

# Hunger Strikes, Force-feeding, and Physicians' Responsibilities

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**P**RISON HUNGER STRIKES PRESENT CLINICAL, ETHICAL, LEGAL, and human rights challenges to physicians who care for hunger strikers. Controversy continues over the care of prisoners who are hunger striking at the US Naval Base in Guantánamo Bay, Cuba.<sup>1</sup> The World Medical Association (WMA) has updated the Declaration of Malta with guidelines on care of hunger strikers,<sup>2</sup> and recent court opinions in the United States and Europe have attempted to define the obligations of physicians caring for hunger strikers in prison settings.<sup>3</sup> This Commentary describes the medical aspects of starvation and examines the ethical, legal, and human rights dimensions of decision making by health care professionals caring for imprisoned patients who are hunger striking.

## Prisoner Hunger Strikes

A hunger strike, by definition, is food refusal used as a form of protest or demand. Hunger strikes occur in various settings, but they result in important clinical and ethical dilemmas for health care professionals caring for hunger strikers who are imprisoned or detained.<sup>2</sup> In such settings, the faster must be a competent prisoner (understanding the nature and consequences of his or her actions) who voluntarily refuses food for a specific purpose.<sup>4</sup> A food refuser who is not mentally competent does not qualify as a hunger striker. Hunger strikers are not suicidal, although they may accept death as one possible outcome of their fast. Although a high prevalence of depression has been reported among hunger strikers, depression alone does not mean that the hunger striker is not competent.<sup>5</sup> For this reason, formal assessment by a psychiatrist and ongoing psychiatric evaluation must be undertaken in all persons refusing food.

In addition, as recommended in the WMA's guidelines, a detailed medical history and evaluation should be performed, including identification of medical conditions that may put the striker at increased risk of complications.<sup>2</sup> The physician should assess the motives for the hunger strike, and

the hunger striker's understanding of the risks and benefits of food deprivation. Gaining the trust of the patient who hunger strikes may be challenging when the physician may be viewed as an agent of the system responsible for the detention. If necessary, an independent physician should be consulted and the hunger striker should be allowed to request a second medical opinion.<sup>2</sup> Physicians caring for hunger strikers should evaluate whether the striker is being coerced, either by other prisoners, officials, or outside influences.

Physicians should also ascertain the wishes of the patient who is hunger striking should he or she become incompetent as a result of the fast (via an advance directive). According to the WMA's Declaration of Malta, physicians should follow prior directives of hunger strikers who become incompetent.<sup>2</sup> If no such prior directives are available, the physician should act in the patient's best interest, and treatment would be permissible, until such time that the patient becomes competent to make decisions and provide future advance directives.

The WMA's Declaration of Malta defines a hunger strike as the refusal of nutrition for a "significant period."<sup>2</sup> In many prison settings, a physician is called to assess the prisoner's health after 72 hours of food refusal. In total fasting, usually only liquids are consumed, possibly with salt, minerals, or sugar.<sup>6,7</sup> Refusal of both food and water is uncommon, because doing so would usually lead to death within a week and would not give the hunger strikers sufficient opportunity to negotiate their demands.

Hunger strikes undertaken as a means of prison protest have occurred regularly during the past century, beginning with the imprisonment of women demonstrating for the right to vote.<sup>8,9</sup> Notable hunger strikes in recent times include the Irish hunger strike of 1981<sup>4</sup>; South African hunger strikes in the late 1980s<sup>4</sup>; hunger strikes by Turkish prisoners in 1996, and again in 2000-2003<sup>4</sup>; and the ongoing hunger strikes at the US Naval Station at Guantánamo Bay, Cuba.<sup>1</sup> Since 2002, hundreds of prisoners held at Guantánamo Bay have embarked on hunger strikes to protest their indefinite detention without legal process and inhumane treatment.<sup>10-12</sup>

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### Physiology of Human Starvation (Fasting)

Physiological changes begin several days after fasting.<sup>13</sup> Early in the fast, the body uses stores of glycogen in the liver and muscles. The brain normally mainly uses glucose for cellular metabolism but can substitute a fat or fat-derived product, ketone bodies, for glucose as an alternative fuel. With prolonged fasting, ketone bodies, specifically  $\beta$ -hydroxybutyrate and acetoacetate, substitute for glucose oxidation in the brain and spare gluconeogenesis by the liver, and thus preserve body protein.<sup>13</sup> Fatty acids (from adipose tissue) are broken down into ketones, causing ketosis, which begins 2 to 3 days after fasting and suppresses hunger. Glycogen stores are exhausted by approximately day 3 and the substrate for gluconeogenesis is shifted to amino acids, gradually using up muscle (including heart muscle).<sup>14,15</sup>

