



## Clinical Guidance

### I. Patients Stockpiling of Medications Guidance

#### Medication Guidance for Emergency Preparedness

An important part of your disaster supply kit or go-bag is a current supply of your medications and medical supplies. While the cost and insurance coverage of medications can vary greatly, keeping at least 5–7 days of the medicines you take and the supplies you need will help ensure your health during times when you must shelter-in-place or evacuate and while healthcare services may not be available.

Keep your medicines in a waterproof plastic bag. Keep your prescription bottles, even if they are empty, so you can easily tell a new pharmacy what medications you are taking. If you receive your prescriptions through a mail-order service, remember that disasters can disrupt mail delivery or you may not get medical deliveries to your home if you are evacuated.

Keep in mind that all medications and most medical supplies have expiration dates. Write down, on your calendar, the earliest expiration date of the medication in your go-bag and rotate this stock by using or safely discarding medications that are about to expire. It is best to avoid use of expired medications.

### II. Sodium polystyrene sulfonate (SPS), USP Guidance

#### Medication Recommendations for Clinicians

Renal failure patients may develop hyperkalemia (high blood potassium levels), and the absence of the availability of dialysis resources can precipitate the need for clinical management of hyperkalemia without the availability of dialysis. In view of expansive experience with the use of sodium polystyrene sulfonate (SPS<sup>®</sup>, Kayexalate<sup>®</sup>, Kionex<sup>®</sup>, Kalexate<sup>®</sup>), the Kidney Community Emergency Response Program's Physician Committee offers the following guidance to medical providers and the emergency preparedness community:

While the definitive treatment for hyperkalemia in patients with renal failure is often dialysis, temporary and alternative treatment measures should be considered for hyperkalemia control when access to dialysis care is compromised. It is well understood that the aggressiveness of the need for therapy for hyperkalemia can be related to the rapidity with which the condition develops, the absolute level of potassium levels, and evidence for toxicity such as electrocardiogram changes.<sup>1</sup>

While the use of SPS is widespread, the data supporting the efficacy of SPS in the management of hyperkalemia is limited. Therefore, the use of SPS should be considered on an individual



patient basis and when hyperkalemia is severe (potassium > 6.0), and dialysis treatment for definitive control of hyperkalemia is unavailable. However, dialysis will more rapidly and reliably control hyperkalemia than SPS.

Prescribers should take into account safety and efficacy concerns posed in the literature.<sup>2</sup> The U.S. Food and Drug Administration (FDA) advises against SPS use in patients with intestinal diseases or in those who have experienced adverse bowel issues (bleeding, ischemic colitis, perforation) with prior use. The risk of intestinal perforation may be increased with concurrent use of sorbitol, but SPS can be administered as a powder dissolved in a low potassium-containing liquid or water. The side effects of SPS include cramping, diarrhea, and general gastrointestinal discomfort.<sup>3</sup> The oral route of SPS administration would be preferred over rectal administration.

Recognizing the need for caution with SPS use, many renal failure patients in disaster situations should have SPS administered for the control of hyperkalemia when dialysis therapy is not readily available. The Committee cautiously accepts that SPS be recognized as an important emergency preparedness pharmaceutical and supports its stockpiling (without sorbitol) and distribution when dialysis services are likely to be compromised in disaster impact areas where large numbers of ESRD patients reside, or a disaster is likely to precipitate cases of acute kidney injury cases (i.e., earthquake). It is anticipated that the FDA will approve alternative medications to control hyperkalemia in the near future.

#### Sources:

1 <http://emedicine.medscape.com/article/240903-treatment>

2 Sterns RH, Rojas M, Bernstein P, Chennupati S. Ion-exchange resins for the treatment of hyperkalemia: are they safe and effective?. *J Am Soc Nephrol.* May 2010;21(5):733-5. [Medline].

Lillemoie KD, Romolo JL, Hamilton SR, Pennington LR, Burdick JF, Williams GM. Intestinal necrosis due to sodium polystyrene (Kayexalate) in sorbitol enemas: clinical and experimental support for the hypothesis. *Surgery.* 1987 Mar;101(3):267-72. PubMed PMID: 3824154.

McGowan CE, Saha S, Chu G, Resnick MB, Moss SF. Intestinal necrosis due to sodium polystyrene sulfonate (Kayexalate) in sorbitol. *South Med J.* May 2009;102(5):493-7. [Medline]. [Full Text].

3 [www.fda.gov/Safety/MedWatch/SafetyInformation/ucm186845.htm](http://www.fda.gov/Safety/MedWatch/SafetyInformation/ucm186845.htm)



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