

Essential Drugs

WHO Model List: Sixth Revision

Section 1: Anaesthetics

GENERAL ANAESTHETICS AND OXYGEN

ether, anaesthetic (2)	inhalation
diazepam (1b, 2)	injection, 5 mg/ml in 2-ml ampoule
halothane (2)	inhalation
ketamine (2)	injection, 50 mg/ml in 10-ml vial
nitrous oxide (2)	inhalation
oxygen	inhalation (medicinal gas)
*thiopental (2)	powder for injection, 0.5 g, 1.0 g (sodium salt) in ampoule

LOCAL ANAESTHETICS

*bupivacaine (2, 9)	injection, 0.25%, 0.5% (hydrochloride) in vial
	injection for spinal anaesthesia, 0.5% (hydrochloride) in 4-ml ampoule to be mixed with 8% glucose
*lidocaine	injection, 1%, 2% (hydrochloride) in vial
	injection, 1%, 2% (hydrochloride) + epinephrine 1:200 000 in vial

injection for spinal anaesthesia,
5% (hydrochloride) in 2-ml ampoule
to be mixed with 7.5% glucose solution
topical forms, 2 - 4% (hydrochloride)
dental cartridge, 2% (hydrochloride)
+ epinephrine 1:80 000

PREOPERATIVE MEDICATION

atropine	injection, 1 mg (sulfate) in 1 ml ampoule
chloral hydrate	syrup, 200 mg/5 ml
*diazepam (1b)	injection, 5 mg/ml in 2-ml ampoule
*morphine (1a)	injection, 10 mg (sulfate or hydrochloride) in 1-ml ampoule
*promethazine	elixir or syrup, 5 mg (hydrochloride)/5 ml

Section 2: Analgesics, antipyretics, non-steroidal anti-inflammatory drugs and drugs used to treat gout

NON-OPIOIDS

acetylsalicylic acid	tablet, 100 - 500 mg suppository, 50 - 150 mg
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* Example of a therapeutic group. *Various drugs can serve as alternatives.*

Explanatory Notes

When the strength of the drug is specified in terms of a selected salt or ester, this is mentioned in brackets; when it refers to the active moiety, the name of the salt or ester in brackets is preceded by the word "as".

Numbers in parentheses following the drug names indicate:

- (1a) Drugs subject to international control under the Single Convention on Narcotic Drugs (1961);
- (1b) Drugs subject to international control under the Convention on Psychotropic Substances (1971);
- (2) Specific expertise, diagnostic precision, or special equipment required for proper use;
- (3) Greater potency or efficacy;

- (4) In renal insufficiency, contraindicated or dosage adjustments necessary;
- (5) To improve compliance;
- (6) Special pharmacokinetic properties for purpose;
- (7) Adverse effects limit benefit/risk ratio;
- (8) Limited indications or narrow spectrum of activity;
- (9) For epidural anaesthesia.

Letters in parentheses following the drug names indicate the reasons for the inclusion of *complementary drugs*:

- (A) When drugs in the main list cannot be made available;
- (B) When drugs in the main list are known to be ineffective or inappropriate for a given individual;
- (C) For use in rare disorders or in exceptional circumstances.

allopurinol (4)	tablet, 100 mg
colchicine (7)	tablet, 500 µg
*ibuprofen	tablet, 200 mg
*indometacin	capsule or tablet, 25 mg
paracetamol	tablet, 100 - 500 mg
	suppository, 100 mg
	syrup, 125 mg/5 ml

OPIOID ANALGESICS

*codeine (1a)	tablet, 30 mg (phosphate)
*morphine (1a)	injection, 10 mg (sulfate or hydrochloride) in 1-ml ampoule
	oral solution, 10 mg/5 ml
	tablet, 10 mg (sulfate)

Complementary drug

*pethidine (A) (1a, 4)	injection, 50 mg (hydrochloride) in 1-ml ampoule
	tablet, 50 mg, 100 mg (hydrochloride)

Section 3: Antiallergics and drugs used in anaphylaxis

*chlorphenamine	tablet, 4 mg (hydrogen maleate)
	injection, 10 mg (hydrogen maleate) in 1-ml ampoule
*dexamethasone	tablet, 500 µg, 4 mg
	injection, 4 mg (as sodium phosphate) in 1-ml ampoule
epinephrine	injection, 1 mg (as hydrochloride) in 1-ml ampoule
hydrocortisone	powder for injection, 100 mg (as sodium succinate) in vial
*prednisolone	tablet, 5 mg

