about yourself? (NO)
- Are you satisfied with your eating habits? (YES)

HOW TO EFFECTIVELY HELP PARENTS AND LOVED ONES SUPPORT AN EATING DISORDER AFFECTED PATIENT:

Although symptoms of an ED are experienced by one person, the effects of these disorders go far beyond the lives of the sufferer's. Parents, relatives, and friends can be drawn into an emotionally painful downward spiral, some more than others.

Clearly conveying that there is never a single easily identifiable cause for the eating disorder developing in their loved one, the next step is to briefly explain that there are many complex biological, psychological, and social factors that have all interacted in the development of the illness. After doing this you must also help them move away from dwelling too much on the WHY and HOW questions, as this can hinder them from further developing their vital supportive role.

The next step is for you to direct a question back to them, "how do you feel?" This is the critical step in helping them to vent and subsequently let go of their negative emotions such that they can stop focusing on how the illness is affecting them and get it back on the patient, who is in need of their support. Encourage them to discuss these emotions as openly and as honestly as they can with you as well as others who are providing support, but by no means with the patient who is already suffering enough of their own negative thoughts about themselves.

Anger:

Certainly one of the main emotions felt by loved ones, often directly at the person with the illness, and sometimes at themselves for their inability to fix it. No one is immune; you and other professionals may be seen as not doing enough or being as effective as they may wish you to be. Be realistic about the chronic nature of ED's, remain optimistic but never apologetic. Anger needs to be redirected at the eating disorder itself, never the person who is affected.

Guilt:

Another common emotion, especially amongst parents who often blame themselves for either causing or contributing to the eating disorder development. This may be accentuated when well meaning family and friends begin to imply they must have done some poor parenting to bring it about.

Shame:

As if it were not enough that the sufferer experiences shame, loved ones, especially parents, feel ashamed that their child, often viewed by others as being intelligent, attractive, and accomplished, has developed a mental illness, and especially something so misunderstood as an eating disorder.

Anxiety:

Inevitable, as this emotion always arises whenever we attempt to resist what is occurring now and start projecting what we fear may come to be. This fear will grow as the disorder takes over more and more of the person's life.

Mistrust:

The person affected by an eating disorder may lie repeatedly to cover up their 3 maladaptive behaviors of restricting, bingeing, and purging. Help to counsel loved ones that it is the ED driving these behaviors; their loved one is no longer in control when they exhibit them. Confronting about their behavior is okay, but letting them know you understand their loss of control is a much more effective method of building trust.

Apathy:

Certainly not commonly encountered, but if it is, you have to question the psychological damage that has been inflicted on the patient. This attitude suggests some deeper emotional or psychological issues exist within the parent, family member, partner, or friend.

Parents, partners, relatives, and friends play an important role in forming a vital network of loving, nurturing, and healthy relationships which act as a lifeline to eating disorder sufferers. In supporting them however, remember to state the 3 C's:

- "You alone didn't Cause it"
- "You alone can't Control it"
- "You alone can't Cure it" ⁵

Convey the following suggestions to support persons to help them effectively manage their approach to someone affected by an eating disorder:

- Ask your loved one what you can do to best support them
- Listen and allow them to express their feelings
- Be patient, don't expect rapid recovery, even if actively in therapy
- Be insistent they receive professional help; you take their beliefs and behaviors seriously, and you care about their health and well being
- Outside counseling for support people is always a good idea, as it is bound to be an arduous journey
- When you first approach a loved one about an ED, be aware that denial or hostility are common reactions; this is the ED speaking, not your loved one
- Let your loved one know she is important member of the family, but not more so than any other member
- Encourage involvement in non-food related activities

