

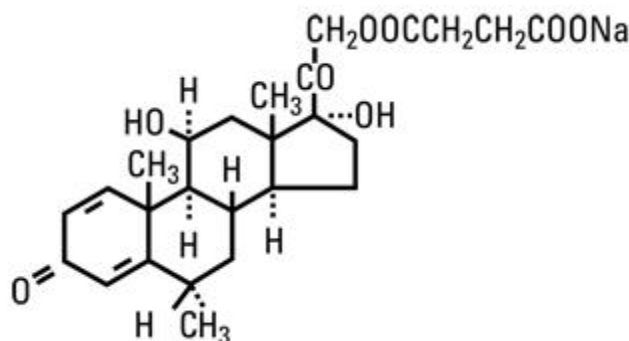
PRODUCT INFORMATION

METHYLPRED Powder for Injection

NAME OF THE MEDICINE:

METHYLPRED (methylprednisolone sodium succinate Injection USP)

The chemical structure of methylprednisolone sodium succinate is shown below:



CAS: 2375-03-3

Molecular weight: 496.53

Molecular formula: $C_{26}H_{33}NaO_8$

Chemical name: Sodium 4-[(11 β ,17-dihydroxy-6 α -methyl-3,20-dioxopregna-1,4-dien-21-yl)oxy]-4-oxobutanoate

DESCRIPTION:

Methylprednisolone sodium succinate USP is a white or nearly white, odourless, hygroscopic, amorphous solid. It is very soluble in water and in alcohol; it is insoluble in chloroform and is very slightly soluble in acetone. Its melting point is greater than 250°C.

METHYLPRED powder for injection contains methylprednisolone (as methylprednisolone sodium succinate) as the active ingredient. The excipients include sodium phosphate - dibasic anhydrous, sodium phosphate – monobasic anhydrous and lactose (for the 40 mg strength only).

Methylprednisolone sodium succinate is extremely soluble in water so that it may be administered in a small volume of diluent and is especially well suited for intravenous use in situations in which high blood levels of methylprednisolone are required rapidly.

PHARMACOLOGY:

Methylprednisolone is a potent anti-inflammatory steroid. It has a greater anti-inflammatory potency than prednisolone and even less tendency than prednisolone to induce sodium and water retention.

Methylprednisolone sodium succinate has the same metabolic and anti-inflammatory actions as methylprednisolone. When given parenterally and in equimolar quantities, the two compounds are equivalent in biological activity. The relative potency of METHYLPRED powder for injection and hydrocortisone sodium succinate, as indicated by depression of eosinophil count following intravenous

administration, is at least four to one. This is in good agreement with the relative oral potency of methylprednisolone and hydrocortisone.

Pharmacokinetics

In vivo, cholinesterases rapidly hydrolyse methylprednisolone sodium succinate to free methylprednisolone. In humans, methylprednisolone forms a weak dissociable bond with albumin and transcortin; approximately 40 to 90% of the drug is bound.

Metabolism of methylprednisolone occurs via the hepatic route and is qualitatively similar to metabolism of cortisol. The major metabolites are 20-beta-hydroxymethylprednisolone and 20-beta-hydroxy-6-alpha-methylprednisolone. The metabolites are mainly excreted in the urine as glucuronides, sulfates and unconjugated compounds. Following intravenous administration of ¹⁴C-labelled methylprednisolone, 75% of the total radioactivity was recovered in the urine in 96 hours, 9% in faeces after five days and 20% in the bile.

Peak methylprednisolone plasma levels of approximately 20 microgram/mL are reached after intravenous infusions of 30mg/kg bodyweight administered over 20 minutes, or 1 g over 30 to 60 minutes, while levels of 42 to 47 microgram/mL are measured after an intravenous bolus injection of 40 mg. Peak methylprednisolone plasma levels of 34 microgram/100 mL are measured after 120 minutes following a 40mg intramuscular injection. Lower peak methylprednisolone plasma levels are achieved following intramuscular injection than following intravenous administration. However, the peak plasma value persists for a longer period following intramuscular administration resulting in equivalent quantities of methylprednisolone reaching the plasma independent of the route of administration.

