ice-plug or lack of air pocket does prompt rescuers to identify and, hopefully, clear the obstruction, but this is a subtlety that could be missed by nonmedical or companion rescuers. What is notably missing from the snow burial guidelines is the emphasis on ventilation during CPR. The WMS drowning guidelines, on the other hand, specifically state that BLS care must include ventilation. Why not add the same recommendations for snow burial victims without an air pocket who are in cardiac arrest and rescued within the first few minutes of burial?

The International Liaison Committee on Resuscitation CPR guidelines changed its recommendations regarding CPR in 2010.³ During the last decade, priority has been on circulation, and then on airway and breathing, as the focus of BLS training. Hands-only CPR has also been promoted with the hope that chest compression-only CPR is better than no CPR. The American Heart Association (AHA) 2020 guidelines recommended that emergency call takers providing telecommunicator CPR instruct callers to perform hands-only CPR.⁴ Providing hands-only CPR is obviously not ideal in special resuscitation situations involving asphyxia. The 2010 AHA guideline highlights did address this and indicated that CPR for drowning patients must include artificial respiration.³ However, by 2020 those recommendations were no longer highlighted but buried in section 3 part 9.5.⁵

Shortly after the 2010 AHA guidelines were published, the International Commission for Alpine Rescue Medical Committee considered hands-only CPR not appropriate and recommended ventilation during CPR for the resuscitation of avalanche victims.⁶

The influence of the WMS guidelines is significant, as can be seen in the 2020 AHA recommendations, which specifically mention the WMS drowning guidelines as a supplemental reference.⁵ Suggestions from the WMS that include specific wording regarding snow burial victims could foreseeably be included in the AHA recommendations also. The WMS should emphasize CPR with ventilation in snow burial victims in cardiac arrest and work with organizations such as the Canadian and American Avalanche Associations to highlight this among their target groups. We need to guide the companion rescuer because it will be the on-scene bystander who must conduct the immediate rescue sequence and resuscitation.

As our colleague and coauthor of the drowning guidelines Dr. Sempsrott pointed out, drowning victims are still drowning after they are rescued from the water. The drowning process has not stopped until adequate ventilation has begun. If this is true for drowning, why then should it not apply to asphyxia related to snow burial?

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Rhabdomyolysis After Consumption of Freshwater Fish (*Neolissochilus soroides*)

To the Editor:

Exercise and nutrition are essential to good health. However, exercise combined with the consumption of risky food or drugs can cause serious illness.

A 41-y-old man who had been receiving simvastatin therapy (40 mg·d⁻¹) for dyslipidemia for a few years presented to the emergency department of Maharaj-

Figure 1. The cooked fish meal that was consumed by the patient during a trekking trip on a mountain in southern Thailand. Image used with permission from the patient.

Nakhonsrithammaraj Hospital because of a 2-d history of generalized myalgia and weakness. The patient had been on a mountain trek with 3 companions for 1 d and had ingested freshwater fish that they had caught for dinner (Figure 1 and 2). The patient had eaten the largest portion and developed nausea in 30 min and shortness of breath, muscle pain, and weakness approximately 5 h after the meal. The next morning, the patient was unable to walk and had little urine, which was dark brown in color. The 3 companions who shared the dinner also had nausea and vomiting in 30 min and myalgia approximately 5 to 6 h after the meal; however, their symptoms were self-limited and resolved the following morning.

The patient's companions required 2 d to carry him down the mountain using a bamboo stretcher, which also constituted vigorous exercise. The patient denied fever, new medications, recreational drug use, recent illness,

trauma, or other vigorous exercise. He was conscious, fatigued, and tachypnic on arrival. His temperature was 36.7°C; heart rate was 100 beats·min⁻¹, blood pressure was 127/70 mm Hg, respiratory rate was 36 beats·min⁻¹, and oxygen saturation was 98% on room air. Physical examination revealed tenderness in both thighs and the shoulder area and generalized weakness. Electrocardiography revealed sinus tachycardia with tall peak T waves. Laboratory results demonstrated hyperkalemia and elevated creatinine, urea, and creatine phosphokinase levels (Table 1). Urine myoglobin analysis was unavailable. The patient's companions also had elevated creatine phosphokinase levels of 1235, 1728, and 490 U·L⁻¹ (normal range, 24–195 U·L⁻¹).

The patient was diagnosed as having rhabdomyolysis, acute kidney injury, and hyperkalemia. He received intravenous fluid and standard treatment for hyperkalemia. However, he remained oliguric despite adequate fluid replacement, and his renal function declined. On hospital Day 3, he developed severe dyspnea owing to volume overload. He was intubated and underwent hemodialysis. He improved clinically and was extubated on Day 7. The patient required intermittent hemodialysis for 3 wk and was discharged uneventfully on Day 34. He had no further symptoms during the 2-wk post-discharge follow-up, at which time his serum creatinine level was 1.8 mg·dL⁻¹.

