Goals

- Provide appropriate medical care to patients participating in a mass hunger strike in accordance with Mass Organized Hunger Strike Policy (IMSPP 4.22.2)
- Identify patients at risk during fasting
- Identify patients at risk for refeeding syndrome
- Safely refeed patients after fasting

Definitions

Hunger Strike: The conscious decision to refuse food or fluids to achieve a goal or set of demands
Mass Hunger Strike: An organized hunger strike including multiple inmates with a common goal and set of demands.
Mass Hunger strike participant: An inmate who is identified by California Department of Corrections and Rehabilitation (CDCR) custody staff as a participant in a mass organized hunger strike.
Refeeding Syndrome (RFS): The term refeeding syndrome describes a potentially fatal medical condition that may affect malnourished and/or ill patients in response to feeding. (See page 7)

Diagnostic Criteria/Evaluation of Fasting & Refeeding Syndrome

<table>
<thead>
<tr>
<th>Fasting</th>
<th>Refeeding Syndrome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negligible Risk</td>
<td>Patients requiring monitoring due to medical risks</td>
</tr>
<tr>
<td>Modest Risk</td>
<td>Patients with:</td>
</tr>
<tr>
<td>High Risk</td>
<td>- A BMI &gt;16 but ≤18.5 kg/m²</td>
</tr>
<tr>
<td></td>
<td>- Loss of &gt;10% but ≤15% of body weight during food refusal</td>
</tr>
<tr>
<td></td>
<td>- Food refusal of 15-28 days</td>
</tr>
</tbody>
</table>

Treatment Summary

1. Designated licensed health care staff will observe all participants daily and will determine if there is a need for immediate medical attention. (Sec. VII.A.9)
2. Health information on starvation, refeeding, and patient care resources should be distributed to hunger strike participants within one week of notification by custody of a hunger strike participant.
3. Within 72 hours of notification by custody that patient-inmates are mass hunger strike participants, a. Health care staff shall review the high risk patient-inmate registries and medication lists to determine if any participants are at a high risk for complications of starvation and refeeding.
   b. Some high risk participants may be scheduled for a PCP visit, vital signs, and Body Mass Index (BMI) determinations.
   c. Refusals shall be documented in the eUHR.
   d. If participants are prescribed high risk medications, a PCP may discontinue or adjust the medication dosage without a PCP visit.
   e. Participants will be notified in writing regarding medication changes. (Sec. VII.6a)
4. Within one week of notification by custody of a hunger strike participant, the participant will be scheduled for a face-to-face triage assessment by an RN. (Sec. VII.A.7)
5. Appropriate housing for participants should be determined based on daily observation, nurse triage visits, and PCP visits.
6. After two weeks of participation in a hunger strike (as defined by custody), and at least weekly thereafter, all identified participants (even if not in a high risk group) shall be scheduled for a PCP visit which will include a BMI determination. (Sec. VII.A.9)
7. After three weeks of participation in a hunger strike: All hunger strike participants will be provided with written information about advance directive and a Physician Orders for Life Sustaining Treatment (POLST). (Sec.VII.A.11.a)
8. Refeeding: Negligible Risk: participants can eat and drink freely and require no specific monitoring.
   Modest Risk: most participants may be refed with modified CDCR heart healthy diet for the first 48 hours by providing “1/2 CDCR diet.”
   High Risk: refeeding will usually occur in a licensed medical setting. Intake is increased from 10 kcal/kg/day to 30 kcal/kg/day over one week. Patients are monitored for fluid, electrolyte, and cardiac abnormalities. (See pages 4-5 for specific refeeding recommendations.)
### MANAGEMENT RECOMMENDATIONS DURING FASTING

**Day**

<table>
<thead>
<tr>
<th>Day</th>
<th>Initiate the CCHCS Hunger Strike Policy</th>
</tr>
</thead>
</table>
| Within 1 day of notification of participation in mass hunger strike | While patient-inmates are participating in a hunger strike, health care staff will not prescribe meal replacements including milk, juice, or nutritional supplements for participants, even if they have lost more than 10 percent of their body weight. *(Sec. VII.A.8)* *(For refeeding at any stage, see Refeeding Management page 4-5)*

**NURSING**

- Designated licensed health care staff will observe all participants daily and will determine if there is a need for immediate medical attention. *(Sec. VII.A.5)*
  - Observations should include:
    - visual check of inmates on the hunger strike
    - brief verbal contact
    - observation of any obvious health issues
    - documentation of findings in the eUHR
  - Education should include:
    - encouraging 1.5 liters or more/day fluid intake
    - provide patient education hunger strike fact sheet at initial contact regarding fasting and refeeding facts, and medical care information
  - Within 24 hours of notification to health care executives by custody regarding mass hunger strike participants: All participants will be notified by health care staff that they will continue to be eligible for sick call evaluation per Chapter 4, Access to Care policy. *(Sec. VII.A.4.a)*
  - Health care staff will report to the Primary Care (Clinic) RN of all participants with any change in condition that might indicate patient needs housing change/higher level of care. Patients needing immediate health care will be transported to the TTA for evaluation.