Section 4: Antidotes and other substances used in poisonings

GENERAL

*charcoal, activated	powder
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ipecacuanha	syrup, containing 0.14% ipecacuanha alkaloids calculated as emetine
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SPECIFIC

atropine	injection, 1 mg (sulfate) in 1-ml ampoule
deferoxamine	powder for injection, 500 mg (mesilate) in vial
dimercaprol (2)	injection in oil, 50 mg/ml in 2-ml ampoule
*methionine	tablet, 250 mg (DL)
methylthioninium chloride (methylene blue)	injection, 10 mg/ml in 10-ml ampoule
naloxone	injection, 400 µg (hydrochloride) in 1-ml ampoule
penicillamine (2)	capsule or tablet, 250 mg
sodium calcium edetate (2)	injection, 200 mg/ml in 5-ml ampoule
sodium nitrite	injection, 30 mg/ml in 10-ml ampoule
sodium thiosulfate	injection, 250 mg/ml in 50-ml ampoule
potassium ferric hexacyanoferrate (II)·2H ₂ O (Prussian blue)	powder for oral administration

Section 5: Antiepileptics

carbamazepine	scored tablet, 100 mg, 200 mg
*diazepam (1b)	injection, 5 mg/ml in 2-ml ampoule (intravenous or rectal)
ethosuximide	capsule or tablet, 250 mg
	syrup, 250 mg/5 ml
phenobarbital (1b)	tablet, 15 - 100 mg
	elixir, 15 mg/5 ml
phenytoin	capsule or tablet, 25 mg, 100 mg (sodium salt)
	injection, 50 mg (sodium salt)/ml in 5-ml vial
valproic acid (7)	enteric coated tablet, 200 mg, 500 mg (sodium salt)

* Example of a therapeutic group. Various drugs can serve as alternatives.

Section 6: Anti-infective drugs

ANTHELMINTHICS

INTESTINAL ANTHELMINTHICS

albendazole	tablet, 200 mg
levamisole (8)	tablet, 50 mg, 150 mg
*mebendazole	chewable tablet, 100 mg
niclosamide	chewable tablet, 500 mg
piperazine	tablet, 500 mg hydrate (as adipate or citrate) elixir or syrup (as citrate) equivalent to 500 mg hydrate/5 ml
praziquantel	tablet, 150 mg, 600 mg
pyrantel	chewable tablet, 250 mg (as embonate) oral suspension, 50 mg (as embonate)/ml
tiabendazole	chewable tablet, 500 mg lotion, 500 mg/5 ml

ANTIFILARIALS

diethylcarbamazine	tablet, 50 mg (dihydrogen citrate)
ivermectin	scored tablet, 6 mg
suramin sodium (2, 7)	powder for injection, 1 g in vial

ANTISCHISTOSOMALS

metrifonate	tablet, 100 mg
oxamniquine	capsule, 250 mg syrup, 250 mg/5 ml
praziquantel	tablet, 600 mg

ANTIBACTERIALS

PENICILLINS

*amoxicillin	capsule or tablet, 250 mg, 500 mg (anhydrous) powder for oral suspension, 125 mg (anhydrous)/5 ml
ampicillin	powder for injection, 500 mg (as sodium salt) in vial
benzathine benzylpenicillin (5)	powder for injection, 1.44 g benzylpenicillin (= 2.4 million IU) in 5-ml vial

benzylpenicillin	powder for injection, 600 mg (= 1 million IU), 3 g (= 5 million IU) (as sodium or potassium salt) in vial
*cloxacillin	capsule, 500 mg (as sodium salt) powder for oral solution, 125 mg (as sodium salt)/5 ml powder for injection, 500 mg (as sodium salt) in vial
phenoxymethylpenicillin	tablet, 250 mg (as potassium salt) powder for oral suspension, 250 mg (as potassium salt)/5 ml
*piperacillin	powder for injection, 1 g, 2 g (as sodium salt) in vial
procaine benzylpenicillin	powder for injection, 1 g (= 1 million IU), 3 g (= 3 million IU)

OTHER ANTIBACTERIALS

*chloramphenicol (7)	capsule, 250 mg oral suspension, 150 mg/5 ml (as palmitate salt) powder for injection, 1 g (as sodium succinate) in vial
*erythromycin	capsule or tablet, 250 mg (as stearate or ethyl succinate) powder for oral suspension, 125 mg (as stearate or ethyl succinate) powder for injection, 500 mg (as lactobionate) in vial
*gentamicin (2, 4, 7)	injection, 10 mg, 40 mg (as sulfate)/ml in 2-ml vial
*metronidazole	tablet, 200 - 500 mg injection, 500 mg in 100-ml vial suppository, 500 mg, 1 g oral suspension, 200 mg (as benzoate)/5 ml
spectinomycin (8)	powder for injection, 2 g (as hydrochloride) in vial
*sulfadimidine (4)	tablet, 500 mg oral suspension, 500 mg/5 ml injection, 1 g (sodium salt) in 3-ml ampoule

* Example of a therapeutic group. Various drugs can serve as alternatives.