- Never comment on the person's weight, shape, or appearance, as this is only heard by the inner voice of the eating disorder, which always hears such comments in a different context
- Instead focus always on feelings, as well as non-food and non-appearance related topics and activities
- Allow your loved one the opportunity to develop her own thoughts, beliefs, and identity, and never start preaching
- "safe" foods, those that your loved one feels comfortable eating at their particular stage of recovery, should be determined and provided
- Consider your own relationship to food, your body, and your weight; if it is not a healthy one, acknowledge your difficulties and find help for yourself, as this will allow both of you to move towards recovery
- Low self esteem is very common; be aware not to compare, criticize, or become frustrated and impatient
- People with ED's strive for control over their daily routine, but the situation is only aggravated if a loved one attempts to take control away; be clear about negotiable and non-negotiable items, even writing them down at an opportune time
- Although your loved one may push you away, it is the voice of the ED that driven by fear and a need to assert control, so never give up on working on your relationship
- Early intervention increases the likelihood of a faster and more complete recovery, with fewer relapses

CONDUCTING OFFICE BASED MEDICAL ASSESSMENT AND MONITORING OF THE EATING DISORDER AFFECTED PATIENT

MEDICAL COMPLICATIONS OF EATING DISORDERS:

Although physicians need to be aware of both the acute as well as the long term complications associated with eating disorders, it is important to let patients, parents, and partners know that most symptoms and conditions are reversible upon re-feeding or restoration of normal weight, or when purging behaviours cease or binge episodes are controlled.

When complications do arise, having an optimistic attitude and taking a collaborative stance is more likely to be effective than a negative attitude and directive, authoritarian stance; remember to be non-judgemental when explaining why medical complications are occurring, and if medical treatments need to be instituted, be clear and concise that such treatments are required to protect her body from the harm being done to it by the eating disorder itself, and not “her”, and that rehydrating or re-nourishing are at times non-negotiable requirements to preserve life. Remember to not blame her, but lay the blame on the eating disorder. She already feels badly enough about herself; that’s what keeps driving it.

If you obtain a clear cut history of under-eating, over-exercising, or purging, there are no other illnesses in the differential diagnosis, therefore extensive and unnecessary medical investigations are less important than prompt therapy to reverse the disordered eating with a healthy relationship to food and body image, before maladaptive beliefs and behaviours become firmly entrenched in the neural networks.

The following physiological disturbances may occur:

Weight Loss Complications

- Delayed sexual development and amenorrhea secondary to Hypothalamic-Pituitary –Adrenal Axis (HPA) dysfunction in pre-pubertal and early pubertal females
- Hypogonadism in pre-pubertal boys
- Growth retardation if occurring prior to epiphyses closure from both gonadal and growth hormone dysfunction
- Cold intolerance secondary to thyroid dysfunction and loss of sub-cutaneous fat stores
- Acrocyanosis
- Decreased gastrointestinal motility with reflux, bloating, abdominal cramps and constipation
- Hypoalbuminemia and edema
- Hypoglycemia
- Hypercholesterolemia (more common in acute rather than chronic weight loss)

- Orthostatic hypotension, dizziness and fainting spells secondary to intravascular volume depletion
- Stress fractures, osteopenia and osteoporosis secondary to calcium, protein, and hormonal deficiency states preventing peak bone mass accumulation that normally occurs late in the second decade of life
- Kidney stones and renal insufficiency
- Weakness and lethargy from muscle protein catabolism
- Hair loss, brittle nails, dry skin from protein and fat deficient diets and development of lanugo hair as a primitive reflex to maintain body temperature
- Bradycardia
- Supraventricular and ventricular arrhythmias (palpitations)
- Congestive heart failure (multiple underlying effects of starvation including loss of heart muscle, anaemia, bradycardia, and electrolyte disturbances, possible Ipecac induced cardiomyopathy)
- Anemia (iron, B12, folate, and severe vitamin C deficiency may be implicated), mild leucopenia, and rarely thrombocytopenia
- Structural and functional brain changes that may either aggravate or cause poor concentration, lethargy, apathy, anxiety, obsessive thinking, and depressed mood

