

Essential Medicines

WHO Model List (revised April 2003)

Explanatory Notes

The **core list** presents a list of minimum medicine needs for a basic health care system, listing the most efficacious, safe and cost-effective medicines for priority conditions. Priority conditions are selected on the basis of current and estimated future public health relevance, and potential for safe and cost-effective treatment.

The **complementary list** presents essential medicines for priority diseases, for which specialized diagnostic or monitoring facilities, and/or specialist medical care, and/or specialist training are needed. In case of doubt medicines may also be listed as complementary on the basis of consistent higher costs or less attractive cost-effectiveness in a variety of settings.

When the strength of a 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".

The square box symbol (?) is primarily intended to indicate similar clinical performance within a pharmacological class. The listed medicine should be the example of the class for which there is the best evidence for effectiveness and safety. In some cases, this may be the first medicine that is licensed for marketing; in other instances, subsequently licensed compounds may be safer or more effective. Where there is no difference in terms of efficacy and safety data, the listed medicine should be the one that is generally available at the lowest price, based on international drug price information sources.

Therapeutic equivalence is only indicated on the basis of reviews of efficacy and safety and when consistent with WHO clinical guidelines. National lists should not use a similar symbol and should be specific in their final selection, which would depend on local availability and price."

Drugs are listed in alphabetical order, within sections.

1. ANAESTHETICS	
1.1 General anaesthetics and oxygen	
ether, anaesthetic *	inhalation * the public health relevance and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
halothane	inhalation
ketamine	injection, 50 mg (as hydrochloride)/ml in 10-ml vial
nitrous oxide	inhalation
oxygen	inhalation (medicinal gas)
? thiopental	powder for injection, 0.5 g, 1.0 g (sodium salt) in ampoule
1.2 Local anaesthetics	
? bupivacaine	injection, 0.25%, 0.5% (hydrochloride) in vial injection for spinal anaesthesia, 0.5% (hydrochloride) in 4-ml ampoule to be mixed with 7.5% glucose solution
? lidocaine	injection, 1%, 2% (hydrochloride) 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)
? lidocaine + epinephrine (adrenaline)	injection 1%, 2% (hydrochloride)+ epinephrine 1:200 000 in vial; dental cartridge 2% (hydrochloride) + epinephrine 1:80 000
<i>Complementary List</i>	
<i>ephedrine</i>	injection, 30 mg (hydrochloride)/ml in 1-ml ampoule (For use in spinal anaesthesia during delivery, to prevent hypotension)
1.3 Preoperative medication and sedation for short-term procedures	
atropine	injection, 1 mg (sulfate) in 1-ml ampoule
? diazepam	injection, 5 mg/ml in 2-ml ampoule; tablet, 5 mg
morphine	injection, 10 mg (sulfate or hydrochloride) in 1-ml ampoule
promethazine	elixir or syrup, 5 mg (hydrochloride)/5ml
2. ANALGESICS, ANTIPYRETICS, NON-STEROIDAL ANTI-INFLAMMATORY MEDICINES (NSAIDs), MEDICINES USED TO TREAT GOUT AND DISEASE MODIFYING AGENTS IN RHEUMATOID DISORDERS (DMARDs)	
2.1 Non-opioids and non-steroidal anti-inflammatory medicines (NSAIDs)	
acetylsalicylic acid	tablet, 100-500 mg; suppository, 50-150 mg
ibuprofen	tablet, 200 mg, 400 mg
paracetamol *	tablet, 100-500 mg; suppository, 100 mg; syrup, 125 mg/5ml * not recommended for anti-inflammatory use due to lack of proven benefit to that effect

2.2 Opioid analgesics	
codeine	tablet, 30 mg (phosphate)
morphine	injection, 10 mg in 1-ml ampoule (sulfate or hydrochloride); oral solution, 10 mg (hydrochloride or sulfate)/5 ml; tablet, 10 mg (sulfate)
2.3 Medicines used to treat gout	
allopurinol	tablet, 100 mg
colchicine *	tablet, 500 micrograms * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
2.4 Disease modifying agents used in rheumatoid disorders (DMARDs)	
chloroquine	tablet, 100 mg, 150 mg (as phosphate or sulfate)
<i>Complementary List</i>	
azathioprine	tablet, 50 mg
methotrexate	tablet, 2.5 mg (as sodium salt)
penicillamine	capsule or tablet, 250 mg
sulfasalazine	tablet, 500 mg
3. ANTIALLERGICS AND MEDICINES USED IN ANAPHYLAXIS	
? chlorphenamine	tablet, 4 mg (hydrogen maleate); injection, 10 mg (hydrogen maleate) in 1-ml ampoule
dexamethasone	injection, 4 mg dexamethasone phosphate (as disodium salt) in 1-ml ampoule
epinephrine (adrenaline)	injection, 1 mg (as hydrochloride or hydrogen tartrate) in 1-ml ampoule
hydrocortisone	powder for injection, 100 mg (as sodium succinate) in vial
? prednisolone *	tablet, 5 mg, 25 mg * there is no evidence for complete clinical similarity between prednisolone and dexamethasone at high doses.
4. ANTIDOTES AND OTHER SUBSTANCES USED IN POISONING	
4.1 Non-specific	
charcoal, activated	powder
4.2 Specific	
acetylcysteine	injection, 200 mg/ml in 10-ml ampoule
atropine	injection, 1 mg (sulfate) in 1-ml ampoule
calcium gluconate *	injection, 100 mg/ml in 10-ml ampoule * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
deferoxamine	powder for injection, 500 mg (mesilate) in vial