The plasma half-life of methylprednisolone is 2.3 to 4 hours and appears to be independent of the route/pattern of administration. The biological half-life is 12 to 38 hours. The intracellular activity of glucocorticoids results in the marked variation in the plasma and pharmacological half-lives. Pharmacological activity persists after plasma levels are no longer measurable.

The duration of the anti-inflammatory action of glucocorticoids approximately equals the duration of the hypothalamic/pituitary/adrenal (HPA) axis suppression.

INDICATIONS:

When oral therapy is not feasible and the strength, dosage form and route of administration of the drug reasonably lend the preparation to the treatment of the following conditions.

For intravenous or intramuscular use only.

Endocrine disorders

Primary or secondary adrenocortical insufficiency (hydrocortisone or cortisone is the drug of choice; synthetic analogues may be used in conjunction with mineralocorticoids where applicable; in infancy, mineralocorticoid supplementation is of particular importance).

Acute adrenocortical insufficiency (hydrocortisone or cortisone is the drug of choice; mineralocorticoid supplementation may be necessary, particularly when synthetic analogues are used).

Preoperatively and in the event of serious trauma or illness in patients with known adrenal insufficiency or when adrenocortical reserve is doubtful.

Shock unresponsive to conventional therapy if adrenocortical insufficiency exists or is suspected, congenital adrenal hyperplasia, nonsuppurative thyroiditis, hypercalcaemia associated with cancer.

Rheumatic disorders

As adjunctive therapy for short-term administration (to tide the patient over an acute episode or exacerbation) in ankylosing spondylitis, acute and subacute bursitis, synovitis of osteoarthritis, acute nonspecific tenosynovitis, psoriatic arthritis, epicondylitis, acute gouty arthritis, post-traumatic osteoarthritis, rheumatoid arthritis, including juvenile rheumatoid arthritis (selected cases may require low dose maintenance therapy).

Collagen disease

During an exacerbation or as maintenance therapy in selected cases of systemic lupus erythematosus, systemic dermatomyositis (polymyositis), acute rheumatic carditis.

Dermatological diseases

Bullous dermatitis herpetiformis, severe psoriasis, exfoliative dermatitis, pemphigus, severe seborrhoeic dermatitis, mycosis fungoides, severe erythema multiforme (StevensJohnson syndrome).

Allergic states

Control of severe or incapacitating allergic conditions intractable to adequate trials of conventional treatment in bronchial asthma, contact dermatitis, atopic dermatitis, seasonal or perennial allergic rhinitis, acute noninfectious laryngeal oedema (adrenaline is the drug of first choice), drug hypersensitivity reactions, urticarial transfusion reactions, serum sickness.

Ophthalmic diseases

Severe acute and chronic allergic and inflammatory processes involving the eye, such as allergic corneal marginal ulcers, chorioretinitis, herpes zoster ophthalmicus, diffuse posterior uveitis and choroiditis, optic neuritis, allergic conjunctivitis, anterior segment inflammation, iritis, iridocyclitis, keratitis, sympathetic ophthalmia.

Gastrointestinal diseases

To tide the patient over a critical period of the disease in ulcerative colitis (systemic therapy), regional enteritis (systemic therapy).

Respiratory diseases

Symptomatic sarcoidosis, berylliosis, aspiration pneumonitis, Loeffler's syndrome not manageable by other means, fulminating or disseminated pulmonary tuberculosis when used concurrently with appropriate antituberculous chemotherapy.

Haematological disorders

Idiopathic thrombocytopenic purpura in adults (intravenous only, intramuscular administration is contraindicated), secondary thrombocytopenia in adults, acquired (autoimmune) haemolytic anaemia, erythblastopenia (red blood cell anaemia), congenital (erythroid) hypoplastic anaemia.

Neoplastic diseases

For palliative management of leukaemias and lymphomas in adults, acute leukaemia of childhood.

Oedematous states.

To induce diuresis or remission of proteinuria in the nephrotic syndrome, without uraemia, of the idiopathic type or that due to lupus erythematosus.