The primary cause of the rhabdomyolysis was considered to be fish ingestion, a condition often known as Haff disease, which in this case was potentially precipitated by vigorous exercise (mountain trekking) and simvastatin ingestion. He was thus diagnosed on the basis of following rationale. First, all his companions, who ingested the same fish meal, also had clinical and

Figure 2. *Neolissochilus soroides*, a freshwater fish, which is called Rangaea in the local language. Image used with permission from the patient.

Table 1. Laboratory parameters and volume status during hospitalization

Hospital day	1	2	3	4	5	6	7	12	23	34
BUN (mg·dL ⁻¹)	41	61	85	61	52	53	95	95	50	
Cr (mg·dL ⁻¹)	4.2	6.7	9.0	8.4	7.7	6.8	12.1	10.0	6.4	2.2
Sodium (mmol·L ⁻¹)	139	136	137	140	140		142	144	144	
Potassium (mmol·L ⁻¹)	6.1	4.4	3.2	3.0	4.1		4.0	5.3	5.2	
Chloride (mmol·L ⁻¹)	101	94	100	102	99		100	107	104	
Bicarbonate (mmol·L ⁻¹)	21	20	15	17	25		27	22	24	
Creatinine phosphokinase (U·L ⁻¹)	25,240		12,420		16,253	2723	895			
Fluid intake/output (mL)	3432/500	2275/510	2111/1530	1660/2170	2140/2250	1790/140	893/200	2441/500	1343/4200	3290/4950

elevated creatine phosphokinase levels of 1235, 1728, and 490 U·L⁻¹. Second, a temporal relationship exists between the fish ingestion and the illness experienced by all who had eaten the fish because gastrointestinal symptoms occurred within 30 min and myalgia developed in approximately 5 h. Finally, the biological plausibility of the soro brook carp, *Neolissochilus soroides* (family Cyprinidae) (Figure 2), causing rhabdomyolysis, as previously reported after consumption of other cyprinids, was also considered.¹ Statin-induced rhabdomyolysis is more common than Haff disease. The reported incidence of statin-associated muscle symptoms varies greatly, ranging from 5 to 29%, with milder symptoms being common and more serious symptoms being rarer. However, rhabdomyolysis is far rarer, with an incidence of approximately 1 in 10,000 population.² Elevated risk of statin-related muscle adverse events can be attributed to various genetic backgrounds.³ Therefore, the patient may have had higher risk of statin-induced rhabdomyolysis owing to his Asian ethnicity and excessive exercise.⁴ However, he had used the same dose of simvastatin and previously trekked to the same extent without developing rhabdomyolysis. In addition, a detailed history review found that the patient and his companions had no underlying diseases for which trekking is considered a serious predisposing risk factor.⁵ We hypothesized that compared with his companions, the patient had severe rhabdomyolysis due to consuming the most fish and taking simvastatin.

Haff disease, named after the Königsberg Haff, which lies along the Baltic coast, was first reported in 1924 and recurred in periodic clusters.⁶ Comparison of features of confirmed cases of the disease in the United States and

China during the reporting period, 1997 to 2014, revealed that the median incubation period was 8 h for the United States, ranging from 3 to 21 h, and 7 h for China, ranging from 0.1 to 41 h. The major symptoms are muscle pain and stiffness. Other symptoms are nausea or vomiting, stomachache, diarrhea, headache, chest pain, shortness of breath, sweating, and pain to light touch.⁷ Haff disease is associated with various types of fish, such as carp, crayfish, pomfret, freshwater eel, and marine boxfish. No information has been reported about which part of the fish contains more toxins than others. The toxins are heat stable and cannot be recognized by smell or taste. Currently, the toxin and etiology of the disease have not been identified.⁸ Treatment is mainly supportive and standard care for rhabdomyolysis and its complications.⁹

Haff disease is not widely recognized, so it is understandably underreported. A high index of suspicion and exclusion of other causes are important parts of the diagnosis. Trekkers should not consume fish from mountain waterfalls because they can cause Haff disease. In addition, foraging wildlife has a negative impact on the ecosystem.

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Exposure to Bat Droppings Among Tourists Visiting Caves in the Brazilian Amazon: A Risk for Disease Transmission

To the Editor:

Bats harbor diverse pathogens and are considered as a source of zoonotic diseases, in particular those caused by viruses. Large-scale epidemics that have occurred since the end of the 20th century have been associated with viruses of bat origin, such as Hendra virus, Nipah virus, and SARS-CoV virus. The etiology of the coronavirus disease 2019 pandemic is a betacoronavirus of probable bat origin.¹ The reason why these mammals carry numerous viruses is under debate, with strong evidence suggesting unique immunologic features. In several animal species including bats, pathogens are shed via saliva, feces, and urine. Infections from these secretions can occur via direct contact or indirectly through contaminated soil, water, food, and aerosols. Thus, places with high concentrations of excreta, such as caves, mines, tunnels, and bridges, may be the origin of zoonotic infections.

Tourists Highly Exposed to Bat Droppings in Amazon Caves—The facts presented refer to 2 d of field observations carried out in July 2018 in Presidente Figueiredo (PF), a small tourist town in Amazonas state, Brazil. PF has approximately 36,000 inhabitants and is 128 km away from the Manaus urban center. The city is located