Appetite Suppressant Abuse

- Ephedra (containing ephedrine and pseudoephedrine), phenylpropanolamine (norephedrine), caffeine, and nicotine are common stimulants used in attempts at weight loss. The former 2 are less widely available since removal from OTC drugs, but the Chinese herb Ma huang contains ephedra. Thyroid replacement therapy may also be used inappropriately
- Stimulant drugs only serve to heighten anxiety and may precipitate panic attacks
- Hypertension, tachyarrhythmias, and tremors may be presenting physical symptoms of abuse

Complications of Purging (Vomiting, Diuretics, Laxatives, Ipecac)

- Dehydration with secondary effects of intravascular volume depletion
- Electrolyte abnormalities, most notably hypokalemia
- Electrolyte and nutrient deficiencies such as magnesium, phosphorus, chloride, potassium, zinc and phosphate are more severe in purging type AN than BN, due to existing weight loss from malnourishment (risk of re-feeding syndrome high)
- Cardiac arrhythmias
- Ipecac (emetine) toxicity, producing myopathy and cardiomyopathy
- Dental caries and gingival erosions
- Benign parotid gland hypertrophy or submandibular gland hypertrophy (sialadenosis on biopsy)

- Gastritis, reflux esophagitis or bleeding from Mallory-Weiss tears
- Abnormal colonic motility and bloating
- Renal failure (both pre-renal and renal causes)
- Rarely, gastric or esophageal rupture and pancreatitis

TREATMENT OF MEDICAL COMPLICATIONS OF EATING DISORDERS

Physicians are required to monitor the medical status of patients with eating disorders, but in a multi-disciplinary team, ultimately it is the psychotherapist, with assistance from the nutritional therapist, and family therapist who will slowly reduce maladapted cognitions (beliefs) while introducing more adapted beliefs and coping mechanisms and alleviate distressing psychological conditions such as anxiety, depression, obsessional thinking, and inflexibility. Only then can the patient begin to diminish the maladaptive behaviors of starving, bingeing, and purging.

Acute medical complications may occasionally require hospitalization and treatment; telephone consultation with the tertiary Provincial Eating Disorders Program specialists may be sought (see Part B: Provincial Resources). Cardiovascular and metabolic decompensation are the most common complications necessitating hospitalization, and younger age patients with short illness duration are less able to maintain homeostasis and more typically develop symptoms.³⁹

Dehydration:

- Intravascular volume contraction is a common homeostatic mechanism to deal with fluid and food restriction; purging effects of vomiting, diuretic and laxative abuse, and obsessive exercising without appropriate fluid replacement cause it to occur
- Chronic dehydration is usually well adapted and asymptomatic
- Laboratory values such as electrolytes, BUN, and creatinine are typically in the normal or high normal range
- Clinical signs are livedo reticularis, acrocyanosis, cold extremities, poor skin turgor, dry mucous membranes, and dizziness associated with postural changes
- Aggressive rehydration may tip the malnourished cardiovascular system into CHF, and is only indicated if complications such as acute tubular necrosis (ATN) or severe electrolyte disturbances occur
- Bradycardia and orthostatic hypotension are common manifestations of the malnourished cardiovascular system attempting to compensate
- ECG may show PAC's, PVC's, arrhythmias, and prolonged QT syndrome
- Normal saline given at 75% to 125% maintenance daily fluid for body weight in the first 24 hours if acutely dehydrated, and if not, fluid intake on maintenance needs only.⁽³⁹⁾

Hypokalemic , Hypochloremic metabolic alkalosis:

- Associated with binge-purge behaviours in AN and BN

- Orthostatic hypotension with SBP drop > 20 bpm and tachycardia of >30 bpm
- Blood work may be normal or show low K⁺ and Cl⁻ related to secondary hyperaldosteronism (total body K⁺ depletion in renal exchange for Na⁺ retention to maintain intravascular volume)
- Gastric fluid loss from vomiting and colonic loss from laxatives exacerbate metabolic changes
- With normal renal function, oral K⁺ (2mmol/kg/day in 3 divided doses if patient can control behaviours)
- If metabolic disturbance is more severe and/or behaviours are uncontrolled, short admission for correction is required
- Use Normal saline, with a maintenance dose of KCL, to restore both intravascular volume and serum osmolality
- Monitor serum glucose, potassium, sodium, calcium, magnesium, and phosphate closely for evidence of re-feeding syndrome

