



DESCRIPTION	Ivermectin alters chloride channel function and acts as a GABA agonist in the parasite, resulting in paralysis and death of the parasite. ^{1,2} Ivermectin is used in the treatment of filariasis, onchocerciasis, strongyloidosis, crusted (Norwegian) scabies, headlice and cutaneous larva migrans. ³
ChAMP INDICATIONS AND RESTRICTIONS	Oral: Category B: Monitored ChAMP team to be informed of use and will review if ongoing therapy is required and does not meet specified indications. Standard Indications: <ul style="list-style-type: none"> • Strongyloidiasis – uncomplicated • Strongyloidiasis - immunocompromised patients • Strongyloidiasis – complicated or disseminated disease • Scabies – severe or refractory to topical therapy
FORMULATIONS	3mg tablet
DOSAGE	The doses listed below fall within the standard range. Higher doses may be prescribed for certain situations. This should be in consultation with Infectious Diseases or Microbiology consultants. Oral: For immunocompromised patients or complicated or disseminated infection extended treatment is necessary. Contact Infectious Diseases Physicians for further information. ^{1,4} Children > 15kg and over 5 years of age: Strongyloidiasis (uncomplicated): 0.2mg/kg as a single dose. Dose should be repeated 7 to 14 days later. ³ Strongyloidiasis (immunocompromised): 0.2mg/kg once daily on days 1,2,15 and 16. ^{3,4} Strongyloidiasis (complicated or disseminated disease): 0.2mg/kg once daily. ³ Length of therapy should be guided by Infectious disease or Clinical Microbiology. Scabies: 0.2mg/kg as a single dose repeated for up to 5 doses depending on severity. Contact Infectious Diseases for further information. ³ Refractory Head Lice: 0.2mg/kg as a single dose (only after topical treatment has failed). ³ Neonates and children under 5 years of age: Not routinely used in neonates or children less than 5 years of age, contact Infectious Disease or Microbiology consultants for advice.
DOSAGE ADJUSTMENT	There is limited information available, dose adjustment does not seem necessary in patients with renal or hepatic impairment. However care should be taken when administering ivermectin to these patients. ^{4,6}
RECONSTITUTION	Not applicable
ADMINISTRATION	Tablets should be administered on an empty stomach, half an hour before food. ^{2,7} When treating strongyloidiasis, tablets should be taken with a high fat meal to increase absorption. ^{3,4}
MONITORING	Patients should be monitored for symptomatic improvement. Stools should be checked to ensure that the treatment was effective for strongyloidiasis (generally one stool per month). ^{1,2,4,7} For patients with onchocerciasis, microfilarial counts of the skin and eye as well as ophthalmic exam should be performed at baseline and periodically during therapy. ^{2,7}
ADVERSE	Adverse effects are more common in patients with onchocerciasis due to allergic or inflammatory responses to the death of the parasite (Mazzotti reaction). ⁷ These

EFFECTS	<p>reactions generally occur within 3 days and tend to lessen with repeated courses.^{1,4}</p> <p>Common: diarrhoea, nausea, dizziness and somnolence. In onchocerciasis arthralgia, lymphadenopathy, itch, oedema, rash, fever, tachycardia, hypotension and temporary worsening of ocular symptoms occur in approximately one-third of patients.¹</p> <p>Rare: fatigue, abdominal pain, constipation, vomiting, tremor, rash, itch, headache, toxic epidermal necrolysis.¹</p>
COMPATIBLE FLUIDS	Not applicable
PRECAUTIONS	<p>Ivermectin is contraindicated in patients with a previous hypersensitivity reaction.^{2,7,8}</p> <p>Patients from Central or West Africa being treated for onchocerciasis should be assessed for co-infection with Loa loa due the increased risk of serious or fatal encephalopathy.^{1,2,4,6,7}</p>
COMMENTS	Ivermectin does not kill the adult worm in onchocerciasis, therefore it is likely further treatment will be required. ^{1,4}


****Please note:** The information contained in this guideline is to assist with the preparation and administration of **ivermectin**. Any variations to the doses recommended should be clarified with the prescriber prior to administration**

References:

1. Australian Medicines Handbook Pty Ltd. Australian Medicines Handbook [online] Adelaide (SA): Australian Medicines Handbook Pty Ltd accessed online 23rd July 2013.
2. Truven Health Analytics. Micromedex 2.0 [online] Michigan. Truven Health Analytics; Accessed 23rd July 2013.
3. Therapeutic Guidelines Ltd. eTG complete [online]. West Melbourne: Therapeutic Guidelines Ltd; accessed online 23rd July 2013.
4. Bidgood M, et al (editors) WHO Model Formulary for Children 2010. WHO Press pg.72.
5. Kemp CA, McDowell JM, editors. Paediatric Pharmacopoeia 13th edition. Melbourne: Pharmacy Department, Royal Children's Hospital; 2005. p.152.
6. Elsevier. Clinical Pharmacology [online]. Tampa (Florida): Elsevier BV; accessed online 23rd July 2013.
7. Taketomo CK, Hodding JH, Kraus DM, editors. Pediatric dosage handbook with international tradename index. 19th edition. Ohio: Lexi-Comp Inc;2012-2013. p. 955-957.
8. MIMS Australia Pty Ltd. MIMS [online]. St Leonards (NSW): CMPMedica Australia Pty Ltd; accessed online 23rd July 2013.

Disclaimer

The recommendations contained in this guideline provide direction for the use of **ivermectin** at Princess Margaret Hospital for Children in Perth, Western Australia. This guideline is intended for use at Princess Margaret Hospital for Children and is not necessarily suitable for use elsewhere. Princess Margaret Hospital (Child and Adolescent Health Service) accepts no liability for such use. The information provided is made available in good faith and is derived from sources believed to be reliable and accurate at the time of release. No assurance is given as to the accuracy of any information contained after publication on the Intranet. No part of this protocol may be reproduced, stored in a retrieval system or transmitted in any form, electronic, mechanical, photocopy or recording without prior permission of the publisher.

File Name and Path:	W:\Safety & Quality\CAHS\CLOVERS MEDICAL Pharmacy\Procedures Protocols and Guidelines\ChAMP		
Document Owner:	Children's Antimicrobial Management Program (ChAMP)		
Reviewer / Team:	Children's Antimicrobial Management Program Pharmacist		
Document Sponsor:	PMCCU		
Date First Issued:	October 2013	Version:	1
Last Revised:	October 2013	Review Date:	October 2015
Endorsed by:	DTC	Date:	21 st October 2013
Standards Applicable:	NSQHS Standards: 		
The accuracy of this document is not guaranteed when printed			