

Healthy food for trainees: a call to action

'Our food should be our medicine and our medicine should be our food', a pronouncement attributed to Hippocrates, is too often quoted but ignored in circles of academic medicine. In fact, in many residency and fellowship programmes, we have established food as medicine's antithesis. Instead of supporting nutrition and wellness, our eating habits not only make us less healthy, but they also reduce our effectiveness and longevity as physicians. Facing a pandemic, it has become more important than ever to admit that we have been misguided and that we could do better: the well-being of our trainees is *essential* to the health of our society.

There are many examples of maladaptive behaviours physicians use to cope with a stressful work environment, and poor nutrition among trainees deserves more attention. Residents and fellows, engaged in demanding work requiring gruelling hours, often regard unhealthy hospital food as immediate gratification. After complicated surgical cases or lengthy teaching rounds on our medical wards, trainees unite at the cafeteria, repaying themselves for their travails with high-calorie foods, consumed hastily while multitasking. Medical and surgical floors, labour and delivery units, and emergency rooms are often stocked with sugary snacks, especially at night, feeding a hungry, harried clinical team. Unfortunately, despite its convenience, 'comfort food' carries hidden costs. While physicians, as a group, are healthier than the general public,^{1 2} studies have demonstrated room for improvement.³ Trainees, in particular, work in highly stressful, emotionally charged conditions, often staying overnight or for 24 h on call. In times of stress, the hypothalamic-pituitary-adrenal axis is supposed to prepare the body for a defensive response, releasing glucose into the bloodstream and theoretically suppressing hunger. However, emotional eaters (like trainees under stress) do not tend to demonstrate this response, but instead eat the same amount or more.^{4 5} Shift work causes a disruption in circadian rhythms and difficulty sleeping, which can result in an imbalance of leptin/ghrelin ratios. While data are inconsistent, many studies have shown associations between night-time eating and poor metabolic consequences,⁶ suggesting that trainees may be at especially high risk of poor long-term

outcomes like obesity, diabetes and hypertension. These health problems can lead to increased morbidity for a lifetime.

Our professional culture not only passively accepts eating habits that lead to deleterious metabolic effects, but also habits that potentially lead to other deficits.⁷ All physicians queried in a qualitative study evaluating physicians' views of their workplace nutrition reported that they 'sometimes have difficulty eating and drinking during work hours', and all of them reported that they felt that inadequate nutrition impacted them through emotional symptoms like irritability and impatience, physical symptoms such as fatigue or malaise, or cognitive symptoms, for example, difficulty concentrating or thinking clearly.⁷ Many hospitals have limited availability of wholesome, nutritious foods even in their large cafeterias, and the size of some institutions precludes easy access to those foods where they do exist.^{3 7}

The COVID-19 health crisis highlights the need to encourage healthy eating for trainees, who are often working on the frontlines to take care of sick patients. Unhealthy eating weakens the immune system. Diets high in refined sugars and saturated fats lead to chronic inflammation, which impairs host immune responses against viruses, with both the innate and the adaptive immune system negatively affected.⁸ In addition, though data is limited, nutritional status appears to be a relevant contributor to the outcomes of patients with COVID-19.⁹ In other words, healthy eating is important both to prevent illness and to heal when illness strikes. During quarantine, healthy food is less easily available, as people venture out to grocery stores rarely, farmer's markets remain closed and increased stress levels are likely making 'comfort foods' increasingly appetising. Trainees have a tough time accessing healthy food options in the best of times; to face the worst of times, we have work to do.

In this unprecedented historical moment, we need our trainees to be physically, emotionally, cognitively and immunologically at their best, because both their lives and those of their patients depend on it. The change must begin at the level of the academic medical institution, supported by hospital leadership who believe that it is critical that we give up on the status quo and opt to be healthier. The general medical education community has demonstrated a recent interest in resident wellness manifested through the culture of eating, but there is limited evidence that

change has been made. According to the American Medical Association's STEPS Forward module intended to prevent burnout among physician trainees, 'residents need healthful food options and scheduled time to eat'.¹⁰ However, while the Accreditation Council for Graduate Medical Education has emphasised the importance of physician wellness, for example, through the Clinical Learning Environment Review programme,¹¹ recommendations have not included a focus on nutrition. Instead, resident wellness interventions have focused on interventions such as mindfulness, yoga and access to behavioural health resources.¹²⁻¹⁴ One systematic review evaluating interventions to decrease burnout noted that many well-intentioned interventions fail to make a difference because they inadvertently add more burden to busy residents' lives.¹⁵ Offering healthful food options as part of broad cultural change at an institutional level would not require additional time or effort from trainees.¹⁶ Establishing a culture of regular, healthy eating is likely to enhance and supplement already instituted wellness and resilience programmes designed for trainees, which are also an integral part of improving resident nutrition.¹⁷