**PRIMARY CARE PROVIDER:** Evaluation as clinically indicated

<table>
<thead>
<tr>
<th>Day</th>
<th>NURSING: Daily observation</th>
<th>PRIMARY CARE PROVIDER:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3 Days after notification of participation in mass hunger strike</td>
<td><strong>IDENTIFY HIGH RISK PATIENTS:</strong> Within 72 hours of notification of participation, health care staff will review records to identify patients with conditions or medications placing them at risk for complications during fasting (see page 1)</td>
<td></td>
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<tr>
<td></td>
<td><strong>MEDICATION ADJUSTMENT:</strong> Within 72 hours of notification of hunger strike participation: Medications will be dose adjusted or discontinued for patients if their use increases the risk of complications during fasting. <em>(Note: a PCP visit is not required to adjust/discontinue medications)</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Medications which may require adjustment or discontinuation due to potential risk to fasting individuals include insulin, oral hypoglycemic agents, antihypertensive agents, nonsteroidal (NSAIDs), antacids (may interfere with phosphate absorption), diuretics (discontinue if possible, especially in those refusing fluids.)</td>
<td></td>
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<tr>
<td></td>
<td><strong>PCP VISIT:</strong> Based on clinical judgment, some high risk participants may be scheduled for a PCP visit. <em>(Sec. VII.A.6.a)</em> The PCP visit should include:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Recording vital signs, weight, and BMI (see page 12)</td>
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<tr>
<td></td>
<td>- Consideration of baseline labs: CBC, CMP, magnesium, phosphate</td>
<td></td>
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<tr>
<td></td>
<td>- Counseling regarding the medical risks of starvation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Counseling of the medical risks of refeeding after prolonged fasting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Encouraging consumption of 1.5 liters or more of fluid each day</td>
<td></td>
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<tr>
<td></td>
<td>- Consider reissuing patient education fact sheet</td>
<td></td>
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<tr>
<td></td>
<td>Refusals of scheduled PCP visits will be documented in the eUHR</td>
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</tr>
</tbody>
</table>

**MENTAL HEALTH**

Within 72 hours of notification by custody that patient-inmates are mass hunger strike participants: Mental health staff shall review the health care Mass Hunger Strike Participant list for participant(s) in the mental health program and make appointments for patient-inmates who require evaluation by the mental health primary clinician (or other mental health clinician). *(Sec. VII.A.6.b)* Mental health staff are also advised to review the Developmental Disabilities Program (DDP) list for mass hunger strike participants and make appropriate appointments for evaluation.
### MANAGEMENT RECOMMENDATIONS DURING FASTING

| 4-7 days of mass hunger strike participation | NURSING | Within one week of notification by custody of a hunger strike participant, the participant will be scheduled for a face-to-face (FTF) triage assessment by an RN. (Sec. VII.A.7) This assessment should include: |
|                                            |        | ♦ education (see patient education page PE-1) |
|                                            |        | ♦ the adverse effects and risks of starvation and the refeeding syndrome. (Sec. VII.A.7) |
|                                            |        | ♦ the need to consume 1.5 liters or more of fluid each day |
|                                            |        | ♦ providing the hunger strike participant education fact sheet regarding starvation and refeeding facts, and medical care information |
|                                            |        | ♦ signs and symptoms of dehydration, potential for dizziness when moving quickly |
|                                            |        | ♦ height and weight (noting presence of restraints), scale should be identifiably marked, whenever possible the same scale should be used at each weighing session (record scale used) |
|                                            |        | ♦ vital signs |
|                                            |        | ♦ additional focused system assessment to assess for signs of dehydration, altered mental status, and other physical abnormalities that would require referral to a higher level of care. |
|                                            |        | The RN shall document the encounter or refusal in the eUHR. (Sec. VII.A.7) |
|                                            | PCP    | If participants are prescribed high risk medications, a PCP may discontinue or adjust the medication dosage without a PCP visit. Participants will be notified in writing regarding medication changes. (Sec. VII.A.6.a) |

| 7-14 days of mass hunger strike participation | NURSING | Daily nursing observation |
|                                            | PCP    | PCP evaluation as clinically indicated |

| 14—20 days of mass hunger strike participation | NURSING | Daily nursing observation |
|                                            | PCP    | After two weeks of participation in a hunger strike (as defined by custody), and at least weekly thereafter, all identified participants (even if not in a high risk group) shall be scheduled for a PCP visit which will include a BMI determination. (Sec. VII.A.9) and baseline labs as clinically indicated. |
|                                            |        | After three weeks of participation in a hunger strike: All hunger strike participants will be provided with written information about advance directives and a Physician Order for Life Sustaining Treatment (POLST). (Sec. VII.A.11.a) (See prolonged fasting patient education handout, page PE-2) |
|                                            |        | Consider need for higher level of care (especially with >15% weight loss or BMI of <19 kg/m²) |
|                                            |        | Patients offered: |
|                                            |        | ♦ Thiamine 100 mg po daily |
|                                            |        | ♦ B complex, one po daily |
|                                            |        | ♦ Multivitamin, one po daily |

| 21 -34 days of mass hunger strike participation | NURSING | Daily nursing observation |
|                                            |        | At 21-28 days of participation in a hunger strike: Consider referral for evaluation of need for higher level of care (especially with >15% weight loss or BMI of <19 kg/m²) |
|                                            | PCP    | At least weekly PCP visit |
|                                            |        | If the participant accepts a PCP visit, the PCP should assess and document: |
|                                            |        | ♦ Clinical assessment including hydration status and need for closer observation or a higher level of care |
|                                            |        | ♦ If the participant accepts a primary care visit, the PCP will perform and document a determination of capacity for informed consent as defined by California Code of Regulations (CCR), Title 15, Section 3353.1 Participants who lack capacity for informed consent shall be reported to the Chief of Mental Health, Dental Program Health Program Manager III, CME, CNE, and CEO. (Sec. VII.A.11.b) |
|                                            |        | ♦ Need for lab testing (CBC, CMP, magnesium, and phosphate) |

| 35 days onward of mass hunger strike participation | NURSING | Daily nursing observation |
|                                            | PCP    | At least weekly PCP evaluation, consideration of higher level of care placement |
Assessment of Risk of Refeeding Syndrome