dimercaprol	injection in oil, 50 mg/ml in 2-ml ampoule
DL-methionine	tablet, 250 mg
methylthioninium chloride (methylene blue)	injection, 10 mg/ml in 10-ml ampoule
naloxone	injection, 400 micrograms (hydrochloride) in 1-ml ampoule
penicillamine	capsule or tablet, 250 mg
potassium ferric hexacyano- ferrate(II) · 2H ₂ O (Prussian blue)	powder for oral administration
sodium calcium edetate	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
5. ANTICONVULSANTS/ANTIEPILEPTICS	
carbamazepine	scored tablet, 100 mg, 200 mg
[?] diazepam	injection, 5 mg/ml in 2-ml ampoule (intravenous or rectal)
magnesium sulfate*	injection, 500 mg/ml in 2-ml ampoule; 500mg/ml in 10-ml ampoule * for use in eclampsia and severe pre-eclampsia and not for other convulsant disorders.
phenobarbital	tablet, 15-100 mg; elixir, 15 mg/5ml
phenytoin	capsule or tablet, 25 mg, 50 mg, 100 mg (sodium salt); injection, 50 mg/ml in 5-ml vial (sodium salt)
valproic acid	enteric coated tablet, 200 mg, 500 mg (sodium salt)
<i>Complementary List</i>	
[?] clonazepam *	scored tablet 500 micrograms * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
ethosuximide	capsule, 250 mg; syrup, 250 mg/5ml
6. ANTI-INFECTIVE MEDICINES	
6.1 Anthelmintics	
<i>6.1.1 Intestinal anthelmintics</i>	
albendazole	chewable tablet, 400 mg
levamisole	tablet, 50 mg; 150 mg (as hydrochloride)
[?] mebendazole	chewable tablet, 100 mg, 500 mg
niclosamide *	chewable tablet, 500 mg * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.

praziquantel	tablet, 150 mg, 600 mg
pyrantel *	chewable tablet 250 mg (as embonate); oral suspension, 50 mg (as embonate)/ml * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
<i>6.1.2 Antifilarials</i>	
ivermectin	scored tablet, 3 mg, 6 mg
<i>Complementary List</i>	
<i>diethylcarbamazine</i>	tablet, 50 mg, 100 mg (dihydrogen citrate)
<i>suramin sodium</i>	powder for injection, 1 g in vial
<i>6.1.3 Antischistosomes and antitremitode medicines</i>	
praziquantel	tablet, 600 mg
triclabendazole *	tablet, 250 mg * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
<i>Complementary List</i>	
<i>oxamniquine</i> *	capsule, 250 mg; syrup, 250 mg/5ml * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
6.2 Antibacterials	
<i>6.2.1 Beta Lactam medicines</i>	
amoxicillin	capsule or tablet, 250 mg, 500 mg (anhydrous); powder for oral suspension, 125 mg (anhydrous)/5 ml
amoxicillin + clavulanic acid	tablet, 500 mg + 125 mg
ampicillin	powder for injection, 500 mg, 1 g (as sodium salt) in vial
benzathine benzylpenicillin	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) (sodium or potassium salt) in vial
? dicloxacillin	capsule, 250 mg, 500 mg (as sodium salt)
phenoxymethylpenicillin	tablet, 250 mg (as potassium salt); powder for oral suspension, 250 mg (as potassium salt)/5 ml
procaine benzylpenicillin	powder for injection, 1 g (=1 million IU), 3 g (=3 million IU) in vial
<i>Complementary List</i>	
<i>ceftazidime</i>	powder for injection, 250 mg (as pentahydrate) in vial
? <i>ceftriaxone</i>	powder for injection, 250 mg (as sodium salt) in vial

<i>imipenem</i> * + <i>cilastatin</i> *	powder for injection 250 mg (as monohydrate) + 250 mg (as sodium salt), 500 mg (as monohydrate) + 500 mg (as sodium salt) in vial * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
6.2.2 Other antibacterials	
azithromycin *	capsule, 250 mg or 500 mg; suspension 200 mg/5 ml * only listed for single dose treatment of genital <i>C.trachomatis</i> and of trachoma.
chloramphenicol	capsule, 250 mg; oral suspension, 150 mg (as palmitate)/5 ml; powder for injection, 1 g (sodium succinate) in vial; oily suspension for injection 0.5 g (as sodium succinate)/ml in 2-ml ampoule
? ciprofloxacin *	tablet 250 mg (as hydrochloride) * final selection depends on indication for use
doxycycline *	capsule or tablet, 100 mg (hydrochloride) * final selection depends on indication for use
? 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 *	injection, 10 mg, 40 mg (as sulfate)/ml in 2-ml vial * final selection depends on indication for use
? 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
nalidixic acid *	tablet 250 mg, 500 mg * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
nitrofurantoin	tablet, 100 mg
spectinomycin *	powder for injection, 2 g (as hydrochloride) in vial * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
sulfamethoxazole + trimethoprim	tablet, 100 mg + 20 mg, 400 mg + 80 mg; oral suspension, 200 mg + 40 mg/5 ml; injection, 80 mg + 16 mg/ml in 5-ml and 10-ml ampoules
trimethoprim	tablet, 100 mg, 200 mg
Complementary List	
<i>clindamycin</i>	capsule, 150 mg; injection, 150 mg (as phosphate)/ml
<i>sulfadiazine</i>	tablet, 500 mg; injection, 250 mg (sodium salt) in 4-ml ampoule
<i>vancomycin</i>	powder for injection, 250 mg (as hydrochloride) in vial
6.2.3 Antileprosy medicines	

