TABLE 244-2 PROPHYLAXIS OF PNEUMOCYSTOSIS

Drug(s)	Dose, Route	Comments
First-Choice Agent		
TMP-SMX	1 tablet (double- or single-strength) qd PO	Incidence of hypersensitivity is high. Rechallenge for non-life-threatening hypersensitivity; consider dose-escalation protocol.
Alternative Agents		
Dapsone	50 mg bid or 100 mg qd PO	Hemolysis is associated with G6PD deficiency.
Dapsone	50 mg qd PO	Leucovorin ameliorates cytopenias due to pyrimethamine.
plus		
Pyrimethamine	50 mg weekly PO	
plus		
Leucovorin	25 mg weekly PO	
Dapsone	200 mg weekly PO	Leucovorin ameliorates cytopenias due to pyrimethamine.
plus		
Pyrimethamine	75 mg weekly PO	
plus		
Leucovorin	25 mg weekly PO	
Pentamidine	300 mg monthly via Respirgard II nebulizer	Aerosol may cause bronchospasm. Pentamidine is probably less effective than TMP-SMX or dapsone regimens.
Atovaquone	1500 mg qd PO	Requires fatty meal for optimal absorption.

Abbreviations: G6PD, glucose-6-phosphate dehydrogenase; TMP-SMX, trimethoprim-sulfamethoxazole.

underlying disease and immunosuppressive regimen. Patients receiving a prolonged course of high-dose glucocorticoids appear to be particularly susceptible to PCP. The glucocorticoid exposure threshold that warrants chemoprophylaxis is controversial, but such preventive therapy should be strongly considered for any patient receiving more than the equivalent of 20 mg of prednisone daily for 30 days.

TMP-SMX is the most effective prophylactic drug: few patients experience a PCP breakthrough when they are reliably taking a recommended TMP-SMX chemoprophylactic regimen. Several TMP-SMX regimens have been used successfully. One double-strength tablet daily is the regimen with which there is the most experience, but either one single-strength tablet daily or one double-strength tablet two or three times weekly also has been recommended for various populations of patients.

For patients who cannot tolerate TMP-SMX (usually because of hypersensitivity or bone marrow suppression), alternative drugs include daily dapsone, weekly dapsone-pyrimethamine, and monthly aerosol pentamidine. Patients who develop hypersensitivity to TMP-SMX can sometimes tolerate the drug if a gradual dose-escalation protocol is used. Dapsone cross-reacts with sulfonamides in a substantial fraction of patients and therefore is rarely useful in patients with a history of life-threatening reactions to TMP-SMX. Aerosolized pentamidine is highly effective, but it is not as effective as TMP-SMX and may not provide protection in areas of the lung that are not well ventilated. Atovaquone is also effective and well tolerated; however, this drug is available only as an oral preparation, and gastrointestinal absorption is unpredictable in patients with abnormal gastrointestinal motility or function.