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A Physician's Guide to Surviving COVID Winter

By Rada Jones, MD

How can you survive this winter holding on to your temper, family, and job? Look out for #1. That's you. To care for others, you must care for yourself first. That's not selfish. That's smart. To protect those who need you, you must stay healthy and sane. How? These are my tips.

1 | Set rules for others and for yourself | Your sleep should be sacred. So should whatever time off you can schedule.

2 | Enlist help | So many grateful folks want to help healthcare workers. Your neighbors may be glad to walk your dog, run some errands, or grab a gallon of milk.

3 | Prioritize yourself | Pay someone to plow, buy groceries online, hire a housekeeper to save time for the things that really matter.

4 | Schedule time for yourself to exercise, meditate, pray, journal—whatever helps fill your well.

5 | Shut off the TV | Whether you're Democrat or Republican, you won't enjoy the news. Watch the Nature Channel, Hallmark, or the Food Channel. Watching food is fun, and it won't make you fat.

6 | Go outdoors | There's magic in nature and sunlight, whatever's left of it. Hike, snowshoe, and allow your lungs to breathe real air instead of the reconditioned germs they allow you in the hospital.

7 | Say no | That's a survival technique. Say no to parties, hugging strangers, doing things you shouldn't, and protecting others' feelings. Let them take care of their feelings. You take care of yourself.

8 | Cut yourself some slack | You aren't perfect. Nobody is. You'll make mistakes, gain a few pounds, step on some toes, maybe even lose it at times. So what? Just do the best you can.

9 | Read a book | Remember those things made of paper? You turn a page and land in a new world?

10 | Be careful with alcohol and substance use | They may feel good at the moment, but you'll be worse off in the long run.

11 | Watch old movies that make you laugh.

12 | Take a break from social media | Picking fights with random strangers won't help your mental health. Cut off those who hurt you.

13 | Get a cat | They have nine lives; that's why they are masters of survival. They ignore all unpleasantness, and they'll show you how. And they're the best nap helpers.

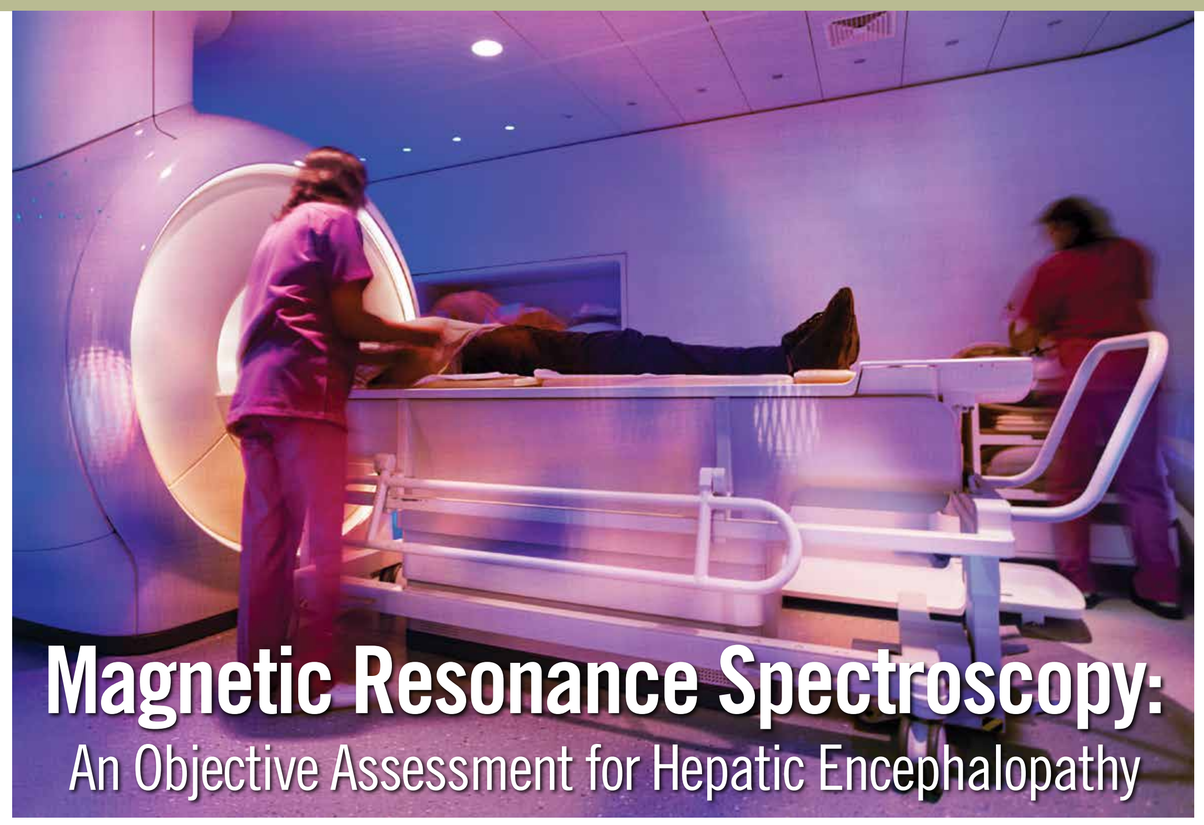
14 | Communicate | Ask coworkers how they handle the stress. They may teach you something, and if they don't, sharing the burden will help you both.

