# ATOM IV — Administration & *Handling Guide*

SYSTEMIC IV THERAPY · THAW · STERILE PREP · SLOW-PORT ADMINISTRATION

| PRODUCT | FORMAT | CONTENT | CRYOPRESERVATION |
|---|---|---|---|
| **ATOM IV** | **1 ML** / IV | **Viable MSCs** + native exosomes | **XT-Thrive®** DMSO-free |

*Live-cell product. Once thawed, viability is time-sensitive — observe the 5-minute rule below. This guide covers product handling and preparation; clinical judgment, patient selection, and IV technique remain the responsibility of the treating licensed provider.*

## Before You Begin — What You'll Need

- **ATOM IV (1 mL)** — retrieved from -80°C freezer or liquid nitrogen storage at the moment of use
- **250 cc bag, normal saline** + IV start kit (spike set / tubing)
- **IV catheter** — provider's preferred gauge & site per clinical judgment
- **Sterile syringe** for product draw-up + appropriate draw needle
- **Alcohol swabs**, tegaderm/tape, tourniquet, gauze
- **Sharps container** & standard PPE

## The 5-Minute Rule

CORE HANDLING STANDARD

### *Thaw to administration in* **under 5 minutes.**

ATOM IV is a living-cell product. Retrieve the vial from cryogenic storage only when the patient and IV line are ready. Thaw naturally at room temperature (~5 minutes) — do not apply external heat, do not agitate vigorously. Administer promptly once thawed to preserve post-thaw viability. Do not re-freeze.

## Storage & Handling at a Glance

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|---|---|
| STORAGE | -80°C freezer or liquid nitrogen until point of use |
| THAW METHOD | Natural / room temperature, approx. 5 minutes — no external heat source |
| THAW-TO-ADMINISTER | Under 5 minutes (see 5-Minute Rule) |
| RE-FREEZING | Not permitted — single thaw, single use |
| ANESTHETIC MIXING | Never combine with lidocaine or any anesthetic — denatures the biologic |
| DOCUMENTATION | Retain the lot COA accompanying each shipment with the patient record |

## Step-by-Step IV Administration

1. **Prepare the line first — before touching the product**
   Prep your 250 cc bag of normal saline and IV start kit. Spike the bag, open the line, and **bleed all air from the tubing**. Lock the flow off so saline fills the entire line to the tip.

2. **Establish IV access & confirm flow**
   Site the IV catheter per your clinical judgment and secure it (tegaderm/tape). Hook up the line, release the tourniquet, open the flow valve, and confirm normal drip before proceeding. Establish steady saline flow first.

3. **Retrieve & thaw ATOM IV — start the clock**
   Only now retrieve the vial from -80°C / liquid nitrogen. Thaw naturally at room temperature (~5 min). **Once thawed, you are on the 5-minute clock** — the line should already be running so there is no delay.

4. **Draw up the product**
   Gently draw the full 1 mL of ATOM IV into a sterile syringe. Handle gently — avoid vigorous agitation or foaming, which stresses live cells. Do not add lidocaine or any anesthetic.

5. **Administer through the IV port — slowly**
   Swab the injection port. Push ATOM IV **into the IV port** — not into the saline bag. Administer the product as a **slow, deliberate push**. The slow rate is the safeguard. See the rule below.

6. **Let it run & monitor**
   Allow saline to continue running to carry the product through and clear the line. Monitor the patient throughout and per your facility's post-administration observation standards.

THE ATOM METHOD — WHY SLOW, WHY THE PORT

### *Push into the port. Take your time.* Do not rush this.

ATOM administers through the IV port — not into the bag — with a slow, controlled push. Easing the product in gradually, rather than delivering it as a bolus, is how we guard against a Herxheimer-type response. There is no benefit to speed here. A measured, unhurried push is the standard for every ATOM IV administration.

## Precautions

- ✕ Never mix ATOM IV with lidocaine or any anesthetic — it will denature the biologic
- ✕ Do not apply external heat to thaw; do not agitate vigorously
- ✕ Do not re-freeze; single thaw, single use
- ✕ Do not rush administration — slow port push only
- ✕ Do not delay between thaw and administration beyond the 5-minute window
- ✕ Patient selection, monitoring & adverse-event management are the provider's responsibility

*For licensed-provider use only. This guide covers product handling and preparation and reflects ATOM Stem Cells' handling standards. It is not a substitute for clinical judgment and is not intended to diagnose, treat, or cure any disease. The treating provider is solely responsible for patient selection, dosing decisions, sterile technique, IV access, monitoring, and management of any adverse event.*