Re-Feeding Syndrome (RS):

- Careful re-nourishment is the way to avoid re-feeding syndrome (RS), which is a preventable metabolic complication of fluid and electrolyte replacement and can precipitate CHF, hemolysis, rhabdomyolysis, respiratory failure, hypotension, cardiac arrhythmias, seizures, coma, and sudden death
- Hospital admission is required to allow close monitoring to prevent RS if severely malnourished
- Malnourishment leads to total body phosphate depletion, redistribution from the intracellular space allows maintenance of normal serum phosphate in the compensated starving AN patient
- Lowered insulin response to carbohydrates and increased glucagon levels with carbohydrate deficient intake and resultant fat and protein catabolism (gluconeogenesis) is occurring before re-nourishment takes place
- Re-feeding induces increased insulin levels with intracellular shifts of potassium, magnesium, and in particular, phosphorus
- Phosphorus is essential in cellular energy (ATP from ADP and AMP)
- IV potassium phosphate or phosphate salts if patient is eating (500mg bid Phosphate Sandoz)
- Daily monitoring of serum phosphate, glucose, magnesium, and potassium
- Slow reintroduction of calories, only 25-50% of daily requirements initially, with additional 300-500 calories per day every week, to eventually achieve a goal of 1 kg/week weight gain

Decision guidelines for hospital admission exist at both of the provincial tertiary centers. Faced with a critically ill patient however, family physicians may be faced with admitting such patients for medical stabilization in community hospitals. Medical ward staff would prefer they be in psychiatry beds, and psychiatry ward staff want these same patients in medical beds. The irony is that

these “sickest of the sick” patients will invariably be in the pre-contemplative stage of change, in other words, they will not change. Beliefs and behaviors are likely to be firmly entrenched, and the devastating effects of starvation on the brain precludes any possibility of psychotherapy inducing any significant neuroplastic changes, and only significant re-nourishment and weight gain and stabilization obtained over a much longer admission, together with intensive psychotherapeutic and nutritional intervention, offers any hope for long term remissions or recovery.

That being said, criteria for admission in reality becomes based on critically low BMI's added together with such complications as bradycardia, abnormal EKG, exertional chest pain, dyspnea, hypotension, syncope, hypothermia, significant acrocyanosis, growth delay, chronic illness and lack of progress or deterioration despite outpatient therapy, and abnormal laboratory tests with metabolic concerns.

In reality, low BMI and abnormal metabolic concerns together with suicidal ideation or attempts become the criteria for community hospital admissions. A negotiated meal plan at the time of these admissions would be ideal, but in reality these critically ill patients will invariably require intravenous replacement of fluids or nutritional therapy with nasogastric feeding, as community hospitals lack nursing and nutritional staff with experience in treating patient with eating disorders.

An extensive resource is available on line from the Royal College of Psychiatrists, London council report July 2005, “Guidelines for the nutritional management of AN” if inpatient management is required and specialist support is unavailable at the time of admission.

HELPFUL HINTS ON OFFICE MONITORING:

Patients should be seen at least monthly-more often (weekly)-if very low weight or medically unstable.

At each visit, check patients:

- orthostatic BP and pulse
- weight(with patient's back to the scale)
- symptoms of potential concern(ie of electrolyte disturbance, cardiac abnormalities, suicidality ,etc)
- eating disorder behaviors (ie food intake, bingeing, purging and exercising)

We have enclosed 2 samples (see Appendix) provided by Interior health and the North Fraser Eating Disorder program that you might find useful to modify for your own patient use.

- A) Medical Monitoring checklist
- B) Medical Assessment Referral Form

SPECIFIC MEDICAL ISSUES RELATED TO EATING DISORDERS:

Cardiovascular : Bradycardia and postural hypertension are very common in patients who are restricting.

