

# DOPamine (Intropin) – PEDIATRIC

12:12.08.08 Selective Beta1-Adrenergic Agonists



## PHARMACY PREPARATION:

- Dispense in either bag or syringe depending on child's weight, according to infusion table.
- **Premade bag:** 400 mg of dopamine in 250 mL D5W. Concentration is 1600 mcg/mL.
- Preparation instructions for dispensing in a **syringe:**
  - Withdraw required volume from premade bag and dispense in **appropriately sized syringe** depending on child's weight, according to infusion table and legend below. Syringe should be BD, Monoject, or Terumo brand syringe.

## STABILITY:

- Store premade bag and compounded syringe at controlled room temperature.
- Expiration: 24 hours
- **Do NOT** add DOPamine to sodium bicarbonate or other alkaline intravenous solutions. This may inactivate DOPamine.
- **Do NOT** administer if solution is darker than slightly yellow or discolored in any way.

## ADMINISTRATION:

- Initial: 2 to 5 mcg/kg/min. References state to increase by 5 to 10 mcg/kg/min at 10 to 30 minute intervals. Dose should be titrated to desired effect.
  - *Low dosage (2 to 5 mcg/kg/minute):* increased renal blood flow and urine output.
  - *Intermediate dosage (5 to 15 mcg/kg/minute):* increased renal blood flow, heart rate, cardiac contractility, cardiac output, and blood pressure.
  - *High dosage (> 15 mcg/kg/minute):* alpha-adrenergic effects begin to predominate, vasoconstriction, increased blood pressure
- Central line or large vein administration is preferred. Umbilical arterial catheter is not recommended.
- Extravasation of DOPamine may result in sloughing and tissue necrosis.
- When discontinuing a DOPamine infusion, gradually decrease the dose. Abrupt cessation may cause severe hypotension.

## INFUSION:

- See table below.