The adaptation by the brain to use ketone bodies as an energy source permits weeks of starvation to be extended to months, with the total duration of life depending on the initial body protein and particularly fat stores. Thus, the human brain derives energy from storage fat, permitting survival in normal-weight persons for up to 2 to 2.5 months and in obese persons for many months to even 1 year.<sup>13</sup> Among Northern Ireland's Maze prisoners on hunger strike, death occurred between 45 and 73 days.<sup>15</sup> The 250 mL of water produced daily by metabolism during starvation may even be adequate for covering water needs if the individual minimizes evaporative water loss in moderately warm and humid temperature zones and by decreasing activity. This minimizes the need for much water intake because water excretion diminishes with decreased urea production and reduced salt intake. With the loss of one-third of body protein, however, starvation becomes incompatible with survival. Small amounts of glucose (as little as 75 g of carbohydrate) can reduce the urinary nitrogen losses by half, which preserves muscle mass.<sup>13,16</sup> Death can occur by several mechanisms, notably intractable ventricular dysrhythmias or, uncommonly, lactic acidosis from sepsis secondary to immune system dysfunction leading to small bowel obstruction and multiple organ failure. In 3 cases of death after a hunger strike, the period of starvation was prolonged because of thiamine supplementation. Time from starvation to death was 170, 173, and 189 days.<sup>15</sup>

Serious medical problems begin at a weight loss of approximately 18% of initial body weight in individuals who continue fasting.<sup>13</sup> Starvation is life threatening when more than 30% of the original body weight is lost. The fasting hunger striker progresses through phases of symptoms. Sometime after a short period of euphoria and well-being, the hunger striker will begin to experience symptoms of weakness and dizziness, which can be disabling. Serum levels of active  $T_3$  promptly decline with a reciprocal increase in reverse  $T_3$  levels, which contributes to protein sparing but leads to a sensation of feeling cold. Abdominal pain is common. Because both hunger and thirst mechanisms are lost, volume depletion occurs.<sup>17</sup>

Emotional lability is a late feature of fasting and can complicate psychological evaluation.<sup>17</sup> A sense of well-being may initially occur from the ketosis until fasting becomes prolonged and mental lethargy, apathy, and irritability ensue. If only dextrose and water are given to the starving individual, diplopia and nystagmus can occur after the first month, due to progressive paralysis of the oculomotor nerves from acute thiamine deficiency.<sup>16</sup> Wernicke encephalopathy generally does not occur in pure starvation without supplemental glucose.<sup>17</sup> Vomiting and difficulty swallowing water occur during this most unpleasant phase of fasting. From 40 days onward, progressive asthenia, confusion, and somnolence occur. Loss of hearing, blindness, hemorrhage, and death from cardiovascular collapse and dysrhythmias eventually occur.

### Treatment Options for the Hunger Striker

Medical monitoring of hunger strikers should begin at a weight loss of 10% of initial body weight.<sup>16,18</sup> Options for the hunger striker include water and, if the striker is willing, dextrose replacement with multivitamins, especially the B vitamins and thiamine. Estimated requirements for total water intake (ie, oral and intravenous) are approximately 35 mL/kg per 24 hours with at least 100 to 150 g of dextrose needed to spare body protein.<sup>13,18,19</sup> Fluid and calorie repletion should be gradual for the initial week with fluids starting at approximately 1 L per day.<sup>18</sup>

### Force-feeding and the Refeeding Syndrome

Force-feeding of hunger strikers who refuse food involves the use of force and physical restraints to immobilize the hunger striker, and the placement of a nasogastric tube to administer nutrition. Force-feeding may result in physical sequelae that are collectively known as the refeeding syndrome.<sup>15</sup> The refeeding syndrome can be precipitated by rapid nutritional repletion of patients with significant suboptimal caloric intake, such as in hunger strikers.

Refeeding syndrome is characterized by electrolyte depletion (hypokalemia, hypophosphatemia, and hypomagnesemia), fluid retention causing edema, and hyperglycemia.<sup>18</sup> Because of the shift from fat to carbohydrate metabolism, there is sudden insulin release from the pancreas causing increases in cellular uptake of glucose, phosphate, potassium, magnesium, and water. In addition, rapid glucose infusion without vitamin repletion can lead to acute thiamine deficiency and Wernicke syndrome because of increased cellular thiamine utilization from carbohydrate metabolism. Hypophosphatemia is considered the hallmark feature of refeeding syndrome and is responsible for much of the morbidity and even mortality from aggressive repletion of water and dextrose without phosphate. Mortality can also be caused by congestive heart failure due to fluid retention in heart muscle that has been depleted by protein losses during months of starvation.<sup>18,20</sup> The risk of significant refeeding complications is reduced when the hunger striker be-

gins feeding voluntarily due to natural self-preservation of bodily processes.<sup>18</sup>

Repeated insertions of the feeding tube for force-feeding purposes also can lead to mechanical complications, such as malposition of the tube, nasopharyngeal or esophageal trauma, and rarely, esophageal perforation, with subsequent extravasation of tube feeding into the mediastinum or pleural space. Percutaneous endoscopic gastrostomy is an alternative to repetitive feeding tube insertion for long-term feeding. Risks include surgical complication, device dislodgement, wound infection, bowel perforation, and fistulae, among others.<sup>21</sup> A noncooperative prisoner would also have to remain in restraints to prevent removal of the feeding tube.