Nervous system

Acute exacerbations of multiple sclerosis.

Other

Tuberculous meningitis with subarachnoid block or impending block when used concurrently with appropriate antituberculous chemotherapy.

Trichinosis with neurological or myocardial involvement.

METHYLPRED is beneficial as adjunctive therapy in the treatment of acquired immune deficiency syndrome (AIDS) affected patients with moderate to severe *Pneumocystis carinii* pneumonia (PCP) when given within the first 72 hours of initial antipneumocystis treatment.

CONTRAINDICATIONS:

Systemic fungal infections; known hypersensitivity to components.

PRECAUTIONS:

METHYLPRED is not indicated for intrathecal, epidural or local injection, or any other unspecified route of administration.

In patients on corticosteroid therapy subjected to unusual stress, increased dosage of rapidly acting corticosteroids before, during and after the stressful situation is indicated.

Corticosteroids may mask some signs of infection, and new infections may appear during their use. There may be decreased resistance and inability to localise infection when corticosteroids are used. Infections with any pathogen, including viral, bacterial, fungal, protozoal or helminthic infections, in any location of the body, may be associated with the use of corticosteroids alone or in combination with other immunosuppressive agents that affect cellular immunity, humoral immunity or neutrophil function. These infections may be mild but can be severe and at times fatal. With increasing doses of corticosteroids, the rate of occurrence of infectious complications increases.

A study has failed to establish the efficacy of METHYLPRED in the treatment of sepsis syndrome and septic shock. The study also suggests that treatment of these conditions with METHYLPRED may increase the risk of mortality in certain patients (i.e. patients with elevated serum creatinine levels or patients who develop secondary infections after METHYLPRED).

Prolonged use of corticosteroids may produce posterior subcapsular cataracts, glaucoma with possible damage to the optic nerves and may enhance the establishment of secondary ocular infections due to fungi or viruses.

Average and large doses of cortisone or hydrocortisone can cause elevation of blood pressure, salt and water retention, and increased excretion of potassium. These effects are less likely to occur with the synthetic derivatives except when used in large doses. Dietary salt restriction and potassium supplementation may be necessary. All corticosteroids increase calcium excretion.

Administration of live or live attenuated vaccines is contraindicated in patients receiving immunosuppressive doses of corticosteroids. Killed or inactivated vaccines may be administered to patients receiving immunosuppressive doses of corticosteroids, however the response to such vaccines may be diminished. Indicated immunisation procedures may be undertaken in patients receiving non-immunosuppressive doses of corticosteroids.

The use of METHYLPRED powder for injection in active tuberculosis should be restricted to those cases of fulminating or disseminated tuberculosis in which the corticosteroid is used for the management of the disease in conjunction with an appropriate antituberculous regimen. If corticosteroids are indicated in patients with latent tuberculosis or tuberculin reactivity, close observation is necessary as reactivation of the disease may occur. During prolonged corticosteroid therapy, these patients should receive chemoprophylaxis.

The use of METHYLPRED in patients with AIDS (as in the adjunctive treatment of *Pneumocystis carinii* pneumonia) may be associated with an increased rate of reactivation of tuberculosis. Consideration should therefore be given to the administration of antimycobacterial therapy if corticosteroids are used in this high risk group. Such patients should also be observed for the activation of other latent infections and judicious examinations of sputum/ bronchoalveolar fluid should be made for the presence of other infectious agents.

Because rare instances of anaphylactic (e.g. bronchospasm) reactions have occurred in patients receiving parenteral corticosteroid therapy, appropriate precautionary measures should be taken prior to administration, especially when the patient has a history of allergy to any drug.

There are reports of cardiac arrhythmias and/or circulatory collapse and/or cardiac arrest following the rapid administration of large doses of intravenous METHYLPRED (greater than 0.5 g administered over a period of less than ten minutes). Bradycardia has been reported during or after the administration of large doses of methylprednisolone sodium succinate, and may be unrelated to the speed or duration of infusion (see Adverse Effects, Overdosage, and Dosage and Administration).