We recommend the following concrete model for hospital, departmental and physician leadership to improve healthy nutrition among trainees: *REFUEL* (figure 1).

In order to achieve the *REFUEL* model's goals, hospital leadership must redesign food delivery in the hospital. The National Health Service in the UK has listened to the Campaign for Better Hospital Food and has rolled out national targets to reduce junk food and increase healthful food offerings in its healthcare institutions.¹⁸ The Center for Disease Control has also created a toolkit for 'creating healthy hospital environments',¹⁹ and it provides suggestions for how food services in hospitals can optimise healthful offerings.²⁰ The cafeteria does not need to be rebuilt; it needs to be restocked. Academic hospitals can use online toolkits and resources to guide the implementation of these relatively simple changes (see List 1: Resources to Improve Nutrition in the Hospital). As departmental leaders and attending physicians, we should model healthy choices and balance to our trainees and make the extra effort, when possible, to purchase meals made from whole grains, fruits and vegetables and minimise processed foods when ordering for our team of trainees. The additional cost is minimal and, by

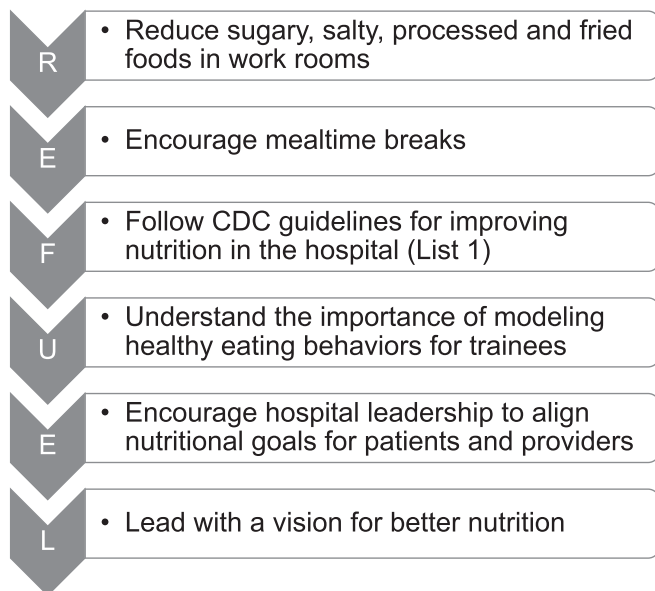


Figure 1 REFUEL model: proposed framework with simple steps to guide hospital, departmental and physician leadership in improving nutrition among trainees.

providing healthful meals, we send a clear message that leaders care about the nutrition of their colleagues. Furthermore, substituting healthier food options for the ‘comfort foods’ we have relied upon will be reimbursed through years of active healthcare service.

We are committed to treating trainees as partners and to respecting their autonomy. Each individual ultimately decides what and how much food to consume; as leaders, we should provide the basic framework required for healthy eating. Whenever possible, and within the constraints of the unique demands of training, we should foster an environment that allows protected time to eat, and we should incorporate physical and mental well-being into our organisational culture. We encourage programmes to incorporate nutrition into wellness interventions. In the end, the beneficiaries of our actions will not only be the individual trainees, but also their patients, who will benefit from physicians less likely to burnout, more likely to stay healthy, who care about both themselves and their patients, their food and their medicine.

Maryl G Sackeim , Ernst Lengyel 

OB/GYN, University of Chicago, Chicago, Illinois, USA

Correspondence to Maryl G Sackeim, OB/GYN, University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637, USA; Maryl.goldberg@gmail.com

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ORCID iDs

Maryl G Sackeim <http://orcid.org/0000-0002-3988-8161>

Ernst Lengyel <http://orcid.org/0000-0001-8624-1507>

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