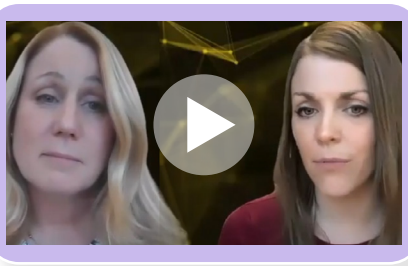
Diagnosis of Edema vs. Drug Pooling



Expert insights video. Click to view
Debra Johnston, RN
Isabelle Beaulieu-Boire, Neurologist

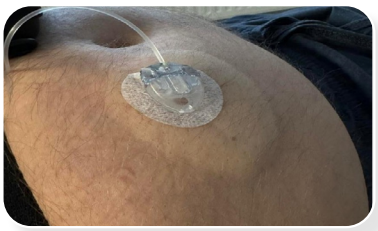
Characteristics

- **Edema**: accumulation/retention of fluid within layers of the skin or beneath the skin, leading to noticeable swelling.[1]
- Edema may be generalized or local, and it can appear abruptly or insidiously (more common). If edema develops slowly over time, it may become massive before patients seek medical care.[2]
- Feels soft to the touch and if pressure is applied, may leave an indentation, referred to as "pitting" after pressure is released.[1]
- **Drug pooling** is an accumulation of drug under the skin around the area of infusion. It is typically manifested as an elevated area of the skin, with or without induration and might be a sign of reduced absorption.











1. Ellenson S. Subcutaneous edema: symptoms, causes, and treatment. Tactile Medical. Published May 22, 2023. Accessed November 27, 2024. https://tactilemedical.com/resource-hub/cellulitis-and-edema/subcutaneous-edema-symptoms-causes-and-treatment/;
2. Thompson AD, Shea MJ. Edema. MSD Manual Professional Edition. Reviewed/Revised August 2024. Accessed November 27, 2024. https://www.msdmanuals.com/professional/cardiovascular-disorders/symptoms-of-cardiovascular-disorders/edema.

Prevention and Management of Edema

Prevention

- To prevent edema, ensure correct catheter placement and avoid areas prone to swelling.

Management

- When possible, treatment involves resolving the underlying cause.[1,2]
- Mild edema typically resolves spontaneously.
- **Gentle massage** of the area can accelerate the absorption of the edema.
- Persistent or worsening symptoms require further evaluation to rule out infection.
  - If swelling, redness, pain, fever increases after infusion site change, further evaluation from an HCP is required.

Initial recommendations:

- Change infusion site.
- Rotate infusion site more frequently.
- Change cannula size.
- Review patient technique.
  - Ensure 90° angle when inserting cannula.
  - Stretching the skin.
  - Insert cannula in standing/lying position.
- Experience from clinical trials with LDp/CDp suggests that although drug pooling does occur, **it does not typically influence efficacy and tends to resolve after a day to a few days** of switching to a new infusion site.

Expert Insights: Diagnosis of Drug Pooling

May be associated with swelling & erythema

Possible causes

- Cannula too short - Available in 6 mm and 9 mm
- Cannula dislodged/occluded
- Not enough fatty tissue
- Infusion volume too high
- Poor site selection



Expert insights video. Click to view
Lynne H. Robertson, Dermatologist

1. Ellenson S. Subcutaneous edema: symptoms, causes, and treatment. Tactile Medical. Published May 22, 2023. Accessed November 27, 2024. https://tactilemedical.com/resource-hub/cellulitis-and-edema/subcutaneous-edema-symptoms-causes-and-treatment/; 2. Thompson AD, Shea MJ. Edema. MSD Manual Professional Edition. Reviewed/Revised August 2024. Accessed November 27, 2024. https://www.msdmanuals.com/professional/cardiovascular-disorders/symptoms-of-cardiovascular-disorders/edema.
Expert Opinion, Dr. Lynne H. Robertson, October 2024.
CDp, carbidopa prodrug; HCP, healthcare professional; LDp, levodopa prodrug.

Expert Insights: Management of Drug Pooling

May be related to

- Cannula too short → drug pooling in dermis
- Cannula was dislodged
- Drug volume high

Consider

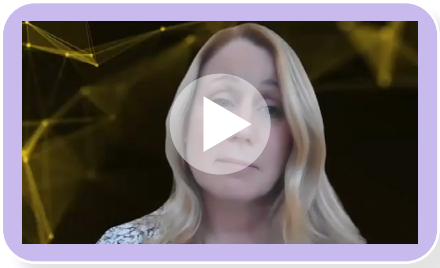
- Increasing cannula length
- Changing site more frequently (volume related)
- Massaging the area after cannula removal
- Antibiotic & referral to Derm/Infectious Disease if increased swelling, redness, pain, +/- fever at site

Infusion Site Leakage



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Managing Drug Pooling



Expert insights video. Click to view
Debra Johnston, RN

Expert Opinion, Dr. Lynne H. Robertson, October 2024.

Leakage of Fluid: Care Plan

May be associated with swelling at site

Consider

1. Increasing the cannula length (9 mm vs. 6 mm)
2. Changing site more frequently (volume related)
3. Massaging the area after cannula removed
4. If increasing swelling, redness, pain, fever at site after removal of cannula → HCP involvement

Plan of Action:

Roles and Responsibilities:

HCP, healthcare professional.