The relative risk of Refeeding Syndrome is based on an assessment of:

- BMI
- Percentage weight loss from initial weight (if known)
- Comorbid illness
- To some degree, the duration of participation in the hunger strike, though the length of participation may not accurately reflect the level of starvation.

Management of Refeeding Syndrome

General Principles

- Correct biochemical abnormalities and fluid imbalances
- Perform a medication review and a screening exam
- Prevent symptoms (4 fundamental factors):
  - Early identification of at-risk individuals
  - Lab evaluation before starting feeding
  - Monitoring during refeeding
  - Appropriate feeding regimen

Treat based on the refeeding risk assessment according to guidelines below and Table 1, page 8

NEGLECTIBLE RISK OF REFEEDING SYNDROME

Individuals who have not been identified as requiring closer monitoring (no significant pre-existing medical conditions and baseline BMI > 18.5 kg/m²) and have been hunger strike participants for ≤14 days are at little risk of refeeding problems.

REFEEDING RECOMMENDATIONS WITH NEGLECTIBLE RISK

- May be allowed to eat and drink freely and no specific monitoring of refeeding is necessary.
- Careful assessment of hydration status and possible tests of renal function are indicated if patient has refused fluid for several days

MODEST RISK OF REFEEDING SYNDROME

Individuals who have been identified as requiring closer monitoring during hunger strikes (pre-existing medical condition or baseline BMI ≤18.5 kg/m²), or meet one of the following criteria:

- A BMI > 16 but < 18.5 kg/m²
- Loss of > 10% but < 15% of their body weight during food refusal
- Refused food for 15-28 days
- BMI > 18.5 and weight loss ≤10% and 15-28 days of refusal of food

REFEEDING RECOMMENDATIONS WITH MODEST RISK

Location

- Refeeding can take place in a general population setting

Monitoring

- Continue daily cell-side observation for two days
- RN will discuss or refer to PCP patients with identified signs or symptoms, in particular those on chronic care medications

Refeeding

Calorie limitation:

- Recommend ≤20 kcal/kg/day for the first 2 days (1/2 of usual CDCR diet–max 4-5 carb “servings”)
- If no problems arise over first 48 hours, patient may be advised to increase consumption of standard CDCR heart healthy diet to consume ¾ of normal caloric intake for next two days as tolerated, then regular diet without restrictions.

Route: Oral

Nutritional Source: CDCR heart healthy diet (limited to 4-5 carbohydrates “servings” per meal see Table 4, page 11)

- Depending on institution factors and number of inmates involved can provide “1/2 CDCR diet” by:
  - Group feed inmates from hunger strike alone so kitchen can prepare trays with 1/2 portions and only 4 to 5 carb “servings”/meal
  - Cell feed inmates using trays with 1/2 portions and only 4-5 carb “servings”/meal
  - Prepare sack “lunches” for each meal that contain only 4-5 carb “servings”/meal

Fluid: should generally be limited to around 30 ml/kg/day. This figure could be doubled if dehydration is diagnosed either clinically or on BUN/creatinine results. (Example 170 lb man = 77 kg x 30 ml/kg = 2310 ml/day)

---

## Refeeding Recommendations

### Location Considerations
- Refeed in a licensed medical setting with 24 hour nursing, availability of daily labs, pharmacy, and dietary services.

### Monitoring Considerations
- Blood tests prior to refeeding, then daily for at least 2-3 days (sodium, potassium, phosphate, magnesium, calcium, glucose, BUN, creatinine)
- Normal or high serum electrolytes does not preclude the risk of refeeding syndrome as these patients may have whole body electrolyte depletion, which may amount to thousands of millimoles.
- Due to whole body depletion, even patients with renal failure (elevated serum electrolytes) are likely to need supplementation as refeeding-fluid replacement progresses and renal function improves.
- Feeding should not be withheld if potassium, magnesium, or phosphate are low since electrolyte deficits are mostly intracellular and cannot be corrected without starting low levels of simultaneous feeding.
- Liver function tests prior to refeeding and at least once several days after refeeding commences.
- Watch for signs of fluid overload, infection, or general deterioration, and have a low threshold for moving to higher level of care should any clinical or biochemical abnormalities become concerning.
  - Likely causes of concern would include:
    - Potassium levels <3.0 mmol/l
    - Magnesium levels <0.5 mmol/l
    - Phosphate levels <0.5 mmol/l
- Monitor EKG daily for at least the first 48 hrs of feeding (look for EKG evidence of electrolyte disturbance: potassium, calcium, magnesium, especially QT prolongation.)