*sulfamethoxazole + trimethoprim (4)	tablet, 100 mg + 20 mg, 400 mg + 80 mg
	oral suspension, 200 mg + 40 mg/5 ml
*tetracycline	capsule or tablet, 250 mg (hydrochloride)
<i>Complementary drugs</i> doxycycline (B) (5, 6)	capsule or tablet, 100 mg (as hyclate)
	injection, 100 mg (as hyclate)/5 ml in ampoule
nitrofurantoin (B) (4, 7)	tablet, 100 mg
trimethoprim (B)	tablet, 100 mg, 200 mg

ANTILEPROSY DRUGS

clofazimine	capsule, 50 mg, 100 mg
dapsone	tablet, 50 mg, 100 mg
rifampicin	capsule or tablet, 150 mg, 300 mg

ANTITUBERCULOSIS DRUGS

ethambutol (4)	tablet, 100 - 400 mg (hydrochloride)
isoniazid	tablet, 100 - 300 mg
pyrazinamide	tablet, 500 mg
rifampicin	capsule or tablet, 150 mg, 300 mg
streptomycin (4)	powder for injection, 1 g (as sulfate) in vial
thioacetazone + isoniazid	tablet, 50 mg + 100 mg, 150 mg + 300 mg
rifampicin + isoniazid	tablet, 150 mg + 100 mg, 300 mg + 150 mg

ANTIFUNGAL DRUGS

amphotericin B (4)	powder for injection, 50 mg in vial
griseofulvin	capsule or tablet, 125 mg, 250 mg
*ketoconazole (2)	tablet, 200 mg
	oral suspension, 100 mg/5 ml
nystatin	tablet, 500 000 IU
	pessary, 100 000 IU
<i>Complementary drug</i> flucytosine (B) (4, 8)	capsule, 250 mg
	infusion, 2.5 g in 250 ml

ANTIPROTOZOAL DRUGS**ANTIAMOEBIAC AND
ANTI GIARDIASIS DRUGS**

*diloxanide	tablet, 500 mg (furoate)
*metronidazole	tablet, 200 - 500 mg
	injection, 500 mg in 100-ml vial
	oral suspension, 200 mg (as benzoate)/5 ml

Complementary drug

chloroquine (B)	tablet, 150 mg (as phosphate or sulfate)
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ANTILEISHMANIASIS DRUGS

*meglumine antimoniate	injection, 30%, equivalent to approx. 8.5% antimony in 5-ml ampoule
pentamidine (5)	powder for injection, 200 mg (as isetonate) in vial

ANTIMALARIAL DRUGS**(a) FOR CURATIVE TREATMENT**

*chloroquine	tablet, 150 mg (as phosphate or sulfate)
	syrup, 50 mg (as phosphate or sulfate)/5 ml
primaquine	tablet, 7.5 mg, 15 mg (as diphosphate)
quinine	tablet, 300 mg (as bisulfate or sulfate)
	injection, 300 mg (as dihydrochloride)/ml in 2-ml ampoule

Complementary drugs

mefloquine (B)	tablet, 250 mg (as hydrochloride)
*sulfadoxine + pyrimethamine (B)	tablet, 500 mg + 25 mg
*tetracycline (B)	capsule or tablet, 250 mg (hydrochloride)

(b) FOR PROPHYLAXIS

chloroquine	tablet, 150 mg (as phosphate or sulfate)
	syrup, 50 mg (as phosphate or sulfate)/5 ml
proguanil	tablet, 100 mg (hydrochloride)

* Example of a therapeutic group. *Various drugs can serve as alternatives.*

ANTITRYPANOSOMAL DRUGS**(a) AFRICAN TRYPANOSOMIASIS**

melarsoprol (5)	injection, 3.6% solution
pentamidine (5)	powder for injection, 200 mg (as isetionate) in vial
suramin sodium	powder for injection, 1 g in vial

(b) AMERICAN TRYPANOSOMIASIS

benznidazole (7)	tablet, 100 mg
nifurtimox (2, 8)	tablet, 30 mg, 120 mg, 250 mg

INSECT REPELLANTS

diethyltoluamide, generic name for <i>N,N</i> -diethyl- <i>m</i> -toluamide (DEET)	solution, 50%, 75%
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Section 7:**Antimigraine drugs****FOR TREATMENT OF ACUTE ATTACK**

acetylsalicylic acid	tablet, 300 - 500 mg
ergotamine (7)	tablet, 2 mg (tartrate)
paracetamol	tablet, 300 - 500 mg

FOR PROPHYLAXIS

*propranolol	tablet, 10 mg, 20 mg (hydrochloride)
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Section 8:**Antineoplastic and immunosuppressive drugs****IMMUNOSUPPRESSIVE DRUGS**

*azathioprine (2)	tablet, 50 mg
	powder for injection, 100 mg (as sodium salt) in vial