Drug induced secondary adrenocortical insufficiency may be minimised by a gradual reduction of dosage. This type of relative insufficiency may persist for months after discontinuation of therapy; therefore, in any situation of stress occurring during that period, hormone therapy should be reinstated. Since mineralocorticoid secretion may be impaired, salt and/or a mineralocorticoid should be administered concurrently.

There is an enhanced effect of corticosteroids on patients with hypothyroidism and in those with cirrhosis.

Corticosteroids should be used cautiously in patients with ocular herpes simplex because of possible corneal perforation. The lowest possible dose of corticosteroid should be used to control the condition under treatment, and when reduction in dosage is possible, the reduction should be gradual.

Psychic derangements may appear when corticosteroids are used, ranging from euphoria, insomnia, mood swings, personality changes and severe depression to frank psychotic manifestations. Also, existing emotional instability or psychotic tendencies may be aggravated by corticosteroids.

Aspirin should be used cautiously in conjunction with corticosteroids in hypothermia.

Corticosteroids should be used with caution in nonspecific ulcerative colitis, if there is a probability of impending perforation, abscess or other pyogenic infection; diverticulitis; fresh intestinal anastomoses; active or latent peptic ulcer; renal insufficiency; hypertension; osteoporosis and myasthenia gravis.

Growth and development of infants and children on prolonged corticosteroid therapy should be carefully observed.

Although controlled clinical trials have shown corticosteroids to be effective in speeding the resolution of acute exacerbations of multiple sclerosis, they do not show that corticosteroids affect the ultimate outcome or natural history of the disease. The studies do show that relatively high doses of corticosteroids are necessary to demonstrate a significant effect (see Dosage and Administration).

Since complications of treatment with glucocorticoids are dependent on the size of the dose and the duration of treatment, a risk/benefit decision must be made in each individual case as to the dose and duration of treatment and as to whether daily or intermittent therapy should be used.

An acute myopathy has been described with the use of high doses of corticosteroids, most often occurring in patients with disorders of neuromuscular transmission (eg. myasthenia gravis), or in patients receiving concomitant therapy with neuromuscular blocking drugs (eg. pancuronium). This acute myopathy is generalised, may involve ocular and respiratory muscles, and may result in quadriplegia. Elevations of creatine kinase may occur. Clinical improvement or recovery after stopping corticosteroids may require weeks to years.

Kaposi's sarcoma has been reported to occur in patients receiving corticosteroid therapy. Discontinuation of corticosteroids may result in clinical remission.

Use in pregnancy - Category A

Use in lactation

Prednisolone is excreted in breast milk, therefore it is reasonable to assume that all corticosteroids are. No specific data are known for methylprednisolone sodium succinate.

Interactions with other medicines

Convulsions have been reported with concurrent use of methylprednisolone and cyclosporin. Since concurrent administration of these agents results in a mutual inhibition of metabolism, it is possible that convulsions and other adverse events associated with the individual use of either drug may be more apt to occur.

Methylprednisolone has a wide spectrum of clinical use and is therefore used with numerous concurrent drugs. The interactions tabulated below are of known or likely clinical significance. The need for dosage adjustment of either medication will depend on the clinical situation, the dose regimen prescribed and the observed clinical response. The interactions listed have either a pharmacokinetic or pharmacodynamic basis.