### Refeeding
- Strongly consider providing prophylactic supplementation of phosphate, potassium, and magnesium as outlined in Table 1 even if baseline levels are normal.
- Thiamine stores last 2-3 weeks. If patient has fasted a significant length of time recommend giving thiamine 100 mg prior to refeeding: Thiamine 100 mg can be added to IV fluid (D5NS) and infused over 1-2 hours or thiamine 100 mg can be given IM.
- **Calorie limitation:** Intake 5-10 kcal/kg/day for the first 24 hours
  - If no problems occur, intake can be increased by increments of 5-10 kcal/kg/day
  - Restrictions can be lifted after 5-7 days if no problems and patient taking >35-40 kcal/kg/day
- **Route:** Nasogastric (NG) tube (continuous or every 2 – 4 hour bolus) if patient cannot safely take food orally. Oral feeding is preferred, if safe.
- **Nutritional source:**
  - Liquid nutritional supplement (by mouth or NG) Carnation Instant Breakfast Lactose Free®. meets the specifications for refeeding in Table 1. Contains 1 kcal/ml so daily volumes are likely to be in the 300 – 400 ml range. (See Table 2, page 9)
  - CDCR heart healthy diet (composition is consistent with Table 1). Amount is limited in kcal/kg/day as outlined in Table 3, page 10.
- Fluid should generally be limited to no more than 30 ml/kg/day. (May need to be increased if dehydration assessed either clinically or on BUN/creatinine results.) Attempt to maintain a “zero” fluid balance. (See Table 1)
  - Example 170 lb man=77 kg x 30 ml/kg = 2310 ml/day
- Multivitamin and trace element supplement should be provided:
  - Thiamine 100 mg po daily X 7 days
  - B complex 1 po daily X 7 days
  - Multivitamin one po daily x 60 days
- If the patient is at a community hospital and stable after 72 hours, the sending institution/utilization management nurse shall contact the hospital to discuss discharge.
## Summary

**Baseline (Day 0)**

Usual Diet

Carbohydrates are primary calorie source (approximately 60% of normal diet). After eating a meal → blood sugar rises → insulin is released. Insulin:
- promotes glucose uptake and storage (glycogenesis)
- inhibits fat breakdown
- increases uptake of intracellular potassium

Excess caloric intake is converted to fat.

**Day 1-3 Fasting**

Hunger pangs and stomach cramps disappear after the 2nd to 3rd day. Glucose levels begin to fall → glucagon is released and insulin secretion falls. Glycogen stores are depleted in an effort maintain glucose levels. Glycogen stores rarely last more than 72 hours.

**Day 4-13 Fasting**

Brain and RBCs require glucose as energy source. With depletion of glycogen stores, glucose is made from non carbohydrate sources (e.g., from muscle protein) (this is gluconeogenesis). Fatty acids are broken down to provide energy as well (for organs other than brain and RBCs). Body fat and protein (muscle) are lost, as well as total body potassium, phosphate, magnesium. Serum electrolyte levels are maintained at the expense of intracellular stores.

**Day 14-34 Fasting**

Symptoms may include: dizziness, ‘feeling faint’, difficulty standing, ‘lightheadedness’ or ‘mental sluggishness, sensation of cold, weakness, loss of thirst, fits of hiccoughs.

Physical findings: severe ataxia, bradycardia, orthostatic hypotension.

Hydration status needs to be closely monitored. Avoid excess saline administration as it may cause hypokalemia.

Thiamine deficiency occurs in the second or third week of fasting.

The average weight loss in this phase is 0.3 kg per day.

**Day 35-42 Fasting**

This is considered the most unpleasant phase by those who have survived prolonged fasting due to the symptoms of thiamine deficiency:
- Oculomotor symptoms develop due to progressive paralysis of ocular muscles from thiamine deficiency. Oculomotor symptoms include:
  - Uncontrollable nystagmus
  - Diplopia, converging strabismus
  - Vertigo (very unpleasant)
  - Vomiting
- Extreme difficulty swallowing water
- Medical complications arise at ≥18% loss of initial body weight

**Day 42 and Later Fasting**

Progressive asthenia (malaise, fatigue)
- Increasing confusion, incoherence
- Profound concentration problems
- Somnolence, indifference to surroundings

More serious complications:
- Loss of hearing and/or eyesight
- Hemorrhage: gingival, esophageal, other gastrointestinal sites

Organ failure: extreme bradycardia, Cheyne-Stokes respiration, disruption of all metabolic activity

Life-threatening symptoms develop at 30% loss of initial body weight

**Day 45 –75 Fasting**

Death from cardiovascular collapse and/or severe ventricular dysrhythmia (e.g. prolonged QT)

More rarely, lactic acidosis from sepsis due to immune system dysfunction, small bowel obstruction, or multiple organ failure.
REFEEDING SYNDROME (RFS)¹

Definition:
- Refeeding syndrome (RFS) describes the biochemical changes, clinical manifestations, and complications that can occur as a consequence of feeding a malnourished catabolic individual.
- RFS is not defined by a clear set of signs and symptoms.
- There is no internationally agreed definition of RFS: it is a term referring to a wide spectrum of biochemical abnormalities and clinical consequences.
- Hypophosphatemia is the adopted surrogate marker to diagnose RFS though low serum phosphate is not pathognomonic.
- There are limitations to relying on low serum phosphate as levels may be normal in patients with multi-organ failure, in the presence of impaired renal function, or in patients in a stable state of starvation prior to onset of feeding.

