



# REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME

**methotrexate**



<b>Effective Date:</b> April 2012  <b>Revised Date:</b> <b>Reviewed Date:</b> May 2023	CLASSIFICATION <b>Antimetabolite/ Antineoplastic</b>	OTHER NAMES	PAGE  1 of 3
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**ADMINISTRATION POLICY:**  
 IV Intermittent – May be administered by a nurse  
 IV Bolus – May be administered by a nurse  
 IM Injection – May be administered by a nurse  
 Subcutaneous – May be administered by a nurse

**RECONSTITUTION/DILUTION/ADMINISTRATION:**  
**Available as:** 25 mg/mL – 2 mL vial, 25 mg/mL prefilled syringes 25 mg, 40 mg, 45 mg, 50 mg, 55 mg, 60 mg (for ectopic pregnancies medication may be provided in 1 or more syringes dependent on dose of drug to be administered)

**IV Bolus:** Administer undiluted into the tubing of a running IV at a maximum rate of 10 mg/minute

**IV Intermittent:** Dilute dose in a suitable volume of compatible IV solution (50 to 1000 mL (depending on dose and protocol) and administer over 20 minutes to 24 hours (depending on dose and protocol)

**IM/Subcutaneous:** Administer undiluted (for treatment of ectopic pregnancy or rheumatoid arthritis)

**DOSAGE:**

**Rheumatoid Arthritis/Psoriasis/Crohn’s Disease:**  
 IM/Subcutaneous: 7.5 to 25 mg once weekly to a maximum of 30 mg/week

**Ectopic pregnancy:**  
 IM: 50 mg/m<sup>2</sup> (refer to Body Surface Area nomogram – attached).

**Maximum rate:** 10 mg/minute  
**Maximum concentration:** 25 mg/mL

**STABILITY/COMPATIBILITY:**

**Stability of Final Admixture:** 24 hours at room temperature

**Compatibility:** Compatible in D5W, normal saline, combination dextrose-saline solution

- PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:**
- Nausea and vomiting, diarrhea, mouth lesions/ulcers
  - Leucopenia, thrombocytopenia, hemorrhage
  - Increase LFT’s (with high-dose methotrexate), cirrhosis and fibrosis (with chronic low-dose methotrexate)
  - Neurotoxicity is more common with intrathecal and high-dose administration
  - Rash, pruritus, radiation recall reaction, vasculitis
  - Pneumonia, pulmonary fibrosis
  - methotrexate induced renal failure more common with high-dose therapy
  - Rarely anaphylaxis, serum sickness, fever, chills
  - May be given via subcutaneous route despite not being on the drug label or product insert



# REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME  
**methotrexate**



<b>Effective Date:</b> Dec 2011  <b>Revised Date:</b> <b>Reviewed Date:</b> May 2023	CLASSIFICATION <b>Antimetabolite/ Antineoplastic</b>	OTHER NAMES	PAGE  2 of 3
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**ADDITIONAL NOTES AND NURSING CONSIDERATIONS:**

- Leucovorin rescue should be accompanied by hydration and urinary alkalinization with sodium bicarbonate to maintain urine pH greater than 7.
- Serum methotrexate levels should be monitored with high-dose methotrexate
- Drug is a non-vesicant/non-irritant
- Follow cytotoxic precautions: Refer to Medications: Cytotoxic Agents and Hazardous Drugs, Safe Handling of:
  - \*chemo gloves shall be worn
  - \*any waste (including gloves) are to be disposed of in cytotoxic waste container
  - \*do not handle if you are pregnant
  - \*follow spill management section of policy
- Preservative free formulations must be used for high-dose methotrexate
- Dose reduction required in renal impairment
- Elderly patients: Dose reduction may be required due to renal impairment