Drug interactions of known or likely clinical significance

Class of drug	Drug(s) involved	Drug(s) affected	Mechanism	Clinical implication
Antibiotic/ antifungal therapy	Triacetyloleandomycin Erythromycin Ketoconazole	Methylprednisolone (MP)	Enzyme inhibition: reduced MP elimination	Enhanced clinical effects and side effects of methylprednisolone
	Rifampicin	Methylprednisolone	Enzyme induction, increased clearance	May reduce efficacy; dosage adjustment may be required
Anticholinesterase	Neostigmine, pyridostigmine	Anticholinesterase		Precipitation of myasthenic crisis
Anticoagulants	Oral anticoagulants or heparin	Anticoagulant		Increased or decreased clotting. Monitor response. Adjust dose
Anticonvulsants	e.g. Phenobarbitone, phenytoin	Methylprednisolone	Enzyme induction: increased clearance of methylprednisolone	May reduce methylprednisolone efficacy. Monitor clinical response. Adjust dose if necessary
Antidiabetic drugs	e.g. Insulin, glibenclamide, metformin	Antidiabetic	Diabetogenic effects of corticosteroid	May impair glucose control. Monitor glucose levels and adjust dose of antidiabetic therapy
Antihypertensive agents	All antihypertensives	Antihypertensive	Mineralocorticoid effect of corticoid leading to raised blood pressure	May result in partial loss of hypertensive control
Cardioactive drugs	Digoxin and related glycosides	Digoxin	Corticosteroid induced potassium loss (mineralocorticoid effect)	Potential of digoxin toxicity
Diuretics	All potassium losing diuretics e.g. Frusemide		Potassium loss	Enhanced toxicity. Monitor K ⁺ levels and supplement if necessary
Immunising agents	Live vaccine: poliomyelitis, BCG, mumps, measles, rubella, smallpox	Vaccine	Corticosteroid induced immunosuppression	May see increased toxicity from vaccine. Disseminated viral disease may occur
	Killed virulent vaccines	Vaccine	Impaired immune response	Reduced response to vaccine
Immuno suppressants	Methotrexate	Methylprednisolone	Synergistic effect on disease state	May allow reduced dose of corticosteroid
	Cyclosporin	Both	Mutual inhibition of metabolism	Monitor cyclosporin A levels. Adjust dose as necessary
Neuromuscular blocking agents	Pancuronium	Pancuronium		Partial reversal of neuromuscular block
Psychotherapeutic	Anxiolytics Antipsychotics	CNS active drug	CNS effects of corticosteroid	Recurrence or poor control of CNS symptoms. May require dose adjustment
Salicylates		Salicylate	Increased clearance and decreased plasma level	Apparent decrease in salicylate efficacy or salicylate toxicity on reduction of corticosteroid dose
Sympathomimetic agents	e.g. Salbutamol		Increased response to sympathetic agents	Increased efficacy and potentially increased toxicity

ADVERSE EFFECTS:

Fluid and electrolyte disturbances

Fluid retention, sodium retention, congestive heart failure in susceptible patients, potassium loss, hypokalaemic aikkiosis, hypertension.

Musculoskeletal

Muscle weakness, loss of muscle mass, vertebral compression fractures, aseptic necrosis of femoral and humeral heads, steroid myopathy, osteoporosis, pathological fractures of long bones, severe arthraigia, tendon rupture (particularly of the Achilles tendon).

Gastrointestinal

Pancreatitis, abdominal distension, peptic ulcer with possible perforation and haemorrhage, ulcerative oesophagitis, gastric haemorrhage, perforation of the bowel.

Increases in alanine transaminase (ALT), aspartate transaminase (AST) and alkaline phosphatase have been observed following corticosteroid treatment. These changes are usually small, not associated with any clinical syndrome and are reversible upon discontinuation.

Dermatological

Impaired wound healing, petechiae and ecchymosis, increased sweating, thin fragile skin, facial erythema, may suppress reactions to skin tests.

Neurological

Convulsions, vertigo, headache, increased intracranial pressure with papilloedema (pseudotourneur cerebri) usually after treatment, psychic derangements.

Endocrine

Menstrual irregularities, development of cushingoid state, suppression of growth in children, decreased carbohydrate intolerance, manifestations of latent diabetes meliitus, increased requirements for insulin or oral hypoglycaemic agents in diabetic patients, secondary adrenocortical and pituitary unresponsiveness, particularly in times of stress, as in trauma, surgery or illness, suppression of pituitary adrenal axis.

Ophthalmic

Posterior subcapsular cataracts, increased intraocular pressure, glaucoma, exophthalmos.

Metabolic

Negative nitrogen balance due to protein catabolism.

Immune system

Masking of infections, latent infections becoming active, opportunistic infections, hypersensitivity reactions including anaphylaxis with or without circulatory collapse, cardiac arrest, bronchospasm or hypertension.