Be concerned if the patient is symptomatic with:

- fainting
- palpitations
- chest pain
- heart rate is less than 40
- significant postural drop in BP

Monitor ECG and electrolytes, Mg, PO₄, Ca.
Consider cardiology consult.

Prolonged QTc interval: (greater than 450 ms, or increasing > 60ms above baseline) on ECG may be associated with arrhythmias. Discontinue any medications that might prolong QT interval. If sudden, unexplained change in heart rate is noted, patients may be also at risk for arrhythmias and sudden death. In both situations rule out and correct abnormalities in electrolytes ,Mg, PO₄ and Ca. Consider 24 hour Holter monitor and cardiology consult.

Electrolytes (Na⁺, K⁺, Cl⁻, HCO₃): Should be checked regularly if patient is purging. There is more likely to be an abnormality in electrolytes if there are large fluctuations in patient's purging behaviors.

Patients should be encouraged to monitor for symptoms of electrolyte disturbance such as:

- muscle weakness
- deterioration in exercise tolerance
- palpitations

Blood sugar : Eating disorder patients can be at risk for severe hypoglycaemia and its consequences. Blood sugars should be monitored randomly or if symptoms of hypoglycaemia. If < 3.0 mmol, will require very close monitoring, and possible hospitalization.

Dental : enamel loss from purging is irreversible. Advise patients to gargle with baking soda and water after purging, and to defer brushing for at least 30 to 60 minutes. Use high fluoride toothpaste to help harden enamel. Encourage patient to see dentist and inform dentist of eating disorder.

Bones : Osteopenia/osteoporosis is common in patients with amenorrhea, long-standing eating disorder, or low weight .Consider bone density scans.

Most patient's would benefit from:

- vitamin D 400-800 IU
- calcium 1000-1500 mg

Psychiatric Issues : Suicide is one of the leading causes of death in patients with eating disorder- monitor for this.

Treat co-morbid psychiatric conditions such as depression and anxiety.

Re-feeding : Common symptoms experienced by patient's when re-feeding:

- Abdominal discomfort – will resolve spontaneously with continued improved nutrition, but can sometimes be helped with Domperidone 10-20 mg ac meals and hs
- Night sweats as metabolic rate increases- resolves spontaneously
- Increased awareness of emotions
- Fluid retention –resolves spontaneously. In adults, if severe, could consider trial of spironolactone 200mg po od. It is advisable not to use other diuretics, as these could lead to rebound fluid retention and dependence.

*Occasionally with aggressive re-nourishment abnormalities can occur that can be life threatening. Patients should have fluid balance, Mg, Ca, PO₄ and electrolytes regularly monitored when re-feeding after a prolonged period of restriction.

Magnesium : Can be low with chronic restriction and re-feeding.

Symptoms of low magnesium:

- muscle cramps
- difficulty focusing eyes
- proximal muscle weakness
- difficulty with concentration.

Serum levels don't always represent total body magnesium, so treat if symptomatic even if serum levels are normal. Ideally treatment would consist of IV Mg infusions, but practically one could start with oral magnesium- Magnesium Rougier solution 15 mls to 30mls tid or Magnesium gluconate tablets 1 tab tid or Cal-mag 1 tab tid.

Nutritional Deficiencies: All patients should be on a multivitamin including zinc.

Check as needed for other nutritional deficits i.e. iron, B12, etc.

Low zinc can cause dry skin, loss of taste and mucosal ulcers.

Constipation: Common in patients that are restricting. Treat with fluids, fiber and possibly docusate.

Avoid stimulant laxatives due to risk of dependence and abuse.

Laxative Abuse : Monitor for misuse of laxatives. If patient chronically abuses laxatives, they will need to have a slow tapering of laxatives and concomitant treatment for constipation.

Diet pills : Those with ephedra increase cardiovascular risk. Inquire periodically regarding use.