Table on page 3

Height (cm)		Methotrexate DOSE of 50 mg/m <sup>2</sup> rounded to nearest 5 mg														
		60 mg	65 mg	70 mg	75 mg	80 mg	85 mg	90 mg	95 mg	100 mg	105 mg	110 mg	115 mg	120 mg	125 mg	130 mg
Min	Max	Find patient's height in rows at left, then read across and find weight (kg) in correct column below. Dose is read above.														
126	127.9	38-44	45-51	52-59	60-68	69-77	78-87	88-97	98-108	109-119	120-130					
128	129.9	37-43	44-50	51-58	59-67	68-76	77-85	86-95	96-106	107-117	118-128					
130	131.9	37-42	43-50	51-57	58-66	67-74	75-84	85-94	95-104	105-115	116-127	128-138				
132	133.9	37-42	43-49	50-56	57-65	66-73	74-82	83-92	93-103	104-114	115-125	126-136				
134	135.9	36-41	42-48	49-56	57-64	65-72	73-81	82-91	92-101	102-112	113-123	124-134				
136	137.9	35-41	42-48	49-55	56-63	64-71	72-80	81-90	91-100	101-110	111-121	122-132				
138	139.9	35-40	41-47	48-54	55-62	63-70	71-79	80-88	89-98	99-109	110-120	121-130				
140	141.9	34-40	41-46	47-53	54-61	62-69	70-78	79-87	88-97	98-107	108-118	119-128				
142	143.9	34-39	40-46	47-53	54-60	61-68	69-77	78-86	87-95	96-106	107-116	117-127	128-138			
144	145.9	33-38.9	39-45	46-52	53-59	60-67	68-76	77-85	86-94	95-104	105-115	116-126	127-136			
146	147.9	33-38	39-44	45-51	52-58	59-66	67-75	76-83	84-93	94-103	104-113	114-124	125-134			
148	149.9	32-37	38-44	45-50	51-58	59-65	66-74	75-82	83-91	92-101	102-111	112-122	123-133			
150	151.9	32-37	38-43	44-50	51-57	58-64	65-73	74-81	82-90	91-100	101-110	111-121	122-131			
152	153.9	31.5-36.9	37-43	44-49	50-56	57-64	65-72	73-80	81-89	90-99	100-109	110-119	120-129			
154	155.9	31-36	37-42	43-49	50-55	56-63	64-71	72-79	80-88	89-97	98-107	108-117	118-128	129-138		
156	157.9	30.5-35.9	36-41	42-48	49-55	56-62	63-70	71-78	79-87	88-96	97-106	107-116	117-127	128-137		
158	159.9		35.5-41	42-47	48-54	55-61	62-69	70-77	78-86	87-95	96-104	105-114	115-125	126-136	137-146	
160	161.9		35.5-40.9	41-47	48-53	54-61	62-68	69-76	77-85	86-94	95-103	104-113	114-123	124-134	135-145	
162	163.9		35-40	41-46	47-53	54-60	61-67	68-75	76-84	85-93	94-102	103-112	113-122	123-132	133-144	
164	165.9		34.5-39.9	40-45	46-52	53-59	60-66	67-74	75-83	84-91	92-101	102-110	111-120	121-131	132-142	
166	167.9		34-39	40-45	46-52	53-58	59-66	67-74	75-82	83-90	91-99	100-109	110-119	120-129	130-140	141-151
168	169.9		33.5-38.9	39-44.9	45-51	52-58	59-65	66-73	74-81	82-89	90-98	99-108	109-117	118-128	129-138	139-149
170	171.9		33-38	39-44	45-50	51-57	58-64	65-72	73-80	81-88	89-97	98-106	107-116	117-126	127-137	138-148
172	173.9			38-43.9	44-50	51-56	57-63	64-71	72-79	80-87	88-96	97-105	106-115	116-125	126-135	136-146
174	175.9			38-43	44-49	50-56	57-63	64-70	71-78	79-86	87-95	96-104	105-113	114-123	124-134	135-144
176	177.9			37.5-42.9	43-48.9	49-55	56-62	63-69	70-77	78-85	86-94	95-103	104-112	113-122	123-132	133-143
178	179.9				42.5-48	49-54.9	55-61	62-69	70-76	77-84	85-93	94-102	103-111	112-120	121-131	132-141
180	181.9				42-47.9	48-54	55-61	62-68	69-75	76-83	84-92	93-100	101-110	111-119	120-129	130-139
182	183.9				42-47	48-53	54-60	61-67	68-75	76-82	83-91	92-99	100-108	109-118	119-128	129-138
184	185.9				42-46.9	47-53	54-59	60-66	67-74	75-82	83-90	91-98	99-107	108-117	118-126	127-137
186	187.9					46.5-52	53-59	60-66	67-73	74-81	82-89	90-97	98-106	107-115	116-125	126-135
188	189.9					46-52	53-58	59-65	66-72	73-80	81-88	89-96	97-105	106-114	115-124	125-134
190	191.9					45.5-51	52-57.9	58-64	65-71	72-79	80-87	88-95	96-104	105-113	114-122	123-132
192	193.9					45-50.9	51-57	58-64	65-71	72-78	79-86	87-94	95-103	104-112	113-121	122-131

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