CYTOTOXIC DRUGS

bleomycin (2)	powder for injection, 15 mg (as sulfate) in vial
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cisplatin (2)	powder for injection, 10 mg, 50 mg in vial
cyclophosphamide (2)	tablet, 25 mg
	powder for injection, 500 mg in vial
cytarabine (2)	powder for injection, 100 mg in vial
dacarbazine (2)	powder for injection, 100 mg in vial
dactinomycin (2)	powder for injection, 500 µg in vial
*doxorubicin (2)	powder for injection, 10 mg, 50 mg (hydrochloride) in vial
etoposide (2)	capsule, 100 mg
	injection, 20 mg/ml in 5-ml ampoule
fluorouracil (2)	injection, 50 mg/ml in 5-ml ampoule
mercaptopurine (2)	tablet, 50 mg
methotrexate (2)	tablet, 2.5 mg (as sodium salt)
	injection, 50 mg (as sodium salt) in vial
procarbazine	capsule, 50 mg (as hydrochloride)
vinblastine (2)	powder for injection, 10 mg (sulfate) in vial
vincristine (2)	powder for injection, 1 mg, 5 mg (sulfate) in vial

Complementary drug

calcium folinate (C) (2) ¹	tablet, 15 mg
	injection, 3 mg/ml in 10-ml ampoule

HORMONES AND ANTIHORMONES

*dexamethasone	tablet, 500 µg, 4 mg
	injection, 4 mg (as sodium phosphate) in 1-ml ampoule
*ethinylestradiol	tablet, 50 µg
*prednisolone	tablet, 5 mg
	injection, 20 mg, 25 mg (as sodium phosphate or sodium succinate) in vial
tamoxifen	tablet, 10 mg, 20 mg (as citrate)

* Example of a therapeutic group. Various drugs can serve as alternatives.

¹ Drug for "rescue therapy" with methotrexate.

Section 9:**Antiparkinsonism drugs**

*biperiden	tablet, 2 mg (hydrochloride)
	injection, 5 mg (lactate) in 1-ml ampoule
levodopa + *carbidopa (5, 6)	tablet, 100 mg + 10 mg, 250 mg + 25 mg

Section 10:**Drugs affecting the blood****ANTIANAEMIA DRUGS**

ferrous salt	tablet, equivalent to 60 mg iron
	oral solution, equivalent to 25 mg iron (as sulfate) in 1 ml
ferrous salt + folic acid ²	tablet, 60 mg + 250 µg
folic acid (2)	tablet, 1 mg
	injection, 1 mg (as sodium salt) in 1-ml ampoule
hydroxocobalamin (2)	injection, 1 mg in 1-ml ampoule

Complementary drug

*iron dextran (B) (5)	injection, equivalent to 50 mg iron/ml in 2-ml ampoule
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ANTICOAGULANTS AND ANTAGONISTS

heparin	injection, 1000 IU/ml, 5000 IU/ml, 20 000 IU/ml in 1-ml ampoule
phytomenadione	injection, 10 mg/ml in 5-ml ampoule
protamine sulfate	injection, 10 mg/ml in 5-ml ampoule
*warfarin (2, 6)	tablet, 1, 2 and 5 mg (sodium salt)

Section 11:**Blood products and
blood substitutes****PLASMA SUBSTITUTES**

*dextran 70	injectable solution, 6%
*polygeline	injectable solution, 3.5%

PLASMA FRACTIONS FOR SPECIFIC USE ³

albumin, human (2, 8)	injectable solution, 5%
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Complementary drugs

*factor VIII concentrate (C) (2, 8)	(dried)
*factor IX complex (coagulation factors II, VII, IX, X) concentrate (C) (2, 8)	(dried)

Section 12:**Cardiovascular drugs****ANTIANGINAL DRUGS**

glyceryl trinitrate	tablet (sublingual), 500 µg
*isosorbide dinitrate	tablet (sublingual), 5 mg
*propranolol	tablet, 10 mg, 40 mg (hydrochloride)
	injection, 1 mg (hydrochloride) in 1-ml ampoule
*nifedipine	capsule or tablet, 10 mg

ANTIDYSRHYTHMIC DRUGS

lidocaine	injection, 20 mg (hydrochloride)/ml in 5-ml ampoule
*propranolol	tablet, 10 mg, 40 mg (hydrochloride)
	injection, 1 mg (hydrochloride) in 1-ml ampoule
verapamil (8)	tablet, 40 mg, 80 mg (hydrochloride)
	injection, 2.5 mg (hydrochloride)/ml in 2-ml ampoule

Complementary drugs

*procainamide (B)	tablet, 250 mg, 500 mg (hydrochloride)
	injection, 100 mg (hydrochloride)/ml in 10-ml ampoule
*quinidine (A)	tablet, 200 mg (sulfate)

ANTIHYPERTENSIVE DRUGS

*hydralazine	tablet, 25 mg, 50 mg (hydrochloride)
	powder for injection, 20 mg (hydrochloride) in ampoule
*hydrochlorothiazide	tablet, 25 mg, 50 mg
*nifedipine	capsule or tablet, 10 mg

* Example of a therapeutic group. *Various drugs can serve as alternatives.*

² Nutritional supplement for use during pregnancy.