Cardiovascular

Myocardial rupture following a myocardial infarction; hypotension: cardiac arrhythmias.

Other

The following additional adverse reactions are related to parenteral corticosteroid therapy: hyperpigmentation or hypopigmentation; subcutaneous and cutaneous atrophy; sterile abscess; urticaria; nausea and vomiting.

Persistent hiccups with high doses of corticosteroids.

DOSAGE AND ADMINISTRATION:

This product is for single use in one patient only.

METHYLPRED may be administered by intravenous or intramuscular injection or by intravenous infusion, the preferred method for initial emergency use being intravenous injection.

To administer by intravenous (or intramuscular) injection, prepare solution as directed. The desired dose, if 250 mg or less, may be administered intravenously over at least five minutes. Intramuscular injections (250 mg or less) should be injected slowly into a large muscle. If desired, the medication may be administered in diluted solutions by adding water for injections and withdrawing the indicated dose.

When high dose therapy is desired (i.e. greater than 250 mg), the recommended dose of METHYLPRED sterile powder is 30 mg/kg administered intravenously over at least 30 minutes. (see Precautions, Adverse Reactions, and Overdosage.) This dose may be repeated every four to six hours for up to 48 hours. In general, high dose corticosteroid therapy should be continued only until the patient's condition has stabilised; usually not beyond 48 to 72 hours.

Although the adverse effects associated with high dose short-term corticoid therapy are uncommon, peptic ulceration may occur. Prophylactic antacid therapy may be indicated.

For other indications, initial dosage will vary from methylprednisolone 10 to 500 mg depending on the clinical problem being treated. The larger doses may be required for short-term management of severe, acute conditions. The initial dose, up to 250 mg, should be given intravenously over a period of at least five minutes, and if greater than 250 mg, then over at least 30 minutes. Subsequent doses may be given intravenously or intramuscularly at intervals dictated by the patient's response and clinical condition.

Corticoid therapy is an adjunct to, and not replacement for, conventional therapy.

Dosage may be reduced for infants but should be governed more by the severity of the condition and response of the patient than by age or size. It should not be less than 0.5 mg/kg every 24 hours.

Warning: Dosage must be decreased or discontinued gradually when the drug has been administered for more than a few days. If a period of spontaneous remission occurs in a chronic condition, treatment should be discontinued. Routine laboratory studies, such as urinalysis, two hour postprandial blood glucose, determination of blood pressure and bodyweight, and a chest X-ray should be made at regular intervals during prolonged therapy. The state of the upper gastrointestinal tract should be monitored in patients with a history of ulceration or significant dyspepsia.

Pneumocystis carinii pneumonia

For patients diagnosed with *Pneumocystis carinii* pneumonia (PCP), presenting with a PaO₂ (arterial oxygen pressure) under 55 mmHg on room air, or where respiratory failure is considered likely, the following regimen should be administered.

Administer METHYLPRED powder for injection 40 mg intravenously every six hours for five to seven days. Upon improvement, oral prednisolone should be instituted with the following tapering regimen: 60 mg (divided four times daily) for two days; 50 mg (divided twice daily) for two days; 40 mg (divided twice daily) for two days; 30 mg (divided twice daily) for two days; 20 mg (divided twice daily) for two days; 15 mg (divided twice daily) for two days; 10 mg (divided twice daily) for two days; 5 mg (divided twice daily) for two days, then cease.

Treatment with prednisolone should last a maximum of 21 days or until the end of antipneumocystis therapy.

The following four clinical points should be considered when using adjunctive corticosteroid therapy for AIDS related PCP:

1. Adjunctive corticosteroid therapy should be initiated early (within 72 hours of starting antipneumocystis therapy).
2. The diagnosis of PCP must be confirmed and other pulmonary pathogens ruled out because of the potential for masking symptoms of untreated infections.
3. Antimycobacterial therapy should be initiated along with antipneumocystis therapy in patients with a current positive PPD test or in other high risk patients.
4. Adjunctive corticosteroid therapy should be commenced with the maximum recommended dose. The duration of treatment at this dose should be dependent upon both the severity of the disease and the clinical response to therapy.