Physiology:
- Reintroduction of nutrition to a starved or fasted individual results in a rapid decline in both gluconeogenesis and anaerobic metabolism mediated by the rapid increase in serum insulin.
- Insulin stimulates the movement of extracellular potassium, phosphate, and magnesium to the intracellular compartment with rapid fall in the extracellular concentration of these ions.
- Osmotic neutrality must be maintained resulting in the retention of sodium and water.
- Reactivation of carbohydrate-dependent metabolic pathways increases demand for thiamine, a cofactor required for cellular enzymatic reactions.
- The deficiencies of phosphate, magnesium, potassium, and thiamine occur to varying degrees and have different effects in different patients.

Clinical Manifestations:
- Symptoms of RFS are variable, unpredictable, may occur without warning, and may occur late.
- Symptoms occur because changes in serum electrolytes affect the cell membrane impairing function in nerve, cardiac, and skeletal muscle cells.
- Variable clinical picture in RFS reflects the type and severity of biochemical abnormality.
- Mild derangements in these electrolytes may cause no symptoms.
- More often, the spectrum of presentation ranges from simple nausea, vomiting, to lethargy, respiratory insufficiency, cardiac failure, hypotension, arrhythmias, delirium, coma, and death.
- Clinical deterioration may occur rapidly.
- Low serum albumin concentration may be an important predictor for hypophosphatemia.

The optimum timing for correcting abnormalities in established RFS has been controversial.
The view that correction of electrolyte abnormalities must occur before commencement of feeding has been revised and recent National Institute of Health and Clinical Excellence guidelines from the United Kingdom indicate that feeding and correction of biochemical abnormalities can occur in tandem without deleterious effects to the patient, but no randomized control trial (RCT) data is available to support either view.

### TABLE 1: REFEEDING CALORIE & SUPPLEMENT RECOMMENDATIONS FOR HIGH RISK PARTICIPANTS*

<table>
<thead>
<tr>
<th>Day</th>
<th>Calorie Intake (All feeding routes)</th>
<th>Monitoring and Treatment Supplements</th>
</tr>
</thead>
</table>
| Day 1 Refeeding | For extreme cases: 5 kcal/kg/day† | Mineral Supplements:  
Phosphate: 0.5-0.8 mmol/kg/day  
Potassium: 1-3 mmol/kg/day  
Magnesium: 0.3-0.4 mmol/kg/day  
Sodium: <1 mmol/kg/day (restricted)  
IV fluids:  
Restricted, maintain “zero” fluid balance  
Vitamins:  
IV Thiamine + vitamin B complex 30 minutes prior to feeding  
Cardiac and lab monitoring as required |
|  | Other cases: 10 kcal/kg/day† |  |
|  | Composition of refeeding diet:  
Carbohydrate: 50-60%  
Fat: 30-40%  
Protein: 15-20%  
If RFS is suspected based on clinical and biochemical assessment or the patient develops intolerance to artificial nutritional support, the energy intake should be reduced or stopped. |  |
| Day 2-4 | Increase by 5 kcal/kg/day† as tolerated. | Check all biochemistry and correct any abnormalities  
Thiamine + vitamin B complex orally or IV until day 3  
Cardiac and lab monitoring as required |
|  | If RFS is suspected based on clinical and biochemical assessment or the patient develops intolerance to artificial nutritional support, the energy intake should be reduced or stopped. |  |
| Day 5-7 | Increase up to 20-30 kcal/kg/day† | Check electrolytes, renal and hepatic function and minerals  
Fluid: maintain “zero” fluid balance  
Consider iron supplement from day 7  
Cardiac and lab monitoring as required |
|  | If RFS is suspected based on clinical and biochemical assessment or the patient develops intolerance to artificial nutritional support, the energy intake should be reduced or stopped.  
Feeding rate should be increased to meet full requirements for fluid, electrolytes, vitamins, and minerals if the patient is clinically and biochemically stable. |  |
| Day 8-10 | 30 kcal/kg/day† or increase to full requirement | Cardiac and lab monitoring as required |
|  | Feeding rate should be increased to meet full requirements for fluid, electrolytes, vitamins, and minerals if the patient is clinically and biochemically stable. |  |

- Much of the literature on Refeeding Syndrome comes from experience with severely ill, catabolic patients in the Intensive Care Unit. Often these patients had underlying chronic illnesses as well and/or were post-op.
- Experience with two prior mass hunger strikes at CDCR (in 2011), both lasting 21 days, demonstrated that most inmate participants refused to be weighed or be evaluated by health care staff. Participants ended their hunger strike after various lengths of time. Even those who accepted no CDCR food for 21 days did well and did not manifest any problems with refeeding, even though they declined to follow recommendations for gradual reintroduction of kcal.