15 | Seek help before you lose it | Check out the CDC's resources on stress and coping.

16 | Pat yourself on the back | You're a darn hero! In recycled PPE, instead of shining armor, you saved fair maidens of all genders, ages, and persuasions. With a vaccine in sight, there's a light at the end of the tunnel.

Wishing you all health, joy, and happiness. See you all on the other side.

Rada Jones is an emergency physician and can be reached at her self-titled site, RadaJonesMD, and on Twitter @jonesrada. She is the author of Overdose.



Magnetic Resonance Spectroscopy:
An Objective Assessment for Hepatic Encephalopathy

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Data indicate that hepatic encephalopathy (HE) is an important morbid complication of cirrhosis, occurring in an estimated 75% of those with cirrhosis. With HE diagnosis often being subjective and usually based on clinical assessment of the patient and the majority of HE often being subtle and difficult to diagnose with current tools, imaging modalities may offer a potential technique for objective assessment, explains Mark Danta, B Med, MPH, MD, FRACP. "Metabolite changes in the brain are key to the pathophysiology of hepatic encephalopathy, which is incompletely understood," he adds. "Magnetic resonance spectroscopy (MRS) allows measurement of specific metabolites by brain region."

Analyzing MRS for HE

For a paper published in *Neurology*, Dr. Danta and colleagues conducted a meta-analysis of 31 observational studies with the goal of evaluating whether a derangement of cerebral metabolites as measured by MRS occurs with HE. "In particular, we analyzed the capability of MRS to differentiate between cirrhotic individuals with no HE (NHE) and minimal HE (MHE), given its relevance in clinical practice," Dr. Danta notes. Included studies had adequate ascertainment of cirrhosis and hepatic encephalopathy assessment, excluded patients with liver transplant or transjugular intrahepatic portosystemic shunt, had an appropriate comparator group for the same imaging modality, included statistics that allowed confidence intervals to be calculated, had a minimum of 10 cases, and specified the HE grade of patients. The standard meta-analysis was performed based on the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines.

In total, the studies included nearly 1,500 patients with analysis of cirrhosis-related HE, classified into healthy controls and patients with NHE, MHE, or overt HE (OHE). Most studies reported findings on at least three of the four metabolites glutamate + glutamine (Glx), myo-inositol (mI), choline-containing compounds (Cho), and N-acetylaspartate (NAA), with findings mainly stratified into the parietal, occipital, and basal ganglia brain regions, which were each analyzed separately. Studies were published from 1992 to 2016, and the majority were from Europe and North America.

A Pattern Emerges

"The analysis revealed that glutamine levels in the parietal lobe by MRS was effective in distinguishing patients with MHE from those with NHE (+0.82), without substantial heterogeneity or publication bias," says Dr. Danta. "Comparing NHE with MHE, imaging targeting the parietal lobe was found to be effective in distinguishing grades of HE. Similarly, myo-inositol (-0.77) and choline (-0.36) were effective in parietal cortex imaging comparing MHE and NHE patients. Imaging targeting the basal ganglia and occipital lobes had weaker correlations. Importantly, the NHE vs healthy control results indicate that the derangement of metabolites begins in chronic liver disease before the development of a clinically detectable encephalopathic condition."

The results reveal that glutamine change in the parietal lobe has the strongest association with HE, a relationship that increases with increasing severity of HE, according to Dr. Danta (Table). "While choline and myoinositol decreased with increasing HE severity, the relationship was less clear," he adds. "Taken together, it suggests that there is a specific identifiable pattern for HE and that MRS may be of value in the assessment of HE. Recognition of this pattern may allow improved diagnosis, monitoring, and study of interventions in patients with HE."

Focusing the Use of MRS

The finding of glutamine as the most consistent metabolite, with the strongest correlation in the parietal cortex, in differentiating between NHE and MHE identifies a specific region to focus the use of MRS in the diagnosis of HE, says Dr. Danta. "Interestingly, these changes may precede the development of detectable HE," he notes. "It also provides opportunities to study the longitudinal progression or reversal of imaging markers over time, following HE treatment or transplant. To better facilitate direct comparison between imaging modalities in the future, researchers should design more multimodal studies that take advantage of contemporary and evolving imaging techniques."

Table Standard Mean Differences in Metabolites by Brain Region

The table shows comparisons of cirrhosis with no hepatic encephalopathy (NHE), minimal hepatic encephalopathy (MHE), and overt hepatic encephalopathy (OHE) results against controls by metabolite and region.

Metabolite	Region	Standard Mean Differences		
		NHE vs Control	MHE vs Control	OHE vs Control
Glx	Parietal	+0.53	+1.28	+1.89
	Occipital	+0.61	+0.95	+2.11
	Basal ganglia	+0.65	+1.32	+1.41
mI	Parietal	-1.26	-2.55	-2.92
	Occipital	-1.36	-1.54	-4.11
	Basal ganglia	-1.23	-0.41	-1.73
Cho	Parietal	-0.62	-0.84	-0.97
	Occipital	-0.46	-0.66	-1.10
	Basal ganglia	-1.26	-1.15	-1.46

Abbreviations: Glx, glutamine and glutamate; Cho, choline-containing compounds; mI, myo-inositol.