<p>Medicines used in the treatment of leprosy should never be used except in combination. Combination therapy is essential to prevent the emergence of drug resistance. Colour coded blister packs (MDT blister packs) containing standard two medicine (paucibacillary leprosy) or three medicine (multibacillary leprosy) combinations for adult and childhood leprosy should be used. MDT blister packs can be supplied free of charge through WHO.</p>	
clofazimine	capsule, 50 mg, 100 mg
dapsone	tablet, 25 mg, 50 mg, 100 mg
rifampicin	capsule or tablet, 150 mg, 300 mg
<i>6.2.4 Antituberculosis medicines</i>	
ethambutol	tablet, 100 mg-400 mg (hydrochloride)
isoniazid	tablet, 100 -300 mg
isoniazid + ethambutol	tablet, 150 mg + 400 mg
pyrazinamide	tablet, 400 mg
rifampicin	capsule or tablet, 150 mg, 300 mg
rifampicin + isoniazid	tablet, 60 mg + 30 mg; 150 mg + 75 mg; 300 mg + 150 mg; 60 mg + 60 mg (<i>For intermittent use three times weekly</i>); 150 mg + 150 mg (<i>For intermittent use three times weekly</i>)
rifampicin + isoniazid + pyrazinamide	tablet, 60 mg + 30 mg + 150 mg; 150 mg + 75 mg + 400 mg 150 mg + 150 mg + 500 mg (<i>For intermittent use three times weekly.</i>)
rifampicin + isoniazid + pyrazinamide + ethambutol	tablet, 150 mg + 75 mg +400 mg + 275 mg
streptomycin	powder for injection, 1 g (as sulfate) in vial
<i>Complementary List</i>	
<i>thioacetazone</i> * + <i>isoniazid</i> *	tablet, 50 mg + 100 mg; 150 mg + 300 mg * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
<i>Reserve second-line drugs for the treatment of multidrug-resistant tuberculosis (MDR-TB) should be used in specialized centres adhering to WHO standards for TB control. (D)</i>	
<i>amikacin</i>	powder for injection, 1000 mg in vial
<i>p-aminosalicylic acid</i>	tablet, 500 mg; granules, 4 g in sachet
<i>capreomycin</i>	powder for injection, 1000 mg in vial
<i>ciprofloxacin</i>	tablet, 250 mg, 500 mg
<i>cycloserine</i>	capsule or tablet, 250 mg
<i>ethionamide</i>	tablet, 125 mg, 250 mg
<i>kanamycin</i>	powder for injection, 1000 mg in vial
<i>levofloxacin</i> *	tablet, 250 mg, 500 mg * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be

	reviewed at the next meeting of the Expert Committee.
<i>ofloxacin</i>	tablet, 200 mg, 400 mg
6.3 Antifungal medicines	
? fluconazole	capsule 50 mg; injection 2 mg/ml in vial; oral suspension 50 mg/5-ml
griseofulvin	capsule or tablet, 125 mg, 250 mg
nystatin	tablet, 100 000, 500 000 IU; lozenge 100 000 IU; pessary, 100 000 IU
<i>Complementary List</i>	
<i>amphotericin B</i>	powder for injection, 50 mg in vial
<i>flucytosine</i>	capsule, 250 mg; infusion, 2.5 g in 250 ml
<i>potassium iodide</i>	saturated solution
6.4 Antiviral medicines	
<i>6.4.1 Antiherpes medicines</i>	
? aciclovir	tablet, 200 mg; powder for injection 250 mg (as sodium salt) in vial
<i>6.4.2 Antiretrovirals</i>	
<p>Adequate resources and specialist oversight are a pre-requisite for the introduction of this class of drugs. The antiretroviral drugs do not cure the HIV infection, they only temporarily suppress viral replication and improve symptoms. They have various adverse effects and patients receiving these drugs require careful monitoring by adequately trained health professionals. For these reasons, continued rigorous promotion of measures to prevent new infections is essential and the need for this has not been diminished in any way by the addition of antiretroviral drugs to the Model List. Adequate resources and trained health professionals are a prerequisite for the introduction of this class of drugs. Effective therapy requires commencement of three or four drugs simultaneously, and alternative regimens are necessary to meet specific requirements at start-up, to substitute for first-line regimens in the case of toxicity, or to replace failing regimens. The Committee strongly recommends the use of three- or four-drug combinations as specifically recommended in the WHO treatment guidelines. The use of fixed dose preparations for these combinations is also recommended, with assured pharmaceutical quality and interchangeability with the single products as approved by the relevant drug regulatory authority.</p>	
<i>6.4.2.1 Nucleoside reverse transcriptase inhibitors</i>	
abacavir (ABC)	tablet, 300mg (as sulfate), oral solution, 100mg (as sulfate)/5ml
didanosine (ddI)	buffered chewable, dispersible tablet, 25mg, 50mg, 100mg, 150mg, 200mg buffered powder for oral solution, 100mg, 167mg, 250mg packets unbuffered enteric coated capsule, 125mg, 200mg, 250mg, 400mg
lamivudine (3TC)	tablet, 150mg, oral solution 50 mg/5ml
stavudine (d4T)	capsule 15mg, 20mg, 30mg, 40mg, powder for oral solution, 5mg/5ml
zidovudine (ZDV or AZT)	tablet, 300mg capsule 100 mg, 250 mg oral solution or syrup, 50mg/5ml solution for IV infusion injection, 10 mg/ml in 20-ml vial
<i>6.4.2.2 Non-nucleoside reverse transcriptase inhibitors</i>	
efavirenz (EFV or EFZ)	capsule, 50mg, 100mg, 200mg

