*Table 4: Factors that May Affect Nutritional Intake in Populations with Mental Health Conditions and Suggested Interventions**

Factor	Description of Effect on Nutritional Intake	Nutritional Interventions
Condition-Specific Factors		
Altered circadian rhythm (sleep-wake)	• Altered sleep can lead to increased eating and weight gain	• Regular eating pattern with protein in morning meal, snack, and lunch; consume most carbohydrates in the evening • Consume coffee, tea, or any other stimulant, at circadian-neutral times (e.g., near 4 pm)
Anxiety, overactivity	• Unable to sit long enough to eat or eat "on the go" • Increased energy output	• Eat small frequent meals • Limit caffeine • Some anxious individuals may require that one food be fed at a time, with one utensil at a time • Use nutritional supplements as needed
Avoidance or social isolation	• Post-traumatic stress-related dissociation • Isolation may induce overeating • Avoid mealtimes, embarrassed to eat with others, and not shopping for food • Lack of access to health support (e.g., dietitian)	• Therapeutic approaches such as cognitive behaviour therapy and peer support (Section 5) that incorporate nutrition support as needed
Catatonia	• Unresponsive to food stimuli • Some refuse all food and drink	• Placing food beside individual may help get them to eat • Tube-feeding or IV hydration may be needed for those refusing all food and drink
Delirium	• Delirium associated with poor nutrition	• Conduct full nutrition assessment, including serum chemistry, to rule out deficiencies as underlying cause
Dementia	• Increased or decreased food intake • Altered food choices • Consumption of inedible substances • Disturbances in eating processes and behaviour	• Routinely assess nutritional status, including ability to self-feed • Provide verbal and physical assistance at mealtimes as needed • Provide adequate diet; use oral nutrition supplements as needed • Benefits associated with tube feeding unclear
Depression	• Overeating, undereating, comfort eating • Feel unworthy of eating, lack of motivation, or poor energy levels • Severe lack of appetite • No desire to shop or prepare food • Poor food hygiene presenting food safety risks • Exacerbates sedentary lifestyle associated with subsequent weight gain • Somatic delusions of not being able to eat or being physically too ill to eat • Preferences for liquid and/or convenience foods; require less energy to prepare and eat	• Appetite and weight may improve with medication • Encourage a well-balanced diet with protein/calorie supplementation as needed. • Structure eating for mood stability throughout the day • Encourage socialization at mealtimes • Rule out celiac disease; if confirmed, gluten-free diet can improve symptoms • Tube-feedings may be needed for those who refuse food • Total parenteral nutrition (TPN) typically contraindicated as TPN line may be used to inflict self harm (e.g., suicide attempt)

continued...

Table 4: Factors that May Affect Nutritional Intake in Populations with Mental Health Conditions and Suggested Interventions - continued

Factor	Description of Effect on Nutritional Intake	Nutritional Interventions
Condition-Specific Factors		
Disordered eating and body image	• Anorexia, bulimia, binge eating • May be prone to food fads, use of herbs or steroids, or eating disorder	• Multidisciplinary team approach; nutrition therapy focuses on interrupting symptoms, refeeding, correcting nutrient deficiencies and electrolyte imbalances, normalizing eating, restoring weight, and regulating hunger and satiety cues
Disruptive behaviours	• May disrupt mealtimes and quality of intake	• Difficult eating and behaviour challenges require multidisciplinary support (e.g., psychologist, occupational therapist, dietitian) • Depending on circumstances (e.g., communal dining setting), individual may need to eat at a different time or in a different location • Rule out celiac disease; if confirmed, gluten-free diet can improve symptoms
Encopresis	• Encopresis is an elimination disorder that involves repeated bowel movements in inappropriate places • Treated by instituting regular bowel evacuation patterns with stool softeners or laxatives	• High-fibre diet with fluids to help promote regular bowel evacuation patterns
Mania	• Associated with treatment non-adherence • Elevated or irritable mood, rapid speech, and hyperactivity • Poor intake may result from distractibility • Patients with bipolar disorder are less likely to report that their provider discussed diet habits with them	• Appetite and weight often improve with medication and stabilization of symptoms • Encourage and provide a well-balanced diet in the form of small, frequent meals • Protein/calorie supplementation as needed
Megaphagia	• Eating large amounts of food; common feature of Kleine Levin Syndrome	• Supportive nutrition care; control eating environment to maximize healthy food choices, and prevent weight gain
Memory or cognitive impairment	• Forgetting to eat • Forgetting a meal has been taken and overeating • Impaired ability to retain new information	• Cognitive adaptive strategies (e.g., adapt environment to provide reminders about meal preparation, mealtimes) • Adapt therapeutic interventions to facilitate recall (e.g., repeat concepts, written recommendations)
Obsessive compulsiveness	• May avoid certain foods or food groups	• Consume a well-balanced diet in the form of small, frequent meals • Protein/calorie supplementation as needed • Therapeutic work may help to broaden diet (Section 5)
Panic attacks, recurring	• May use food to soothe anxiety leading to weight gain • May isolate themselves to prevent panic attacks which may limit diet • May use sedating medication to ease symptoms, which decrease motivation to eat and/or promote sleep/drowsiness	• Low-calorie healthy food options • Avoid caffeine as may worsen anxiety • Therapeutic approaches to lessen anxiety