³ All plasma fractions should comply with the WHO Requirements for the Collection, Processing and Quality Control of Blood, Blood Components, and Plasma Derivatives (Revised 1988). WHO Technical Report Series, No. 786, 1989.

*propranolol	tablet, 40 mg, 80 mg (hydrochloride)	silver sulfadiazine	cream, 1%, in 500-g container
		mupirocin	cream, 2%
Complementary drugs			
methyldopa (B) (7)	tablet, 250 mg	ANTI-INFLAMMATORY AND ANTIPRURITIC DRUGS	
*reserpine (A)	tablet, 100 µg, 250 µg injection, 1 mg in 1-ml ampoule	*betamethasone (3)	ointment or cream, 0.1% (as valerate)
*sodium nitroprusside (C) (2, 8)	powder for preparing infusion, 50 mg in ampoule	*calamine lotion	lotion
*captopril (B)	scored tablets, 25 mg	*hydrocortisone	ointment or cream, 1% (acetate)
CARDIAC GLYCOSIDES			
digoxin (4)	tablet, 62.5 µg, 250 µg oral solution, 50 µg/ml injection, 250 µg/ml in 2-ml ampoule	ASTRINGENT DRUGS	
		aluminium diacetate	solution, 13% for dilution
Complementary drug			
digitoxin (B) (6)	tablet, 50 µg, 100 µg oral solution, 1 mg/ml injection, 200 µg in 1-ml ampoule	KERATOPLASTIC AND KERATOLYTIC AGENTS	
		benzoyl peroxide	lotion or cream, 5%
		coal tar	solution, topical 5%
		dithranol	ointment, 0.1 - 2%
		fluorouracil	ointment, 5%
		*podophyllum resin (7)	solution, 10 - 25%
		salicylic acid	solution, topical 5%
DRUGS USED IN VASCULAR SHOCK			
dopamine	injection, 40 mg (hydrochloride)/ml in 5-ml vial	SCABICIDES AND PEDICULICIDES	
		benzyl benzoate	lotion, 25%
		lindane (7)	cream, lotion or powder, 1%
		permethrin	lotion
ANTITHROMBOTIC DRUGS			
acetylsalicylic acid	tablet, 100 mg	SUNBLOCKERS	
		para-aminobenzoic acid, SPF ¹⁵	cream, lotion or gel
		*benzophenones	cream, lotion or gel
Section 13: Dermatological drugs			
ANTIFUNGAL DRUGS (TOPICAL)			
benzoic acid + salicylic acid	ointment or cream, 6% + 3%	Section 14: Diagnostic agents	
*miconazole	ointment or cream, 2% (nitrate)	OPHTHALMIC DRUGS	
nystatin	ointment or cream, 100 000 IU/g	fluorescein	eye drops, 1% (sodium salt)
		*tropicamide	eye drops, 0.5%
Complementary Drug			
selenium sulfide (C)	shampoo, 2%	RADIOCONTRAST MEDIA	
ANTI-INFECTIVE DRUGS			
*methylrosanilinium chloride (gentian violet)	aqueous solution, 1% tincture, 1%	*amidotrizoate	injection, 140 - 420 mg iodine (as sodium or meglumine salts)/ml in 20-ml ampoule
*neomycin + *bacitracin	ointment, 5 mg neomycin sulfate + 500 IU bacitracin zinc/g	barium sulfate	powder suspended in water
		*iopanoic acid	tablet, 500 mg

* Example of a therapeutic group. Various drugs can serve as alternatives.

*propylidone oily suspension,
500-600 mg/ml in 20-ml ampoule⁴

Complementary drug

*iotroxate (C) solution, 5 - 8 g iodine
(as meglumine) in 100-250 ml

Section 15: Disinfectants

*chlorhexidine solution, 5% (digluconate)
for dilution

hydrogen peroxide solution, 1.5%

*iodine solution, 2.5%

Section 16: Diuretics

*amiloride (4, 7, 8) tablet, 5 mg (hydrochloride)

*furosemide tablet, 40 mg

injection, 10 mg/ml in
2-ml ampoule

*hydrochlorothiazide tablet, 25 mg, 50 mg

Complementary drugs

mannitol (C) injectable solution, 10%, 20%

spironolactone (C) tablet, 25 mg

Section 17: Gastrointestinal drugs

ANTACIDS AND OTHER ANTIULCER DRUGS

aluminium hydroxide tablet, 500 mg

oral suspension, 320 mg/5 ml

*cimetidine tablet, 200 mg

injection, 200 mg in 2-ml ampoule

magnesium hydroxide oral suspension,
equivalent to 550 mg
magnesium oxide/10 ml

sodium citrate oral solution, 8.82% (0.3 mol/l)