	oral solution, 150mg/5ml
nevirapine (NVP)	tablet 200 mg; oral suspension 50 mg/5-ml
6.4.2.3 Protease inhibitors	
Selection of two or three protease inhibitors from the Model List will need to be determined by each country after consideration of local treatment guidelines and experience, as well as the comparative costs of available products. Ritonavir is recommended for use in combination with indinavir, lopinavir and saquinavir as a booster, and not as a drug in its own right.	
indinavir (IDV)	capsule, 200mg, 333mg, 400mg (as sulfate)
ritonavir	capsule, 100mg, oral solution 400mg/5ml
lopinavir + ritonavir (LPV/r)	capsule, 133.3mg + 33.3mg, oral solution, 400mg + 100mg/5ml
nelfinavir (NFV)	tablet, 250mg (as mesilate), oral powder 50mg/g
saquinavir (SQV)	capsule, 200mg
6.5 Antiprotozoal medicines	
6.5.1 Antiamoebic and anti giardiasis medicines	
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
6.5.2 Antileishmaniasis medicines	
? meglumine antimoniate	injection, 30%, equivalent to approximately 8.1% antimony, in 5-ml ampoule
<i>Complementary List</i>	
amphotericin B	powder for injection, 50 mg in vial
pentamidine	powder for injection, 200 mg, 300 mg (isetionate) in vial
6.5.3 Antimalarial medicines	
6.5.3.1 For curative treatment	
Medicines for the treatment of <i>P. falciparum</i> malaria cases should be used in combination.	
amodiaquine *	tablet, 153 mg or 200 mg (base) * amodiaquine should preferably be used as part of combination therapy
artemether + lumefantrine *	tablet, 20 mg + 120 mg * recommended for use in areas with significant drug resistance and not in pregnancy or in children below 10kg
chloroquine	tablet 100 mg, 150 mg (as phosphate or sulfate); syrup, 50 mg (as phosphate or sulfate)/5 ml; injection 40 mg (as hydrochloride, phosphate or sulfate)/ml in 5-ml ampoule
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
<i>Complementary List</i>	

<i>artemether</i>	injection, 80 mg/ml in 1-ml ampoule
<i>artesunate</i>	tablet, 50 mg
<i>doxycycline</i>	capsule or tablet, 100 mg (hydrochloride) (for use only in combination with quinine)
<i>mefloquine</i>	tablet, 250 mg (as hydrochloride)
<i>sulfadoxine + pyrimethamine</i>	tablet, 500 mg + 25 mg
<i>6.5.3.2 For prophylaxis</i>	
chloroquine	tablet, 150 mg (as phosphate or sulfate); syrup, 50 mg (as phosphate or sulfate)/5 ml
doxycycline	capsule or tablet, 100 mg (hydrochloride)
mefloquine	tablet, 250 mg (as hydrochloride)
proguanil	tablet, 100 mg (hydrochloride) (for use only in combination with chloroquine)
<i>6.5.4 Anti-pneumocystosis and antitoxoplasmosis medicines</i>	
pyrimethamine	tablet, 25 mg
sulfamethoxazole + trimethoprim	injection 80 mg + 16 mg/ml in 5-ml ampoule 80 mg + 16 mg/ml in 10-ml ampoule
<i>Complementary List</i>	
<i>pentamidine</i>	tablet 200 mg, 300 mg
<i>6.5.5. Antitrypanosomal medicines</i>	
<i>6.5.5.1 African trypanosomiasis</i>	
melarsoprol	injection, 3.6% solution
suramin sodium	powder for injection, 1 g in vial
<i>Complementary List</i>	
<i>eflornithine</i>	injection, 200 mg (hydrochloride)/ml in 100-ml bottles
<i>pentamidine</i>	powder for injection, 200 mg, 300 mg (isetionate) in vial
<i>6.5.5.2 American trypanosomiasis</i>	
benznidazole	tablet, 100 mg
nifurtimox	tablet, 30 mg; 120 mg; 250 mg
6.6 Insect repellents	
diethyltoluamide *	topical solution, 50%, 75% * the place of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
7. ANTIMIGRAINE MEDICINES	
7.1 For treatment of acute attack	
acetylsalicylic acid	tablet, 300 -500 mg

ergotamine *	tablet, 1 mg (tartrate) * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
paracetamol	tablet, 300-500 mg
7.2 For prophylaxis	
? propranolol	tablet, 20 mg, 40 mg (hydrochloride)
8. ANTINEOPLASTIC, IMMUNOSUPPRESSIVES AND MEDICINES USED IN PALLIATIVE CARE	
8.1 Immunosuppressive medicines	
<i>Complementary List</i>	
<i>azathioprine</i>	tablet, 50 mg; powder for injection, 100 mg (as sodium salt) in vial
<i>ciclosporin</i>	capsule, 25 mg; concentrate for injection 50 mg/ml in 1-ml ampoule for organ transplantation
8.2 Cytotoxic medicines	
<i>Complementary List</i>	
<i>asparaginase</i>	powder for injection, 10 000 IU in vial
<i>bleomycin</i>	powder for injection, 15 mg (as sulfate) in vial
<i>calcium folinate</i>	tablet, 15 mg; injection, 3 mg/ml in 10-ml ampoule
<i>chlorambucil</i>	tablet 2 mg
<i>chlormethine</i>	powder for injection, 10 mg (hydrochloride) in vial
<i>cisplatin</i>	powder for injection, 10 mg, 50 mg in vial
<i>cyclophosphamide</i>	tablet, 25 mg; powder for injection, 500 mg in vial
<i>cytarabine</i>	powder for injection, 100 mg in vial
<i>dacarbazine</i>	powder for injection, 100 mg in vial
<i>dactinomycin</i>	powder for injection, 500 micrograms in vial
<i>daunorubicin</i>	powder for injection, 50 mg (as hydrochloride)
<i>doxorubicin</i>	powder for injection, 10 mg, 50 mg (hydrochloride) in vial
<i>etoposide</i>	capsule, 100 mg; injection, 20 mg/ml in 5-ml ampoule
<i>fluorouracil</i>	injection, 50 mg/ml in 5-ml ampoule
<i>levamisole</i>	tablet, 50 mg (as hydrochloride)
<i>mercaptopurine</i>	tablet, 50 mg
<i>methotrexate</i>	tablet, 2.5 mg (as sodium salt); powder for injection, 50 mg (as sodium salt) in vial
<i>procarbazine</i>	capsule, 50 mg (as hydrochloride)