continued...

Table 4: Factors that May Affect Nutritional Intake in Populations with Mental Health Conditions and Suggested Interventions - continued

Factor	Description of Effect on Nutritional Intake	Nutritional Interventions
Condition-Specific Factors		
Pica	• Consume non-nutritive substances	• Assess for nutrient deficiencies, electrolyte imbalances, and toxicity symptoms from ingestion of non-food items • Limit accessibility to items; provide alternative sources of stimulation; behaviour interventions such as reinforcement for eating from a plate • Referral to behavioural consultants for severe cases
Psychotic symptoms	• Delusions about food (e.g., food is poisoned) or hallucinations (e.g., person sees bugs on their food), causing refusal to eat	• Allow for delusional beliefs as is practical until medication becomes effective • Rule out possible reversible causes (e.g., electrolyte imbalances) • Provide well-balanced diet
Rumination	• Repeated regurgitation of food	• Assess for nutrient deficiencies, electrolyte imbalances, and organ damage • Interventions such as fading food consistency (gradual addition of higher textures), food satiation (provide a food in abundance so as to reach a satiation point and create negative association), differential reinforcement to shape the rumination behaviour, and over-correction (e.g., individual repeatedly performs an appropriate behaviour)
Sensory issues	• Some (especially children) may have problems with texture and consistency of foods	• Assess chewing and swallowing • Texture-modified food and fluids as needed
Skin picking	• Skin breakdown; can cause sores severe enough to require surgery	• Nutrition guidelines for wound healing: 1) 30 to 35 kcal/kg body weight, 2) 1.25 to 1.5 g protein/kg body weight; 3) 30 ml fluid/kg body weight to prevent dehydration; and 4) Balanced diet that meets the RDA for all vitamins and minerals (supplemental nutrition as needed)
Sleep problems/ insomnia	• Can alter intake (usually increased) • Lead to night eating syndrome and weight gain • Fatigue can lead to excess caffeine intake and dehydration	• Well-balanced diet • Consume small amount of complex carbohydrate food (e.g., milk, cheese) one hour before bed • Low-calorie healthy options if night eating an issue • Avoid caffeinated food and drinks, heavy or spicy foods at least eight hours before sleeping; monitor and promote hydration
Substance use	• Reduced food intake • Organ damage alters utilization of nutrients • Malnutrition	• Harm reduction approaches (see Section 5) that help optimize nutritional status • Where appropriate, nutritional interventions that promote recovery
Suspicion	• Undereating • Concern that food or fluid may be altered	• Allow for suspicion until medication becomes effective. Offer nutrient-dense high-calorie foods to prevent weight loss • If feasible, provide a packaged food diet or involve person in food preparation to minimize suspicion

continued...

Table 4: Factors that May Affect Nutritional Intake in Populations with Mental Health Conditions and Suggested Interventions - continued