* **High risk of refeeding syndrome:**
  - Food refusal more than 28 days
  - BMI <16 kg/m²
  - Weight loss >15% during the hunger strike
  - Low potassium, magnesium, or phosphate levels before resumption of feeding
  - Medical or mental health conditions creating high risk of complications from fasting

† Measure weight daily to use for all calculations
Table 2: Suggested Refeeding Regimen for Hunger Strike Patients Using Liquid Nutritional Supplement Based on Recommended Requirements in Table 1

- Patients at high risk for refeeding syndrome initially may require liquid nutritional supplement (LNS) feeding.
- LNS meets the recommended requirements for use in refeeding and these can be given orally or via tube feeding.
- LNS may also be indicated for patients who do not gain weight upon refeeding and who have lost >10% of body weight. (IMSPP volume 4, chapter 20, outpatient therapeutic diets)
- Generally start with 10 kcal/kg/day (5 kcal/kg/day in very severe cases)

<table>
<thead>
<tr>
<th>Day</th>
<th>kcal/kg/day</th>
<th>Kilocal/ml</th>
<th>Caloric distribution (% of Kcal)</th>
<th>Protein Source</th>
<th>NPC: N Ratio</th>
<th>N6:n3 Ratio</th>
<th>Osmolality (mOsm/kg water)</th>
<th>Free water</th>
<th>Meets 100% RDI for 21 key micronutrients</th>
<th>Appropriate for these diets:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>10</td>
<td>1.0</td>
<td>14%</td>
<td>Calcium Caseinate</td>
<td>155:1</td>
<td>4.1:1</td>
<td>480</td>
<td>85%</td>
<td>2100 ml</td>
<td>Lactose-free, gluten-free, low residue, kosher, low-sodium, low-cholesterol</td>
</tr>
<tr>
<td></td>
<td>10 kcal/kg/day</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>10 kcal x 72 kg = 720 kcal x 1 kcal/ml = 720 ml/day</td>
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<td></td>
<td></td>
<td>Provide in 6 small feedings of <strong>120 ml/feeding</strong></td>
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<td></td>
<td>Approximate feeding times are as follows: 6:00 AM, 9:00 AM, 12:00 PM, 3:00 PM, 6:00 PM, 9:00 PM</td>
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<td></td>
</tr>
<tr>
<td>Day 2</td>
<td>15</td>
<td>1.0</td>
<td>14%</td>
<td>Calcium Caseinate</td>
<td>155:1</td>
<td>4.1:1</td>
<td>480</td>
<td>85%</td>
<td>2100 ml</td>
<td>Lactose-free, gluten-free, low residue, kosher, low-sodium, low-cholesterol</td>
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<td></td>
<td>15 kcal/kg/day</td>
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<td>15 kcal x 72 kg = 1080 kcal x 1 kcal/ml = 1080 ml/day</td>
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<td></td>
<td>Provide in 6 small feedings of <strong>180 ml/feeding</strong></td>
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<td>Approximate feeding times are as follows: 6:00 AM, 9:00 AM, 12:00 PM, 3:00 PM, 6:00 PM, 9:00 PM</td>
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<tr>
<td>Day 3-4</td>
<td>20</td>
<td>1.0</td>
<td>14%</td>
<td>Calcium Caseinate</td>
<td>155:1</td>
<td>4.1:1</td>
<td>480</td>
<td>85%</td>
<td>2100 ml</td>
<td>Lactose-free, gluten-free, low residue, kosher, low-sodium, low-cholesterol</td>
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<td></td>
<td>20 kcal/kg/day</td>
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<td>20 kcal x 72 kg = 1440 kcal x 1 kcal/ml = 1440ml/day</td>
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<td>Provide in 6 small feedings of <strong>240 ml/feeding</strong></td>
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<td>Approximate feeding times are as follows: 6:00 AM, 9:00 AM, 12:00 PM, 3:00 PM, 6:00 PM, 9:00 PM</td>
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<tr>
<td>Day 5-6</td>
<td>25</td>
<td>1.0</td>
<td>14%</td>
<td>Calcium Caseinate</td>
<td>155:1</td>
<td>4.1:1</td>
<td>480</td>
<td>85%</td>
<td>2100 ml</td>
<td>Lactose-free, gluten-free, low residue, kosher, low-sodium, low-cholesterol</td>
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<tr>
<td></td>
<td>25 kcal/kg/day</td>
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<td>25 kcal x 72 kg = 1800 kcal x 1 kcal/ml = 1800ml/day</td>
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<td></td>
<td>Provide in 6 small feedings of <strong>300 ml/feeding</strong></td>
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<td>Approximate feeding times are as follows: 6:00 AM, 9:00 AM, 12:00 PM, 3:00 PM, 6:00 PM, 9:00 PM</td>
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<tr>
<td>Day 7-8</td>
<td>30</td>
<td>1.0</td>
<td>14%</td>
<td>Calcium Caseinate</td>
<td>155:1</td>
<td>4.1:1</td>
<td>480</td>
<td>85%</td>
<td>2100 ml</td>
<td>Lactose-free, gluten-free, low residue, kosher, low-sodium, low-cholesterol</td>
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<tr>
<td></td>
<td>30 kcal/kg/day</td>
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<td></td>
<td>30 kcal x 72 kg = 2160 Kcal x 1 kcal/ml = 2100ml/day</td>
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<td></td>
<td>Provide in 6 small feedings of <strong>360 ml/feeding</strong> for gradual introduction.</td>
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<td>Approximate feeding times are as follows: 6:00 AM, 9:00 AM, 12:00 PM, 3:00 PM, 6:00 PM, 9:00 PM</td>
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</tbody>
</table>

\(^{\dagger}\)Daily weights should be taken and used for calculations

* High risk, see page 5
## Table 3: Refeeding using CDCR Heart Healthy Diet for High Risk Participants*

