

Practice Sting Which form of polystyrene sulfonate

This Practice Sting is particularly relevant for pharmacists.

Pay close attention to the salt form when dispensing polystyrene sulfonate. The calcium salt is usually preferred.

Incidents

1. When dispensing **sodium polystyrene sulfonate** at the pharmacy, a patient noted that the container looked different from the one received from the outpatient pharmacy. Upon investigation, it turned out the physician had previously prescribed **calcium polystyrene sulfonate**. Due to unfamiliarity with calcium polystyrene sulfonate and the similar names in the pharmacy system, the wrong product was ordered.
2. A pharmacy assistant replaced calcium polystyrene sulfonate with sodium polystyrene sulfonate. Neither a colleague nor the pharmacist noticed the substitution. The patient used the incorrect product for several days.

Recommendations for pharmacists

- Make the pharmacy team aware of the differences between the calcium and sodium salts of polystyrene sulfonate.
- Discuss the preferred salt form during pharmacotherapy audit meetings (PTAM), involving the dialysis department as well.
- Ensure the preferred preparation is in stock; it is usually needed urgently.

Analysis

Both products are used to treat hyperkalemia in patients with acute and chronic renal insufficiency, including those undergoing dialysis. [Dutch guidelines](#) prefer calcium polystyrene sulfonate over sodium polystyrene sulfonate in patients with hypertension, heart failure, or oliguric kidney damage. This is due to the high sodium content in the sodium salt form. A standard dose of 15 grams contains 4.5 grams of sodium chloride, taken one to four times daily. The [Dutch Guideline for GPs on Chronic kidney disease](#) advises limiting sodium chloride intake to a maximum of 6 grams per day for patients with kidney damage.

The product codes of both products are very similar: POLYSTYREENSULFON **NA** PDR SUSP OR/REC 1000MG/G and POLYSTYREENSULFON **CA** PDR SUSP OR/REC 900MG/G. Confusion is easily made. Inquiry reveals that the number of characters available for the product code in the Dutch Standards limits further clarification.