

Pneumatic Tube System Medication Guide

Special Precautions for Pharmacy Items in the Tube System

Do Not send the following general categories via the pneumatic tube system:

Category	Comments/Considerations
Drugs that can be altered by shaking.	<p>Examples:</p> <ul style="list-style-type: none"> • Carbonated products (Magnesium Citrate) • Emulsions (fat emulsion, propofol) • Package insert of product states: “Do not shake, swirl, or agitate” • Products that foam (Caspofungin, Micafungin, Temeisrolimus) • Protein/blood products (denaturation) Examples: albumin, erythropoietin, filgrastim, immune globulin, monoclonal antibodies “-mabs”, 4F-PCC (Kcentra) <p>PLEASE NOTE: Insulin: Follow your organizations policy concerning the tubing of insulin. Some manufacturers state that insulin can be delivered via pneumatic tube one time[#].</p>
Chemotherapy/hazardous Drugs/radioactive medications or agents.	<p>These medications may contaminate the entire tube system creating unintentional exposure to healthcare workers.</p> <p>Please refer to your organizations specific hazardous drug handling policy.</p>
Heavy items	Follow the size/weight limit for your organizations tube station.
Listed vaccines and those that have been reconstituted by the pharmacy.	<p>Examples: Herpes zoster^{††}, MMR^{††}, MMRV^{††}, Poliovirus, Rotavirus, Typhoid, Varicella^{††}, and Yellow Fever^{††}.</p> <p>^{††}Ok to tube powder, but not the reconstituted product.</p>
Breakable or Items that could leak: glass bottles/ampules/meds dispensed catheter tip syringes.	Examples: IV acetaminophen, magnesium citrate, methylergonovine ampules, propofol, talc and alteplase for chest tube instillation.
Flammable/explosive/aerosol containers/volatile liquids	Examples: benzocaine spray, collodion, medical or anesthetic gases for surgery, nitroglycerin spray.
Medications that are difficult to replace and/or pose confidentiality issues.	<p>Examples:</p> <ul style="list-style-type: none"> • Patient’s Own Medications • Employee/Outpatient prescriptions • Research or Investigational Medications • Expensive items • Medications in short supply • Cell phones/Electronics <p>Medications from isolation rooms could be contaminated and should not be returned to pharmacy. Follow your organizations policy.</p>
Living therapeutic modalities or creatures	Examples: Leeches, maggots
Controlled substances	Controlled substances should only be transported using a secure transaction mode of operation if available.
Limited High Alert Medications	Agents that should be hand delivered to an authorized clinician and not left out for clinical staff to put away. Examples: Epidurals, Neuraxial Opioids, Neuromuscular blockers

References:

Wang P, Nguyen L, Update to delivering medications via a pneumatic tube system, AJHP. 2017; 1521-1522

Delivering Meds Via Pneumatic Tube. Pharmacist’s Letter/Prescriber’s Letter. November 2015.

Peak A, Fleming M, Rykovich, L. Medications that should not be transported via pneumatic tube systems-wall chart. Thomas Land Publishers Inc. 2011

Peak A, *Delivering medications via pneumatic tube systems. Hosp Pharm. 2003; 38:287–90.*

[#]Eli Lilly and Novo Nordisk indicate that product can be delivered one time via pneumatic tube.

- This guide serves only as a resource and is to be used at the discretion of the user.