**Table 3: Suggested Refeeding Regimen for Hunger Strike Patients Using CDCR Heart Healthy Menu**  
(For patients who can tolerate solid food.)  
Based on Recommended Requirements in Table 1

<table>
<thead>
<tr>
<th>CDCR Heart Healthy Diet</th>
<th>Average Daily Calories 2750</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approximate Caloric distribution (% kcal)</td>
</tr>
<tr>
<td></td>
<td>Protein 15 %</td>
</tr>
<tr>
<td></td>
<td>Fat 30%</td>
</tr>
<tr>
<td></td>
<td>Carbohydrate 55</td>
</tr>
</tbody>
</table>

Note: limiting “carbs” in the initial phase of refeeding is important. Most CDCR meal menus provide 7-9 carbohydrate “servings” (15 grams of carbohydrate = 1 serving/meal)  
When adjusting/preparing refeeding trays/sacks, limit carbohydrate servings to 4-5/meal.  
(See Table 4)

The table below illustrates how to refeed using CDCR Heart Healthy Menu for a reference patient whose current weight is 158 lbs / 72 kg after coming off a hunger strike for over 14 days.

<table>
<thead>
<tr>
<th>High Risk for RFS</th>
<th>Sample Heart Healthy Diet Menu Choices</th>
</tr>
</thead>
</table>
| Day 1 10 kcal/kg/day | 10 kcal x 72 kg\(^{\text{1}}\) = 720 kcal/day  
Breakfast- 4 oz nonfat milk, 2 oz hot cereal, 1 oz breakfast meat or eggs, 2 oz juice  
Lunch- 1 slice bread, 2 oz meat with 1 package mustard or 2 oz peanut butter, 1 small fresh fruit, 8 oz SF beverage  
Dinner- 2 oz meat, 4 oz vegetables, 2 oz starch, 4 oz fruit, 8 oz SF beverage |
| Day 2 15 kcal/kg/day | 15 kcal x 72 kg\(^{\text{1}}\) = 1080 kcal/day  
Breakfast- 4 oz nonfat milk, 2 oz breakfast meat or eggs, 4 oz hot cereal, 2 oz juice  
Lunch- 3 slices bread, 2 oz meat with 1 package mustard, 1 small fresh fruit, 8 oz SF beverage  
Dinner- 3 oz meat, 4 oz vegetables, 4 oz starch, 4 oz fruit, 8 oz SF beverage |
| Day 3-4 20 kcal/kg/day | 20 kcal x 72 kg\(^{\text{1}}\) = 1440 kcal/day  
Patient to eat \(\frac{1}{2}\) portion of foods/beverages with provision of 4-5 carbohydrate “counts”/ meal at each meal served. (SF Beverage 100%) |
| Day 5-6 25 kcal/kg/day | 25 kcal x 72 kg\(^{\text{1}}\) = 1800 kcal/day  
Patient to eat \(\frac{1}{2}\) portion of all foods/beverages with provision of 4-5 carbohydrate “counts”/ meal at each meal served. (SF Beverage 100%) |
| Day 7-8 30 kcal/kg/day | 30 kcal x 72 kg\(^{\text{1}}\) = 2160 kcal/day  
Patient to eat \(\frac{3}{2}\) portion of all foods/beverages with provision of 4-5 carbohydrate “counts”/ meal at each meal served. (SF Beverage 100%) |

\(^{\text{1}}\)Daily weights should be taken and used for calculation.  
* High risk, see page 5
## TABLE 4: EXAMPLE CDCR MENU WITH CARBOHYDRATE COUNT

Typical CDCR heart healthy meals contain 7-9 “servings” of carbohydrate/meal. (15 gram carbohydrate = 1 serving)

Carbohydrate (CHO) counts are calculated for each meal and the current CHO counting menu can be found on Allied Health—> Dietary Services Lifeline page under Diabetic Education materials

(Note: AE is “Alternate Entrée for religious diets”)
### BMI Calculator:

<table>
<thead>
<tr>
<th>Height (inches)</th>
<th>58</th>
<th>59</th>
<th>60</th>
<th>61</th>
<th>62</th>
<th>63</th>
<th>64</th>
<th>65</th>
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<th>67</th>
<th>68</th>
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<th>70</th>
<th>71</th>
<th>72</th>
<th>73</th>
<th>74</th>
<th>75</th>
<th>76</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Weight (pounds)</td>
<td>143</td>
<td>144</td>
<td>145</td>
<td>146</td>
<td>147</td>
<td>148</td>
<td>149</td>
<td>150</td>
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<tr>
<td>Normal</td>
<td>190</td>
<td>193</td>
<td>195</td>
<td>197</td>
<td>199</td>
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<td>203</td>
<td>205</td>
<td>207</td>
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<td>219</td>
<td>221</td>
<td>223</td>
<td>225</td>
<td>227</td>
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<tr>
<td>Overweight</td>
<td>196</td>
<td>200</td>
<td>203</td>
<td>206</td>
<td>209</td>
<td>212</td>
<td>215</td>
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<td>221</td>
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<td>227</td>
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<td>239</td>
<td>242</td>
<td>245</td>
<td>248</td>
<td>251</td>
</tr>
<tr>
<td>Obese</td>
<td>198</td>
<td>201</td>
<td>204</td>
<td>207</td>
<td>210</td>
<td>213</td>
<td>216</td>
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<td>222</td>
<td>225</td>
<td>228</td>
<td>231</td>
<td>234</td>
<td>237</td>
<td>240</td>
<td>243</td>
<td>246</td>
<td>249</td>
<td>252</td>
</tr>
<tr>
<td>Extreme Obesity</td>
<td>200</td>
<td>202</td>
<td>204</td>
<td>206</td>
<td>208</td>
<td>210</td>
<td>212</td>
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</tr>
</tbody>
</table>

To the Emergency Department and Hospital Staff:
This patient is at risk for refeeding syndrome

Thank you for caring for our patient. This patient has been on a protracted hunger strike with no documented nutritional intake of state provided meals over the past _____ days.