Factor	Description of Effect on Nutritional Intake	Nutritional Interventions
Condition-Specific Factors		
Trichotillomania (TTM)	• TTM is the irresistible urge to pull out hair from different areas of the body; can cause skin breakdown • For some with TTM, oral manipulation of hair occurs and can cause significant dental erosion • May ingest hair, leading to formation of hairballs that lodge in the gastrointestinal tract	• Provide balanced diet with supplements as needed to promote skin healing • For hairballs (trichozeboars), check for nutrient and electrolyte imbalances; if complete blockage, may need TPN • With surgical removal of trichozeboars, provide preoperative and postoperative nutrition care to optimize health status and promote recovery
Weight gain	• Common in depression, bipolar disorder, schizophrenia spectrum, and other psychotic disorders • May be related to condition and/or side effect of psychiatric medications	• Evaluate the appetite-stimulating effect of any new medication and treat early to limit weight gain • Evaluate beverage consumption and feelings of satiety • Discuss normal portions, encourage consumption of low-calorie foods, and fluids (e.g., water) and increase fibre to increase satiety effects • Relaxation techniques to slow down eating at meals
Withdrawal	• Undereating • Delusions regarding fluid and food • Lack of interest in eating • Ravenous appetite	• For undereating, offer small frequent meals with protein/calorie supplements as needed • For ravenous appetite, establish regular meal patterns with variety of foods. Consume small protein-containing snacks • Limit sweets and caffeine
Other Factors That Impact Nutrition		
Comorbid conditions	• Common ones include dyslipidemia, hypertension, and diabetes • All of these benefit from nutrition interventions	• Integrated approaches to nutrition management needed; see Section 5
Dry mouth	• Side effect of many psychiatric medications • Increased sugar-sweetened and caffeine-containing beverage intakes, which can lead to weight gain • Dry mouth can increase risk for dental caries	• Check fluid intake. Ensure at least 1500–2000 ml of fluid daily • Suggest ice chips, frequent sips of water, and sugar-free popsicles, and carry a water bottle to sip from often • Provide healthy beverage education • Sugarless candy and gum may help stimulate saliva • Artificial saliva substitutes (e.g., Moi-Stir®) can help prevent dental caries • Suggest moisten dry foods with low-fat sauces or broth

continued...

Table 4: Factors that May Affect Nutritional Intake in Populations with Mental Health Conditions and Suggested Interventions - continued

Factor	Description of Effect on Nutritional Intake	Nutritional Interventions
Other Factors That Impact Nutrition		
Excess caffeine intake	• Caffeine intoxication defined in the DSM	• Symptoms of intoxication and withdrawal resolve if caffeine ingestion discontinues • Assess and quantify caffeine consumed per day. Educate about sources of caffeine • Moderate consumption of caffeine (less than 300 mg/d)
Food insecurity	• Limited income and resources making food access challenging	• Screen for food insecurity • Educate about local food programs available (refer if needed). Multi-pronged approach needed (emergency food relief programs, capacity building)
Hospital admission	• Usual preferences may not be catered for • Alternatively, people may eat a healthy diet and have a social mealtime so that diet improves	• Provide diet in accordance with person's health needs and preferences
Medications	• Nutrient-drug interactions • Nutrition-related side effects such as changed appetite, weight gain, gastrointestinal disturbances, and dry mouth. • Refer to Appendix C (Table 10) for detailed description of nutrition-related side effects	• Educate about possible side effects when medication initiated • Monitor side effects and intervene according to symptoms • Metabolic monitoring depending on type of medication (e.g., second generation or atypical antipsychotics) • For gastrointestinal disturbances, adjust amounts and types of fibre and fluids as needed
Physical changes	• Possible swallowing difficulties • Problems feeding self • Conditions requiring therapeutic diets	• Integrated approaches to nutrition management • Assess for chewing, swallowing, and feeding abilities (refer to occupational therapist or speech-language as needed) • Eating aids and assistance as needed
Reliance on outside food sources	• Convenience, vending, take-out, and restaurant foods that require little preparation but tend to be higher in fat, sugar, and sodium	• Education and skills building on food purchasing and preparation
Self-chosen therapies	• Supplemental plus food sources of vitamins and minerals may exceed safe levels • Some therapies may worsen mental symptoms	• Assess type, dose, and frequency of use; compare to Tolerable Upper Intake Levels of Dietary Reference Intakes • Monitor products individual is taking that may worsen symptoms; educate as feasible
Trauma history	• Trauma can lead to sensory issues, hyperarousal, startle, feelings of numbness and altered appetite	• Trauma-informed nutritional approaches

* Table adapted from Abayomi J and Hacket A. (2004). Assessment of Malnutrition in Mental Health Clients: Nurses' Judgement vs a Nutrition Risk Tool. Journal of Advanced Nursing, *45*(4), 430-37 and American Dietetic Association. Dietetics in Developmental and Psychiatric Disorders Dietetic Practice Group (1993). *Clinical Criteria and Indicators for Nutrition Services in Developmental Disabilities, Psychiatric Disorders and Substance Abuse*. Chicago, Ill: The American Dietetic Association