<i>vinblastine</i>	powder for injection, 10 mg (sulfate) in vial
<i>vincristine</i>	powder for injection, 1 mg, 5 mg (sulfate) in vial
8.3 Hormones and antihormones	
<i>Complementary List</i>	
<i>dexamethasone</i>	injection, 4 mg dexamethasone phosphate (as disodium salt) in 1-ml ampoule
<i>hydrocortisone</i>	powder for injection, 100 mg (as sodium succinate) in vial
? <i>prednisolone</i> *	tablet, 5 mg, 25 mg * there is no evidence for complete clinical similarity between prednisolone and dexamethasone at high doses.
<i>tamoxifen</i>	tablet, 10 mg, 20 mg (as citrate)
8.4 Medicines used in palliative care	
<i>The WHO Expert Committee on the Use of Essential Drugs recommended that all the drugs mentioned in the WHO publication Cancer Pain Relief: with a Guide to Opioid Availability, second edition, be considered essential. The drugs are included in the relevant sections of the Model List, according to their therapeutic use, e.g. analgesics.</i>	
9. ANTIPARKINSONISM MEDICINES	
? biperiden	tablet, 2 mg (hydrochloride); injection, 5 mg (lactate) in 1-ml ampoule
levodopa + ? carbidopa	tablet, 100 mg + 10 mg; 250 mg + 25 mg
10. MEDICINES AFFECTING THE BLOOD	
10.1 Antianaemia medicines	
ferrous salt	tablet, equivalent to 60 mg iron; oral solution equivalent to 25 mg iron (as sulfate)/ml
ferrous salt + folic acid	tablet equivalent to 60 mg iron + 400 micrograms folic acid (<i>nutritional supplement for use during pregnancy.</i>)
folic acid	tablet 1mg, 5mg
hydroxocobalamin	injection, 1 mg in 1-ml ampoule
10.2 Medicines affecting coagulation	
heparin sodium	injection, 1000 IU/ml, 5000 IU/ml, 20,000 IU/ml in 1-ml ampoule
phytomenadione	injection, 10 mg/ml in 5-ml ampoule; tablet, 10 mg
protamine sulfate	injection, 10 mg/ml in 5-ml ampoule
? warfarin	tablet, 1 mg, 2 mg and 5 mg (sodium salt)
11. BLOOD PRODUCTS AND PLASMA SUBSTITUTES	
11.1 Plasma substitutes	
? dextran 70	injectable solution, 6%

? polygeline *	injectable solution, 3.5% * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
11.2 Plasma fractions for specific use	
All plasma fractions should comply with the WHO Requirements for the Collection, Processing and Quality Control of Blood, Blood Components, and Plasma Derivatives (Revised 1992). (WHO Technical Report Series, No. 840, 1994, Annex 2).	
<i>Complementary List</i>	
? factor VIII concentrate *	dried * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee. (rare disease)
? factor IX complex coagulation factors, II, VII, IX, X) concentrate *	dried * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee. (rare disease)
12. CARDIOVASCULAR MEDICINES	
12.1 Antianginal medicines	
? atenolol	tablet, 50 mg, 100 mg
glyceryl trinitrate	tablet (sublingual), 500 micrograms
? isosorbide dinitrate	tablet (sublingual), 5 mg
verapamil	tablet, 40 mg, 80 mg (hydrochloride)
12.2 Antiarrhythmic medicines	
? atenolol	tablet, 50 mg, 100 mg
digoxin	tablet, 62.5 micrograms, 250 micrograms; oral solution 50 micrograms/ml; injection 250 micrograms/ml in 2-ml ampoule
epinephrine (adrenaline)	injection, 1 mg (as hydrochloride)/ml in ampoule
lidocaine	injection, 20 mg (hydrochloride)/ml in 5-ml ampoule
verapamil	tablet, 40 mg, 80 mg (hydrochloride); injection, 2.5 mg (hydrochloride)/ml in 2-ml ampoule
<i>Complementary List</i>	
<i>isoprenaline</i> *	injection, 20 micrograms (hydrochloride)/ml in ampoule * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
? procainamide*	injection, 100 mg (hydrochloride)/ml in 10-ml ampoule * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
? quinidine *	tablet, 200 mg (sulfate)

	* the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
12.3 Antihypertensive medicines	
? atenolol	tablet, 50 mg, 100 mg
? enalapril	tablet, 2.5 mg
? hydrochlorothiazide	scored tablet, 25 mg
methyldopa *	tablet, 250 mg * methyldopa is listed for use in the management of pregnancy-induced hypertension only. Its use in the treatment of essential hypertension is not recommended in view of the availability of more evidence of efficacy and safety of other medicines.
? nifedipine *	sustained release formulations, tablet 10 mg * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
<i>Complementary List</i>	
sodium nitroprusside	powder for infusion, 50 mg in ampoule
12.4 Medicines used in heart failure	
digoxin	tablet, 62.5 micrograms, 250 micrograms; oral solution, 50 micrograms/ml; injection, 250 micrograms/ml in 2-ml ampoule
? enalapril	tablet, 2.5 mg
? hydrochlorothiazide	scored tablet, 25 mg
<i>Complementary List</i>	
dopamine	injection, 40 mg (hydrochloride) in 5-ml vial
12.5 Antithrombotic medicines	
acetylsalicylic acid	tablet, 100 mg
<i>Complementary List</i>	
streptokinase	powder for injection, 1.5 million IU in vial
12.6 Lipid-lowering agents	
<p><i>The WHO Expert Committee on Use of Essential Drugs recognizes the value of lipid-lowering drugs in treating patients with hyperlipidaemia. HMG-CoA reductase inhibitors, often referred to as "statins", are a family of potent and effective lipid-lowering drugs with a good tolerability profile. Several of these drugs have been shown to reduce the incidence of fatal and non-fatal myocardial infarction, stroke and mortality (all causes), as well as the need for coronary by-pass surgery. All remain very costly but may be cost effective for secondary prevention of cardiovascular disease as well as for primary prevention in some very high-risk patients. Since no single drug has been shown to be significantly more effective or less expensive than others in the group, none is included in the Model List; the choice of drug for use in patients at highest risk should be decided at the national level.</i></p>	
13. DERMATOLOGICAL MEDICINES (topical)	
13.1 Antifungal medicines	