### Ethical, Legal, and Human Rights Considerations

Dilemmas faced by physicians caring for patients who are hunger striking follow concerns from 2 ethical principles: beneficence and autonomy. For example, in caring for patients who are hunger striking, the physician must balance the right of the hunger striker to refuse food and refuse artificial feeding (patient autonomy to refuse medical intervention) against the physician's duty to preserve life. But as the WMA guidelines note, "benefit includes respecting individuals' wishes . . . [and] avoiding harm means not only minimizing damage to health but also not forcing treatment upon competent people."<sup>2</sup> In the 2006 update of the Declaration of Malta, the WMA is unequivocal: "Forced feeding contrary to an informed and voluntary refusal is unjustified . . . Forcible feeding is never ethically acceptable. Even if intended to benefit, feeding accompanied by threats, coercion, force or use of physical restraints is a form of inhuman and degrading treatment."<sup>2</sup>

The "inhuman and degrading treatment" language is drawn directly from international human rights documents. For example, the 1948 Universal Declaration of Human Rights prohibits "torture" or "cruel, inhuman or degrading treatment or punishment," as does the 1948 Geneva Conventions and the 1966 International Covenant on Civil and Political Rights. Reinforcement of human rights and medical ethics standards has been endorsed by the international courts that have ruled on rights of prison hunger strikers. For example, during a strike by a prisoner in the middle of his trial, the International Tribunal for the former Yugoslavia ruled in 2006 that physicians could proceed to protect "the health and welfare of the accused and avoid loss of life to the extent that such services are not contrary to compelling internationally accepted standards of medical ethics or binding rules of international law."<sup>3</sup> The court went on to require that the medical professionals (Dutch physicians) providing care to the accused "seek professional advice, both in terms of specialized medical expertise and ethics, domestically and internationally . . . [and review their treatment protocol to ensure that it] reflects in every respect the latest international medical and ethical stan-

dards."<sup>3</sup> This latter would include the new WMA standard that would prohibit physicians from force-feeding competent prisoners.<sup>2</sup>

The International Tribunal in this case also cited a 2005 opinion of the European Court of Human Rights, which was reviewing the treatment of a prisoner awaiting trial in the Ukraine who had gone on a hunger strike to protest the conditions under which he was being held.<sup>22</sup> The court held that as a general matter medical treatment that is given for "therapeutic necessity from the point of view of established principles of medicine cannot in principle be regarded as inhuman and degrading," and that this includes force-feeding aimed at saving the life of a fasting prisoner.<sup>3</sup> Nonetheless, "medical necessity" must be determined by a physician based on accepted medical standards, and force-feeding cannot be aimed at "humiliation and punishment" or inflict "severe physical suffering."<sup>22</sup> In this case, the force-feeding was performed with the prisoner in handcuffs, a mouth widener was inserted, and a special rubber tube forced into the prisoner. Under such conditions, the court concluded that the force-feeding "constituted treatment of such a severe character warranting the characterization of torture."<sup>22</sup>

In the United States, force-feeding is governed not by international human rights law but by the Eighth Amendment of the US Constitution, which prohibits "cruel and unusual punishment."<sup>1</sup> In the case of medical care for prisoners, this has been interpreted to prohibit prison officials from acting with "deliberate indifference" or reckless disregard for risks to a prisoner's health, but also to permit forced treatment, including medically reasonable force-feeding of a hunger-striking prisoner, if the prison has a "legitimate penological interest" for force-feeding, which interest includes maintaining order in the prison.<sup>23</sup> Specific protocols for monitoring hunger strikers and for actual force-feeding vary from state to state and from state to federal prisons. Nonetheless, some prison systems require a hearing before a judge before force-feeding of a competent prisoner can commence, and all require the finding by a physician that the force-feeding is "medically necessary" to preserve the life and health of the prisoner.<sup>1</sup> This "medically necessary" requirement inherently contains a requirement that the force-feeding be consistent with medical ethics.

The situation at Guantánamo Bay is unique and has been characterized as a "legal black hole."<sup>1</sup> Nonetheless, it seems reasonable to conclude as has the US Supreme Court that in a detention camp under military control, the provisions of the Geneva Conventions should apply.<sup>24</sup> This means, consistent with international humanitarian law, that force-feeding should not be used as punishment and should not be conducted in a manner that amounts to torture or to inhuman or degrading treatment. To the extent that 6-point restraints reportedly have been and continue to be used to immobilize competent prisoners for nasogastric tube inser-

tion or forced feedings,<sup>12</sup> force-feeding at Guantánamo Bay violates the Geneva Conventions, international human rights law, and medical ethics.<sup>1</sup>

Physicians caring for patients who are hunger striking may be placed in a position of dual loyalty; for example, fulfilling obligations to the prison or government, which may be in direct conflict with the patient's best interests. The physician's duty to the patient is always the highest priority. Because all legal and ethical rules for treating hunger strikers require the cooperation of physicians, physicians can and should prevent the force-feeding of competent prisoners by refusing to approve or participate. This action will, of course, require medical and legal professional organizations to strongly support prison physicians, including those in the military, who follow the dictates of medical ethics and human rights.

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