# DOPamine 1600 mcg/ml

| Weight(kg) | Dose in mcg/kg/min |      |       |       |       |       |       |       |       |       |
|------------|--------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|
|            | 2                  | 3    | 4     | 5     | 6     | 8     | 10    | 12    | 15    | 20    |
| 0.5        | 0.04               | 0.06 | 0.08  | 0.09  | 0.11  | 0.15  | 0.19  | 0.23  | 0.28  | 0.38  |
| 0.6        | 0.05               | 0.07 | 0.09  | 0.11  | 0.14  | 0.18  | 0.23  | 0.27  | 0.34  | 0.45  |
| 0.7        | 0.05               | 0.08 | 0.11  | 0.13  | 0.16  | 0.21  | 0.26  | 0.32  | 0.39  | 0.53  |
| 0.8        | 0.06               | 0.09 | 0.12  | 0.15  | 0.18  | 0.24  | 0.30  | 0.36  | 0.45  | 0.60  |
| 0.9        | 0.07               | 0.10 | 0.14  | 0.17  | 0.20  | 0.27  | 0.34  | 0.41  | 0.51  | 0.68  |
| 1          | 0.08               | 0.11 | 0.15  | 0.19  | 0.23  | 0.30  | 0.38  | 0.45  | 0.56  | 0.75  |
| 1.25       | 0.09               | 0.14 | 0.19  | 0.23  | 0.28  | 0.38  | 0.47  | 0.56  | 0.70  | 0.94  |
| 1.5        | 0.11               | 0.17 | 0.23  | 0.28  | 0.34  | 0.45  | 0.56  | 0.68  | 0.84  | 1.13  |
| 1.75       | 0.13               | 0.20 | 0.26  | 0.33  | 0.39  | 0.53  | 0.66  | 0.79  | 0.98  | 1.31  |
| 2          | 0.15               | 0.23 | 0.30  | 0.38  | 0.45  | 0.60  | 0.75  | 0.90  | 1.13  | 1.50  |
| 2.25       | 0.17               | 0.25 | 0.34  | 0.42  | 0.51  | 0.68  | 0.84  | 1.01  | 1.27  | 1.69  |
| 2.5        | 0.19               | 0.28 | 0.38  | 0.47  | 0.56  | 0.75  | 0.94  | 1.13  | 1.41  | 1.88  |
| 2.75       | 0.21               | 0.31 | 0.41  | 0.52  | 0.62  | 0.83  | 1.03  | 1.24  | 1.55  | 2.06  |
| 3          | 0.23               | 0.34 | 0.45  | 0.56  | 0.68  | 0.90  | 1.13  | 1.35  | 1.69  | 2.25  |
| 3.25       | 0.24               | 0.37 | 0.49  | 0.61  | 0.73  | 0.98  | 1.22  | 1.46  | 1.83  | 2.44  |
| 3.5        | 0.26               | 0.39 | 0.53  | 0.66  | 0.79  | 1.05  | 1.31  | 1.58  | 1.97  | 2.63  |
| 4          | 0.30               | 0.45 | 0.60  | 0.75  | 0.90  | 1.20  | 1.50  | 1.80  | 2.25  | 3.00  |
| 4.5        | 0.34               | 0.51 | 0.68  | 0.84  | 1.01  | 1.35  | 1.69  | 2.03  | 2.53  | 3.38  |
| 5          | 0.38               | 0.56 | 0.75  | 0.94  | 1.13  | 1.50  | 1.88  | 2.25  | 2.81  | 3.75  |
| 6          | 0.45               | 0.68 | 0.90  | 1.13  | 1.35  | 1.80  | 2.25  | 2.70  | 3.38  | 4.50  |
| 7          | 0.53               | 0.79 | 1.05  | 1.31  | 1.58  | 2.10  | 2.63  | 3.15  | 3.94  | 5.25  |
| 8          | 0.60               | 0.90 | 1.20  | 1.50  | 1.80  | 2.40  | 3.00  | 3.60  | 4.50  | 6.00  |
| 9          | 0.68               | 1.01 | 1.35  | 1.69  | 2.03  | 2.70  | 3.38  | 4.05  | 5.06  | 6.75  |
| 10         | 0.75               | 1.13 | 1.50  | 1.88  | 2.25  | 3.00  | 3.75  | 4.50  | 5.63  | 7.50  |
| 12         | 0.90               | 1.35 | 1.80  | 2.25  | 2.70  | 3.60  | 4.50  | 5.40  | 6.75  | 9.00  |
| 14         | 1.05               | 1.58 | 2.10  | 2.63  | 3.15  | 4.20  | 5.25  | 6.30  | 7.88  | 10.50 |
| 16         | 1.20               | 1.80 | 2.40  | 3.00  | 3.60  | 4.80  | 6.00  | 7.20  | 9.00  | 12.00 |
| 18         | 1.35               | 2.03 | 2.70  | 3.38  | 4.05  | 5.40  | 6.75  | 8.10  | 10.13 | 13.50 |
| 20         | 1.50               | 2.25 | 3.00  | 3.75  | 4.50  | 6.00  | 7.50  | 9.00  | 11.25 | 15.00 |
| 25         | 1.88               | 2.81 | 3.75  | 4.69  | 5.63  | 7.50  | 9.38  | 11.25 | 14.06 | 18.75 |
| 30         | 2.25               | 3.38 | 4.50  | 5.63  | 6.75  | 9.00  | 11.25 | 13.50 | 16.88 | 22.50 |
| 35         | 2.63               | 3.94 | 5.25  | 6.56  | 7.88  | 10.50 | 13.13 | 15.75 | 19.69 | 26.25 |
| 40         | 3.00               | 4.50 | 6.00  | 7.50  | 9.00  | 12.00 | 15.00 | 18.00 | 22.50 | 30.00 |
| 45         | 3.38               | 5.06 | 6.75  | 8.44  | 10.13 | 13.50 | 16.88 | 20.25 | 25.31 | 33.75 |
| 50         | 3.75               | 5.63 | 7.50  | 9.38  | 11.25 | 15.00 | 18.75 | 22.50 | 28.13 | 37.50 |
| 55         | 4.13               | 6.19 | 8.25  | 10.31 | 12.38 | 16.50 | 20.63 | 24.75 | 30.94 | 41.25 |
| 60         | 4.50               | 6.75 | 9.00  | 11.25 | 13.50 | 18.00 | 22.50 | 27.00 | 33.75 | 45.00 |
| 65         | 4.88               | 7.31 | 9.75  | 12.19 | 14.63 | 19.50 | 24.38 | 29.25 | 36.56 | 48.75 |
| 70         | 5.25               | 7.88 | 10.50 | 13.13 | 15.75 | 21.00 | 26.25 | 31.50 | 39.38 | 52.50 |

Infusion rate (mL/hr)

**Legend**

|        |                        |
|--------|------------------------|
| Purple | 2 mL in 3 mL Syringe   |
| Blue   | 50 mL in 50 mL Syringe |
| Green  | 50 mL Bag              |