benzoic acid + salicylic acid	ointment or cream, 6% + 3%
[?] miconazole	ointment or cream, 2% (nitrate)
sodium thiosulfate	solution, 15%
<i>Complementary List</i>	
<i>selenium sulfide</i>	detergent-based suspension, 2%
13.2 Anti-infective medicines	
[?] methylrosanilinium chloride (gentian violet)	aqueous solution, 0.5%; tincture, 0.5%
neomycin sulfate + [?] bacitracin	ointment, 5 mg neomycin sulfate + 500 IU bacitracin zinc/g
potassium permanganate	aqueous solution 1:10 000
silver sulfadiazine	cream, 1%, in 500-g container
13.3 Anti-inflammatory and antipruritic medicines	
[?] betamethasone	ointment or cream, 0.1% (as valerate)
[?] calamine lotion	lotion
[?] hydrocortisone	ointment or cream, 1% (acetate)
13.4 Astringent medicines	
aluminium diacetate	solution, 13% for dilution
13.5 Medicines affecting skin differentiation and proliferation	
benzoyl peroxide	lotion or cream, 5%
coal tar	solution, 5%
dithranol	ointment, 0.1%-2%
fluorouracil	ointment, 5%
[?] podophyllum resin	solution, 10-25%
salicylic acid	solution 5%
urea	ointment or cream, 10%
13.6 Scabicides and pediculicides	
[?] benzyl benzoate	lotion, 25%
permethrin	cream 5%; lotion 1%
13.7 Ultraviolet blocking agents	
<i>Complementary List</i>	
<i>topical sun protection agent with activity against ultraviolet A and ultraviolet B *</i>	cream, lotion or gel * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.

14. DIAGNOSTIC AGENTS	
14.1 Ophthalmic medicines	
fluorescein	eye drops, 1% (sodium salt)
? tropicamide	eye drops, 0.5%
14.2 Radiocontrast media	
? amidotrizoate	injection, 140-420 mg iodine (as sodium or meglumine salt)/ml in 20-ml ampoule
barium sulfate	aqueous suspension
? iohexol	injection 140 –350 mg iodine/ml in 5-ml, 10-ml and 20-ml ampoule
? iopanoic acid	tablet, 500 mg
? propylidone	oily suspension, 500-600 mg/ml in 20-ml ampoule (<i>For administration only into the bronchial tree.</i>)
<i>Complementary List</i>	
? meglumine iotroxate	solution, 5-8 g iodine in 100-250 ml
15. DISINFECTANTS AND ANTISEPTICS	
15.1 Antiseptics	
? chlorhexidine	solution, 5% (digluconate) for dilution
? ethanol	solution, 70% (denatured)
? polyvidone iodine	solution, 10%
15.2 Disinfectants	
? chlorine base compound	powder (0.1% available chlorine) for solution
? chloroxylenol	solution, 4.8%
glutaral	solution, 2%
16. DIURETICS	
amiloride	tablet, 5 mg (hydrochloride)
? furosemide	tablet, 40 mg; injection, 10 mg/ml in 2-ml ampoule
? hydrochlorothiazide	scored tablet, 25 mg
mannitol	injectable solution, 10%, 20%
spironolactone	tablet, 25 mg
17. GASTROINTESTINAL MEDICINES	
17.1 Antacids and other antiulcer medicines	
aluminium hydroxide	tablet, 500 mg; oral suspension, 320 mg/5 ml

? ranitidine	tablet, 150 mg (as hydrochloride); oral solution 75 mg/5-ml; injection, 25 mg/ml in 2-ml ampoule																				
magnesium hydroxide	oral suspension, equivalent to 550 mg magnesium oxide/10 ml																				
17.2 Antiemetic medicines																					
metoclopramide	tablet, 10 mg (hydrochloride); injection, 5 mg (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																				
17.3 Antihemorrhoidal medicines																					
? local anaesthetic, astringent and anti-inflammatory medicine *	ointment or suppository * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.																				
17.4 Anti-inflammatory medicines																					
? sulfasalazine	tablet, 500 mg; suppository 500 mg; retention enema																				
<i>Complementary List</i>																					
? hydrocortisone	suppository 25 mg (acetate); retention enema (the ? only applies to hydrocortisone retention enema)																				
17.5 Antispasmodic medicines																					
? atropine *	tablet, 1 mg (sulfate); injection, 1 mg (sulfate) in 1-ml ampoule * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.																				
17.6 Laxatives																					
? senna	tablet, 7.5 mg (sennosides) (or traditional dosage forms)																				
17.7 Medicines used in diarrhoea																					
<i>17.7.1 Oral rehydration</i>																					
oral rehydration salts * (for glucose-electrolyte solution)	<table> <tr> <td>glucose:</td> <td>75 mEq</td> </tr> <tr> <td>sodium:</td> <td>75 mEq or mmol/l</td> </tr> <tr> <td>chloride:</td> <td>65 mEq or mmol/l</td> </tr> <tr> <td>potassium:</td> <td>20 mEq or mmol/l</td> </tr> <tr> <td>citrate:</td> <td>10 mmol/l</td> </tr> <tr> <td>osmolarity:</td> <td>245 mOsm/l</td> </tr> <tr> <td>glucose:</td> <td>13.5 g/l</td> </tr> <tr> <td>sodium chloride:</td> <td>2.6 g/l</td> </tr> <tr> <td>potassium chloride:</td> <td>1.5 g/l</td> </tr> <tr> <td>trisodium citrate dihydrate+:</td> <td>2.9 g/l</td> </tr> </table> <p>+ trisodium citrate dihydrate may be replaced by sodium hydrogen carbonate (sodium bicarbonate) 2.5 g/l. However, as the stability of this latter formulation is very poor under tropical conditions, it is only recommended when manufactured for immediate use.</p>	glucose:	75 mEq	sodium:	75 mEq or mmol/l	chloride:	65 mEq or mmol/l	potassium:	20 mEq or mmol/l	citrate:	10 mmol/l	osmolarity:	245 mOsm/l	glucose:	13.5 g/l	sodium chloride:	2.6 g/l	potassium chloride:	1.5 g/l	trisodium citrate dihydrate+:	2.9 g/l
glucose:	75 mEq																				
sodium:	75 mEq or mmol/l																				
chloride:	65 mEq or mmol/l																				
potassium:	20 mEq or mmol/l																				
citrate:	10 mmol/l																				
osmolarity:	245 mOsm/l																				
glucose:	13.5 g/l																				
sodium chloride:	2.6 g/l																				
potassium chloride:	1.5 g/l																				
trisodium citrate dihydrate+:	2.9 g/l																				