Following a satisfactory clinical response, a tapering regimen should be instituted. The use of a tapering regimen decreases the potential for relapse upon the discontinuation of corticosteroid therapy.

Multiple sclerosis

In the treatment of acute exacerbations of multiple sclerosis, daily doses of prednisolone 200 mg for one week followed by 80 mg every other day for one month have been shown to be effective (methylprednisolone 4 mg equiv. prednisolone 5 mg).

Recommended administration times

Intravenous use

Recommended intravenous administration times are based on the dose to be administered. Dosages greater than or equal to 500 mg should be given over at least 30 minutes and dosages less than or equal to 250 mg should be given over at least 5 minutes.

Intramuscular use

Intramuscular injections (250 mg or less) should be injected slowly into a large muscle.

Reconstitution of METHYLPRED

METHYLPRED should be reconstituted using bacteriostatic water for injections with benzyl alcohol or sterile water for injections. Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration whenever solution and container permit.

It is recommended that the reconstituted solution of METHYLPRED be used immediately upon preparation.

The volume of diluent recommended and the resulting concentration is as follows:

Product Strength	Recommended Concentration	Volume of Diluent
40mg	40mg/mL	1mL
125mg	62.5mg/mL	2mL
500mg	62.5mg/mL 125mg/mL	8mLs 4mLs
1.0g	62.5mg/mL 125mg/mL	16mLs 8mLs

Preparation of solutions for intravenous infusion

To prepare solutions for intravenous infusion, first prepare the solution for injection as directed above. This solution may then be added to glucose intravenous infusion 5%, sodium chloride intravenous infusion 0.9% or glucose 5% and sodium chloride 0.9% intravenous infusion: the resulting admixtures should be used immediately. This solution is for single use only.

Compatibility and stability

To avoid compatibility and stability problems, whenever possible it is recommended that METHYLPRED be administered separately from other drugs and as either an intravenous injection through an intravenous medication chamber, microburette or as an intravenous 'piggy-back' solution. The intravenous compatibility and stability of methylprednisolone sodium succinate, either alone in solution or in admixtures with other drugs, is dependent on pH, concentration, time, temperature and the ability of methylprednisolone to solubilise itself.

OVERDOSAGE:

Reports of acute toxicity and metabolic disturbances with glucocorticoids are rare but do occur. There is no clinical syndrome of acute overdose with METHYLPRED injection. Acute overdose may possibly aggravate pre-existing disease states, e.g. Ulceration of the gastrointestinal tract, electrolyte disturbances, infections, diabetes and oedema. Repeated high doses of methylprednisolone have caused hepatic necrosis and an increase in amylase. Bradyarrhythmias, ventricular arrhythmias and cardiac arrest have been observed in cases of intravenous administration of high doses of methylprednisolone.

Repeated frequent doses (daily or several times per week) over a protracted period may result in a cushingoid state. The possibility of adrenal suppression should be guarded against by gradual diminution of dose levels over a period of time.

Immediately telephone the Poisons Information Centre for advice on 13 11 26.

STORAGE:

Store below 25°C. Protect from light.

When reconstituted using bacteriostatic water for injections with benzyl alcohol, or sterile water for injections, the resulting solution should be used immediately. Discard any unused portion.

PRESENTATION:

METHYLPRED powder for injection is available in 4 strengths; 40 mg, 125 mg, 500 mg and 1.0 g.

All presentations are a white to off white lyophilized plug or powder.

40 mg: Packs of 1* and 5 vials.

125 mg: Packs of 1 and 5* vials.

500 mg: Packs of 1 and 5* vials.

1.0 g: Packs of 1 and 5* vials.

(* not currently distributed in Australia)

POISONS SCHEDULE:

Prescription only medicine (S4)

NAME AND ADDRESS OF SPONSOR:

Aspen Pharmacare Australia Pty Ltd
34-36 Chandos St
St Leonards NSW 2065

DATE OF TGA APPROVAL:

Approved by the Therapeutic Goods Administration: 31 March 2009
Date of most recent amendment: 19 November 2010