ANTIEMETIC DRUGS

metoclopramide tablet, 10 mg (as hydrochloride)

injection, 5 mg (as hydrochloride)/ml
in 2-ml ampoule

*promethazine tablet, 10 mg,
25 mg (hydrochloride)

elixir or syrup, 5 mg
(hydrochloride)/5 ml

injection, 25 mg (hydrochloride)/ml
in 2-ml ampoule

ANTIHAEMORRHOIDAL DRUGS

*local anaesthetic, astringent ointment
and anti-inflammatory drug or suppository

ANTI-INFLAMMATORY DRUGS

hydrocortisone suppositories, 25 mg (acetate)

sulfasalazine (2) tablet, 500 mg

ANTISPASMODIC DRUGS

*atropine tablet, 1 mg (sulfate)

injection, 1 mg (sulfate)
in 1-ml ampoule

CATHARTIC DRUGS

*senna tablet, 7.5 mg (sennosides)
(or traditional dosage forms)

DRUGS USED IN DIARRHOEA**ORAL REHYDRATION SALTS**

powder for reconstitution to prepare
glucose-electrolyte solution powder, 27.9 g/l

G lucose-electrolyte solution	g/l
sodium chloride	3.5
trisodium citrate dihydrate ⁵	2.9
potassium chloride	1.5
glucose	20.0

ANTIDIARRHOEAL (SYMPTOMATIC) DRUGS

*codeine (1a) tablet, 30 mg (phosphate)

* Example of a therapeutic group. *Various drugs can serve as alternatives.*

⁴ This suspension is for administration only into the bronchial tree.

⁵ Trisodium citrate dihydrate may be replaced by sodium bicarbonate (sodium hydrogen carbonate) 2.5g/L. However, as the stability of this latter formulation is very poor under tropical conditions, it is only recommended when manufactured for immediate use.

Section 18

Hormones, other endocrine drugs and contraceptives

ADRENAL HORMONES AND SYNTHETIC SUBSTITUTES

*dexamethasone	tablet, 500 µg, 4 mg injection, 4 mg (as sodium phosphate) in 1-ml ampoule
hydrocortisone	powder for injection, 100 mg (as sodium succinate) in vial
*prednisolone	tablet, 1 mg, 5 mg

Complementary drug

fludrocortisone (C)	tablet, 100 µg (acetate)
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ANDROGENS

Complementary drug

testosterone (C) (2)	injection, 200 mg (enantate) in 1-ml ampoule
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CONTRACEPTIVES

HORMONAL CONTRACEPTIVES

*ethinylestradiol + *levonorgestrel	tablet, 30 µg + 150 µg, 50 µg + 250 µg
*ethinylestradiol + *norethisterone	tablet, 50 µg + 1.0 mg

Complementary drugs

depot medroxyprogesterone acetate (B) (7, 8)	injection, 150 mg/ml in 1-ml, 3-ml vials
*norethisterone (B)	tablet, 350 µg
norethisterone enantate (B) (7, 8)	injection, 200 mg in vial

INTRAUTERINE DEVICES

copper-containing device

BARRIER METHODS

condoms with or without spermicide (nonoxinol)

diaphragms with spermicide (nonoxinol)

ESTROGENS

*ethinylestradiol tablet, 50 µg

INSULINS AND OTHER ANTIDIABETIC AGENTS

insulin injection (soluble)	injection, 40 IU/ml in 10-ml vial, 80 IU/ml in 10-ml vial, 100 IU/ml in 10-ml vial
intermediate-acting insulin	injection, 40 IU/ml in 10-ml vial, 80 IU/ml in 10-ml vial, 100 IU/ml in 10-ml vial (as compound insulin zinc suspension or isophane insulin)
*tolbutamide	tablet, 500 mg

OVULATION INDUCERS

Complementary drug

*clomifene (C) (2, 8) tablet, 50 mg (citrate)

PROGESTOGENS

norethisterone tablet, 5 mg

THYROID HORMONES AND ANTITHYROID DRUGS

levothyroxine	tablet, 50 µg, 100 µg (sodium salt)
potassium iodide	tablet, 60 mg
*propylthiouracil	tablet, 50 mg

Section 19:

Immunologicals

DIAGNOSTIC AGENTS

tuberculin,⁶ injection
purified protein derivative (PPD)

SERA AND IMMUNOGLOBULINS⁷

anti-D immunoglobulin (human)	injection, 250 µg/ml
antirabies hyperimmune serum	injection, 1000 IU in 5-ml ampoule
antitetanus immunoglobulin (human)	injection, 500 IU in vial

* Example of a therapeutic group. Various drugs can serve as alternatives.

⁶ All tuberculins should comply with the WHO Requirements for Tuberculins (Revised 1985). WHO Technical Report Series, No. 745, 1987.