	* in cases of cholera a higher concentration of sodium may be required
17.7.2 Antidiarrhoeal (symptomatic) medicines	
codeine *	tablet, 30 mg (phosphate) * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
18. HORMONES, OTHER ENDOCRINE MEDICINES AND CONTRACEPTIVES	
18.1 Adrenal hormones and synthetic substitutes	
Addison's disease is a rare condition; adrenal hormones are already included in section 3.	
18.2 Androgens	
<i>Complementary List</i>	
<i>testosterone</i>	injection, 200 mg (enantate) in 1-ml ampoule
18.3 Contraceptives	
<i>18.3.1 Hormonal contraceptives</i>	
? ethinylestradiol + ? levonorgestrel	tablet, 30 micrograms + 150 micrograms
? ethinylestradiol + ? norethisterone	tablet, 35 micrograms + 1.0 mg
levonorgestrel	tablet, 30 micrograms, 750 micrograms (pack of two), 1.5 mg
norethisterone enantate	oily solution, 200 mg/ml in 1-ml ampoule
<i>Complementary List</i>	
<i>medroxyprogesterone acetate</i> *	depot injection, 150 mg/ml in 1-ml vial * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
<i>18.3.2 Intrauterine devices</i>	
copper-containing device	
<i>18.3.3 Barrier methods</i>	
condoms	
diaphragms	
18.4 Estrogens	
? ethinylestradiol	tablet, 10 micrograms, 50 micrograms
18.5 Insulins and other antidiabetic agents	
glibenclamide	tablet, 2.5 mg, 5 mg
insulin injection (soluble)	injection, 40 IU/ml in 10-ml vial, 100 IU/ml in 10-ml vial
intermediate-acting insulin	injection, 40 IU/ml in 10 ml vial; 100 IU/ml in 10 ml vial (as compound insulin zinc suspension or isophane insulin)
metformin	tablet, 500 mg (hydrochloride)

18.6 Ovulation inducers	
<i>Complementary List</i>	
<i>clomifene</i>	tablet, 50 mg (citrate)
18.7 Progestogens	
norethisterone	tablet, 5 mg
<i>Complementary List</i>	
<i>medroxyprogesterone acetate</i> *	tablet, 5 mg * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
18.8 Thyroid hormones and antithyroid medicines	
levothyroxine	tablet, 50 micrograms, 100 micrograms (sodium salt)
potassium iodide	tablet, 60 mg
? propylthiouracil	tablet, 50 mg
19. IMMUNOLOGICALS	
19.1 Diagnostic agents	
All tuberculins should comply with the WHO Requirements for Tuberculins (Revised 1985). WHO Expert Committee on Biological Standardization Thirty-sixth report, (WHO Technical Report Series, No. 745, 1987, Annex 1).	
tuberculin, purified protein derivative (PPD)	injection
19.2 Sera and immunoglobulins	
All plasma fractions should comply with the WHO Requirements for the Collection, Processing and Quality Control of Blood, Blood Components and Plasma Derivatives (Revised 1992). WHO Expert Committee on Biological Standardization Forty-third report, (WHO Technical Report Series, No. 840, 1994, Annex 2).	
anti-D immunoglobulin (human)	injection, 250 micrograms in single-dose vial
antitetanus immunoglobulin (human)	injection, 500 IU in vial
antivenom serum *	injection * exact type to be defined locally
diphtheria antitoxin	injection, 10 000 IU, 20 000 IU in vial
? rabies immunoglobulin	injection, 150 IU/ml in vial
19.3 Vaccines	
All vaccines should comply with the WHO Requirements for Biological Substances.	
<i>19.3.1 For universal immunization</i>	
BCG vaccine	
diphtheria vaccine	
hepatitis B vaccine	

measles vaccine	
pertussis vaccine	
poliomyelitis vaccine	
tetanus vaccine	
<i>19.3.2 For specific groups of individuals</i>	
influenza vaccine	
meningococcal meningitis vaccine	
mumps vaccine	
rabies vaccine (inactivated: prepared in cell culture)	
rubella vaccine	
typhoid vaccine	
yellow fever vaccine	
20. MUSCLE RELAXANTS (PERIPHERALLY ACTING) AND CHOLINESTERASE INHIBITORS	
[?] alcuronium	injection, 5 mg (chloride)/ml in 2-ml ampoule
neostigmine	tablet, 15 mg (bromide); injection, 500 micrograms in 1-ml ampoule; 2.5 mg (metilsulfate) in 1-ml ampoule
suxamethonium	injection, 50 mg (chloride)/ml in 2-ml ampoule; powder for injection (chloride), in vial
<i>Complementary List</i>	
pyridostigmine	tablet, 60 mg (bromide); injection, 1 mg in 1-ml ampoule
vecuronium	powder for injection, 10 mg (bromide) in vial
21. OPHTHALMOLOGICAL PREPARATIONS	
21.1 Anti-infective agents	
[?] gentamicin *	solution (eye drops), 0.3% (sulfate) * final selection depends on indication for use
[?] idoxuridine	solution (eye drops), 0.1%; eye ointment, 0.2%
silver nitrate *	solution (eye drops), 1% * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
[?] tetracycline	eye ointment, 1% (hydrochloride)
21.2 Anti-inflammatory agents	
[?] prednisolone	solution (eye drops), 0.5% (sodium phosphate)
21.3 Local anaesthetics	