- His or her oral intake may have consisted of water only.
- Some patients may have had access to canteen food or food from other sources but this cannot be confirmed or assumed.

Please **DO NOT FEED PATIENT IN THE EMERGENCY DEPARTMENT**

It is safe to administer intravenous fluid (including dextrose) in the ED but **IV Thiamine** should be added to the IV fluid along with supplementation of **potassium, magnesium, and phosphate** as outlined in the CCHCS refeeding guidance on page 8, labeled Table 1.

Please monitor carefully for **hypokalemia, hypophosphatemia, and hypomagnesemia**. While baseline electrolytes will likely be normal prior to administration of fluids or food, these will rapidly shift intracellularly following refeeding. Problems can arise at any time in the first week after refeeding has begun.

Once admitted please continue to monitor the patient’s labs with particular attention to phosphate, potassium, magnesium, calcium, creatinine, and glucose.

Cardiac monitoring may be indicated.

- Refeeding regimens will vary depending on severity of patient’s starvation, weight loss, pre-fast BMI and comorbid medical conditions.
- All refeeding regimens suggest starting feeding at 5-10 kcal/kg/day (depending on severity)
- Composition of feeding should be lower glucose (**no Ensure!**).
  Khan¹ recommends 50-60% carbohydrate, 30-40% fat and 15-20% protein
- Kcal/kg is increased as tolerated over 5-10 days. *(If this patient is stable at 3 days and is taking at least 20 kcal/kg please contact the sending institution or UM for discussion of discharge timing.)*

Helpful references:
2. Refeeding syndrome: what it is, and how to prevent and treat it, Hisham M Mehanna, consultant and honorary associate professor, BMJ 2008;336:1495-1498

Please contact our institution if questions: Telephone # _________________________

Note to health care staff: Send copy of Table 1 on page 8 of this guide to ED with patient.
RISKS OF FLUID REFUSAL

- Not drinking fluid can cause death within days
- Not drinking fluid can cause lasting organ damage
- You will get symptoms very soon if you do not drink fluids
- You should drink at least 6 cups of fluid every day

RISKS OF FASTING

- Not eating food for a long time (prolonged fasting) can cause death
- Not eating food can cause lasting organ damage
- You may become dizzy during your hunger strike. You should move slowly and carefully to avoid falls
- You may get many other symptoms the longer you refuse food such as: weakness, confusion, vomiting, stomach pain and higher risk of infections
- If you are in good health when you start to refuse food and you keep on drinking water, you will probably survive for weeks
- After prolonged fasting (starvation) you may have lasting organ damage even after you start eating again and gain weight.

RISKS OF REFEEDING

- Death may happen when you start eating after not eating for a long time. This is called Refeeding Syndrome
- If you have lost more than 10 lbs or have not eaten for more than 14 days, talk to health care staff before you eat again
- Your risk of death is less if you start eating under medical care
- If you have not eaten for many days, you should start to eat by taking only small amounts of food the first few days and then step up to normal eating over 5-7 days

ABOUT YOUR HUNGER STRIKE

- MONITORING: Health care staff will watch you for signs of serious illness during your hunger strike.
- ACCESS TO HEALTH CARE: You may access health care services at any time during your hunger strike just like when you are not on a hunger strike.
- MEDICATION CHANGES: Your primary care provider may change or stop some of your medications during your hunger strike to lower your risk of problems.
Information for Patients with Prolonged Fasting  
(To be distributed to patients after participation in hunger strike for ≥14 days)

### WHAT YOU NEED TO KNOW

- You have not been eating for such a long time that you are in danger of lasting medical harm, even with medical care.
- You may die, even after you start to eat again.
- Now is the time for you to think about what medical care you want when you are no longer able to talk to health care staff.
- Health care staff is concerned about your health so they will check with you to see if you understand that you may die if you refuse food or fluid and that you have clear reasons for refusing food or fluid.

### Advanced Directive  
**Physician’s Order for Life Sustaining Treatment (POLST)**

- If you go into a coma or your heart stops, you will get all the medical care needed to try to save your life, including CPR, food, and fluids.
- You should fill out the Advance Directive and Physician’s Order for Life Sustaining Treatment (POLST) forms if you do NOT want health care staff to give you medical care when you are not able to speak.
- If you want to complete Advance Directive and POLST forms, ask health care staff for the form. Fill them out and return the completed forms to your provider for discussion and signature.
- Health care staff will not give you food or fluid as long as you make it clear that you do not want them to.

If you have questions or are concerned about changes in your health you may contact health care staff at any time.