⁷ All plasma fractions should comply with the WHO Requirements for the Collection, Processing and Quality Control of Blood, Blood Components and Plasma Derivatives (Revised 1988). WHO Technical Report Series, No. 786, 1989.

antivenom sera	injection	suxamethonium (2)	injection, 50 mg (chloride)/ml in 2-ml ampoule
antiscorpion sera	injection		
diphtheria antitoxin	injection, 10 000 IU, 20 000 IU in vial		powder for injection (chloride)
immunoglobulin, human normal (2)	injection	<i>Complementary drug</i> pyridostigmine (B) (2, 8)	tablet, 60 mg (bromide) injection, 1 mg (bromide) in 1-ml ampoule
tetanus antitoxin	injection, 50 000 IU in vial		

VACCINES^a**FOR UNIVERSAL IMMUNIZATION**

BCG vaccine (dried)	injection
diphtheria-pertussis-tetanus vaccine	injection
diphtheria-tetanus vaccine	injection
measles vaccine	injection
measles-mumps-rubella vaccine	injection
poliomyelitis vaccine (inactivated)	injection
poliomyelitis vaccine (live attenuated)	oral solution
tetanus vaccine	injection

FOR SPECIFIC GROUPS OF INDIVIDUALS

hepatitis B vaccine	injection
influenza vaccine	injection
meningococcal vaccine	injection
rabies vaccine	injection
rubella vaccine	injection
typhoid vaccine	injection
yellow fever vaccine	injection

Section 20:**Muscle relaxants
(peripherally acting) and
cholinesterase inhibitors**

*gallamine (2)	injection, 40 mg (triethiodide)/ml in 2-ml ampoule
*neostigmine	tablet, 15 mg (bromide) injection, 500 µg, 2.5 mg (metilsulfate) in 1-ml ampoule

Section 21:**Ophthalmological preparations****ANTI-INFECTIVE AGENTS**

*idoxuridine	solution (eye drops), 0.1% eye ointment, 0.2%
gentamicin	solution (eye drops), 0.3%
silver nitrate	solution (eye drops), 1%
*tetracycline	eye ointment, 1% (hydrochloride)

ANTI-INFLAMMATORY AGENTS

prednisolone	eye drops, 0.5%
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LOCAL ANAESTHETICS

*tetracaine	solution (eye drops), 0.5% (hydrochloride)
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MIOTICS AND ANTIGLAUCOMA DRUGS

acetazolamide	tablet, 250 mg
*pilocarpine	solution (eye drops), 2%, 4% (hydrochloride or nitrate)
*timolol	solution (eye drops), 0.25%, 0.5% (maleate)

MYDRIATICS

atropine	solution (eye drops), 0.1%, 0.5%, 1%
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Complementary drug

epinephrine (A)	solution (eye drops), 2% (as hydrochloride)
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Section 22:**Oxytocics and antioxytocics****OXYTOCICS**

*ergometrine	tablet, 200 µg (maleate) injection, 200 µg (maleate) in 1-ml ampoule
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* Example of a therapeutic group. *Various drugs can serve as alternatives.*^a All vaccines should comply with the WHO Requirements for Biological Substances.

oxytocin injection, 10 IU in 1-ml ampoule

ANTIOXYTOCICS

*salbutamol (2) tablet, 4 mg (as sulfate)
injection, 50 µg (as sulfate)/ml
in 5-ml ampoule

Section 23:**Peritoneal dialysis solution**

intraperitoneal dialysis solution parenteral solution
(of appropriate composition)

Section 24:**Psychotherapeutic drugs**

*amitriptyline tablet, 25 mg (hydrochloride)
*chlorpromazine tablet, 100 mg (hydrochloride)
syrup, 25 mg (hydrochloride)/5 ml
injection, 25 mg (hydrochloride)/ml
in 2-ml ampoule
*diazepam (1b) scored tablet, 2 mg, 5 mg
*fluphenazine (5) injection, 25 mg
(decanoate or enantate)
in 1-ml ampoule
*haloperidol tablet, 2 mg, 5 mg
injection, 5 mg in 1-ml ampoule
lithium carbonate (2, 4) capsule or tablet, 300 mg

Section 25:**Drugs acting on the respiratory tract****ANTIASTHMATIC DRUGS**

*aminophylline (2) tablet, 100 mg, 200 mg
injection, 25 mg/ml in 10-ml ampoule
beclometasone inhalation (aerosol), 50 µg
(dipropionate) per dose
epinephrine injection, 1 mg (as hydrochloride)
in 1-ml ampoule

*salbutamol tablet, 2 mg, 4 mg (as sulfate)
inhalation (aerosol), 100 µg
(sulfate) per dose
syrup, 2 mg (as sulfate)/5 ml
injection, 50 µg (as sulfate)/ml
in 5-ml ampoule