? tetracaine	solution (eye drops), 0.5% (hydrochloride)
21.4 Miotics and antiglaucoma medicines	
acetazolamide	tablet, 250 mg
? pilocarpine	solution (eye drops), 2%, 4% (hydrochloride or nitrate)
? timolol	solution (eye drops), 0.25%, 0.5% (as maleate)
21.5 Mydriatics	
atropine	solution (eye drops), 0.1%; 0.5%, 1% (sulfate)
<i>Complementary List</i>	
<i>epinephrine (adrenaline)</i>	solution (eye drops), 2% (as hydrochloride)
22. OXYTOCICS AND ANTIOXYTOCICS	
22.1 Oxytocics	
? ergometrine *	tablet, 200 micrograms (hydrogen maleate); injection, 200 micrograms (hydrogen maleate) in 1-ml ampoule * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
oxytocin	injection, 10 IU in 1-ml ampoule
22.2 Antioxytocics	
? salbutamol *	tablet, 4 mg (as sulfate); injection, 50 micrograms (as sulfate)/ml in 5-ml ampoule * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
23. PERITONEAL DIALYSIS SOLUTION	
<i>Complementary List</i>	
<i>intraperitoneal dialysis solution (of appropriate composition)</i>	parenteral solution
24. PSYCHOTHERAPEUTIC MEDICINES	
24.1 Medicines used in psychotic disorders	
? chlorpromazine	tablet, 100 mg (hydrochloride); syrup, 25 mg (hydrochloride)/5ml; injection, 25 mg (hydrochloride)/ml in 2-ml ampoule
? fluphenazine	injection, 25 mg (decanoate or enantate) in 1-ml ampoule
? haloperidol	tablet, 2 mg, 5 mg; injection, 5 mg in 1-ml ampoule
24.2 Medicines used in mood disorders	
<i>24.2.1 Medicines used in depressive disorders</i>	
? amitriptyline	tablet, 25 mg (hydrochloride)

<i>24.2.2 Medicines used in bipolar disorders</i>	
carbamazepine	scored tablet, 100 mg, 200 mg
lithium carbonate	capsule or tablet, 300 mg
valproic acid	enteric coated tablet, 200 mg, 500 mg (sodium salt)
24.3 Medicines used in generalized anxiety and sleep disorders	
? diazepam	scored tablet, 2 mg, 5 mg
24.4 Medicines used for obsessive compulsive disorders and panic attacks	
clomipramine	capsules, 10 mg, 25 mg (hydrochloride)
25. MEDICINES ACTING ON THE RESPIRATORY TRACT	
Antiasthmatic and medicines for chronic obstructive pulmonary disease	
? beclometasone	inhalation (aerosol), 50 micrograms per dose (dipropionate); 250 micrograms (dipropionate) per dose
epinephrine (adrenaline)	injection, 1 mg (as hydrochloride or hydrogen tartrate) in 1-ml ampoule
ipratropium bromide	inhalation (aerosol), 20 micrograms/metered dose
? salbutamol	tablet, 2 mg, 4 mg (as sulfate); inhalation (aerosol), 100 micrograms (as sulfate) per dose; syrup, 2 mg/5 ml; injection, 50 micrograms (as sulfate)/ml in 5-ml ampoule; respirator solution for use in nebulizers, 5 mg (as sulfate)/ml
theophylline *	tablet, 100 mg, 200 mg, 300 mg * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
<i>Complementary List</i>	
? aminophylline *	injection, 25 mg/ml in 10 ml ampoule * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
? cromoglicic acid *	inhalation (aerosol), 20 mg (sodium salt) per dose * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
26. SOLUTIONS CORRECTING WATER, ELECTROLYTE AND ACID-BASE DISTURBANCES	
26.1 Oral	
oral rehydration salts (for glucose-electrolyte solution)	see section 17.7.1
potassium chloride	powder for solution
26.2 Parenteral	
glucose	injectable solution, 5%, 10% isotonic; 50% hypertonic

glucose with sodium chloride	injectable solution, 4% glucose, 0.18% sodium chloride (equivalent to Na ⁺ 30 mmol/l, Cl ⁻ 30 mmol/l)
potassium chloride	solution, 11.2% in 20-ml ampoule, (equivalent to K ⁺ 1.5 mmol/ml, Cl ⁻ 1.5 mmol/ml)
sodium chloride	injectable solution, 0.9% isotonic (equivalent to Na ⁺ 154 mmol/l, Cl ⁻ 154 mmol/l)
sodium hydrogen carbonate	injectable solution, 1.4% isotonic (equivalent to Na ⁺ 167 mmol/l, HCO ₃ ⁻ 167 mmol/l); solution, 8.4% in 10-ml ampoule (equivalent to Na ⁺ 1000 mmol/l, HCO ₃ ⁻ 1000 mmol/l)
? sodium lactate, compound solution	injectable solution
26.3 Miscellaneous	
water for injection	2-ml, 5-ml, 10-ml ampoules
27. VITAMINS AND MINERALS	
ascorbic acid	tablet, 50 mg
? ergocalciferol	capsule or tablet, 1.25 mg (50 000 IU); oral solution, 250 micrograms/ml (10 000 IU/ml)
iodine	iodized oil, 1 ml (480 mg iodine), 0.5 ml (240 mg iodine) in ampoule (oral or injectable); 0.57 ml (308 mg iodine) in dispenser bottle; 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 (as palmitate)/ml in multidose dispenser; water-miscible injection 100 000 IU (as palmitate) (55 mg) in 2-ml ampoule
riboflavin	tablet, 5 mg
? sodium fluoride *	in any appropriate formulation * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.
thiamine	tablet, 50 mg (hydrochloride)
<i>Complementary List</i>	
calcium gluconate *	injection, 100 mg/ml in 10-ml ampoule * the public health relevance and/or efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the Expert Committee.