Source: Adapted from: Zeng G, et al. *Neurology.* 2020;94(11):e1147-e1156.

Dealing With Non-Compliant Patients: Using Facts in Your Defense

The following is a continuation of the MedLaw column in the January issue.

If, despite your best efforts, your patient suffers a poor outcome and you are being sued for malpractice, you would ideally like to stop the process before it reaches the courtroom. To that end, your attorney would file a Motion for Summary Judgment, asking the judge to dismiss the case as a matter of law because the plaintiff cannot meet their burden of proof. The plaintiff would be required to "lay bare their proof" that it was actually your conduct that was the proximate cause of the harm.

The judge may decide the Motion on papers alone or may hold a hearing at which the attorneys can offer argument but there will not be any witnesses called. Your "witness" will, therefore, be the medical record. Courts generally loathe to deny a plaintiff their day in court, and so the record must be very clear as to the patient's resistance to your efforts to work with them and your informing them of the serious consequences of their non-compliance and of the likelihood that it would cause the very harm that they then suffered.

If this Motion fails and the matter proceeds to trial, you still have strong defenses to raise based on the patient's non-compliance:

- Contributory negligence is an archaic defense that is still retained in few jurisdictions. It holds that a plaintiff who has any fault at all in their injuries may not recover damages for those injuries. If you are in one of those jurisdictions, your ability to demonstrate that patient non-compliance contributed at all to the claimed harm will bar any recovery against you.
- Comparative negligence does exactly what its name implies: it compares the level of fault for each side. In some jurisdictions, no amount of plaintiff fault bars recovery, and in others, there is a cut-off beyond which the plaintiff is barred. If a case goes through, any recovery will be offset by the proportion of the plaintiff's fault. In any comparative negligence jurisdiction, patient non-compliance will be a critical issue, because even if the case is not barred and the patient wins, damages will be reduced.

The plaintiff's duty of mitigation applies to the conduct of the patient after a harm has been recognized. Plaintiffs must show that they did what they reasonably could to minimize the effect that the negligence for which they are suing had on them. Even if you do have actionable liability for an error of your own, a patient non-compliant with well-advised recommendations for correction comes into evidence and acts as a damages offset.

When dealing with a persistently non-compliant patient, think ahead to how you would counter a malpractice claim when you create the record. A clear contemporaneous record of the patient's ongoing non-compliant conduct despite your efforts to have them act in a medically responsible way is the key to a solid defense.

This article was written by Dr. Medlaw, a physician and medical malpractice attorney.

In Case You Missed It

Polygenic Risk Scores May Improve IBD Risk Prediction

Risk scores from multiethnic populations improve risk prediction for inflammatory bowel disease (IBD), according to a study published in *Gastroenterology.* Researchers examined the effects of common and rare IBD variants on disease prediction and pathophysiology using exome-sequence and single-nucleotide polymorphism array data from 29,358 individuals in the multiethnic BioMe biobank. Polygenic risk scores (PRS) were calculated from European, African American, and Ashkenazi Jewish reference case-control studies; all three datasets were used to run a meta-genomewide association study. PRS were then combined to examine which combination of scores best predicted IBD status. For every population in BioMe, combining risk scores based on association data from distinct ancestral populations improved IBD prediction; among individuals of European ancestry in the UK Biobank, prediction was significantly improved. For non-Europeans, lower predictive power was observed, partly due to lower African IBD case-control reference sizes. Associations for two very early-onset IBD genes, ADAM17 and LRBA, were replicated, with high dominant model penetrance in BioMe. There was an association for autosomal, recessive LRBA risk alleles with severe, early-onset autoimmunity.

ACG Develops First Guideline for Irritable Bowel Syndrome

In a new American College of Gastroenterology clinical guideline, published in *The American Journal of Gastroenterology*, recommendations are presented for diagnostic testing and therapeutic options for patients with irritable bowel syndrome (IBS). After a comprehensive literature search, 25 clinically important questions were assessed for the first of its kind guideline; nine focused on diagnostic testing and 16 focused on therapeutic options. The authors suggest use of a positive diagnostic strategy rather than a diagnostic strategy of exclusion for improving time to initiating appropriate therapy. To rule out celiac disease in patients with IBS and diarrhea symptoms, serologic testing is suggested. To rule out inflammatory bowel disease, it is suggested that fecal calprotectin be checked in patients with suspected IBS and diarrhea. A limited trial of a low fermentable oligosaccharides, disaccharides, monosaccharides, and polyols diet is recommended for improving global symptoms in patients with IBS. To treat global IBS with constipation symptoms, use of chloride channel activators and guanylate cyclase activators is recommended. To treat global IBS with diarrhea symptoms, use of rifaximin is recommended. Gut-directed psychotherapy is suggested for treating global IBS symptoms.

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