Complementary drugs

*cromoglicic acid (B) inhalation (cartridge),
20 mg (sodium salt) per dose
ephedrine (A) tablet, 30 mg (hydrochloride)
elixir, 15 mg (hydrochloride)/5 ml
injection, 50 mg (sulfate)
in 1-ml ampoule

ANTITUSSIVES

*codeine (1a) tablet, 10 mg (phosphate)

Section 26:**Solutions correcting water, electrolyte and acid-base disturbances****ORAL REHYDRATION**

oral rehydration salts see section 17
potassium chloride oral solution

PARENTERAL

*compound solution of sodium lactate injectable solution
glucose injectable solution,
5% isotonic, 50% hypertonic
glucose with sodium chloride 4% glucose, 0.18% sodium chloride
(Na⁺ 30 mmol/L, Cl⁻ 30 mmol/l) injectable solution,
potassium chloride injectable solution
sodium bicarbonate injectable solution, 1.4%
isotonic (Na⁺ 167 mmol/l,
HCO₃⁻ 167 mmol/l);
8.4% solution in 10-ml ampoule
sodium chloride injectable solution, 0.9%
isotonic (Na⁺ 154 mmol/l,
Cl⁻ 154 mmol/l)

* Example of a therapeutic group. Various drugs can serve as alternatives.

MISCELLANEOUS

water for injection in 2-ml, 5-ml, 10-ml ampoules

Section 27:**Vitamins and minerals**

*ergocalciferol capsule or tablet, 1.25 mg (50 000 IU)

oral solution, 250 µg/ml (10 000 IU/ml)

iodine (8) injection, iodinated oil, 1 ml (480 mg iodine), 0.5 ml (240 mg iodine) in 5-ml and 10-ml ampoules

oral iodinated oil, 1 ml (480 mg iodine), 0.5 ml (240 mg iodine) in 5-ml and 10-ml ampoules

capsule, 200 mg

*nicotinamide tablet, 50 mg

pyridoxine tablet, 25 mg (hydrochloride)

*retinol sugar-coated tablet, 10 000 IU (as palmitate) (5.5 mg)

capsule, 200 000 IU (as palmitate) (110 mg)

oral oily solution, 100 000 IU/ml in multidose dispenser (as palmitate)

water-miscible injection, 100 000 IU (as palmitate) (55 mg) in 2-ml ampoule

riboflavin tablet, 5 mg

sodium fluoride (8) tablet, 500 µg

thiamine tablet, 50 mg (hydrochloride)

Complementary drugs

ascorbic acid (C) tablet, 50 mg

calcium gluconate (C), (2, 8) injection, 100 mg/ml in 10-ml ampoule

* Example of a therapeutic group. *Various drugs can*

WHO Expert Committee on the Use of Essential Drugs

The WHO Expert Committee on the Use of Essential Drugs met in Geneva from 27 November to 2 December 1989. The full report of this meeting, containing the sixth revision of the model list in final form, will appear shortly in the WHO Technical Report Series.

Members

Dr E.A. Babajan, Board for the Approval of New Drugs and Medical Equipment, Ministry of Health, Moscow, USSR.

Professor M. Duran, Javeriana University, Bogota, Colombia.

Dr A. Kucers, Director of Medical Services, Fairfield Hospital, Fairfield, Victoria, Australia.

Professor Li Jia Tai, Director, Institute of Clinical Pharmacology, Beijing, China.

Professor M.M. Reidenberg, Head, Division of Clinical Pharmacology, The New York Hospital, New York, USA (*Rapporteur*).

Dr Chiravat Sadavongvivad, Department of Pharmacology, Mahidol University, Bangkok, Thailand.

Professor L.A. Salako, Department of Pharmacology and Therapeutics, University of Ibadan, Nigeria (*Chairman*).

Other organizations represented by observers:

United Nations Children's Fund (UNICEF).
Commonwealth Pharmaceutical Association (CPA).
International Pharmaceutical Federation (FIP).
International Federation of Pharmaceutical Manufacturers Associations (IFPMA).
International Union of Pharmacology (IUPHAR).
World Federation of Proprietary Medicines Manufacturers (WFPMM).

In revising the model list of essential drugs the Committee made the following changes:

Deletions: probenecid, dehydroemetine, sodium stilboglucuronate, sulfacetamide, hydrocortisone, nomatropine, iohexol, oral ampicillin.

Additions: potassium ferric hexacyanoferrate (II)•2H₂O (Prussian blue), albendazole, amoxicillin, rifampicin + isoniazid, diethyltoluamide, dacarbazine, polygeline, captopril, selenium sulfide, mupirocin, benzoyl peroxide, permethrin, para-aminobenzoic acid, SPF¹⁵, benzophenones, iohexol, hydrogen peroxide, measles-mumps-rubella vaccine, iodinated oil.