

APPENDIX

Surgeons working in developing countries are often professionally isolated and may have difficulty in locating reliable suppliers of equipment. In addition, most equipment manufactured in the West is extremely expensive for anyone who does not have access to hard currency. The purpose of this section is to try to provide some details of useful addresses where equipment can be purchased or helpful information can be obtained. The list is unfortunately far from comprehensive or complete. The author has no commercial or personal association with any of the companies mentioned.

Manufacturing companies and suppliers in the developed countries of the Western World produce reliable and sturdy equipment of excellent quality but at high prices. Most equipment can be bought alternatively from manufacturers in developing countries, in particular India and China. Their prices are very much less, sometimes only 25% of Western prices, or even less. In most cases the quality is perfectly acceptable.

A standard list of medicines, equipment etc., which is updated each year, is available from the International Centre for Eye Health (for address see page 324).

SUPPLIERS OF EQUIPMENT

Surgical Instruments

Dixey Instruments Limited

5 High Street
Brixworth
Northants
NN6 9DD
UK

Tel: 01604 882480

Fax: 01604 882488

Manufactures and supplies a wide range of high quality surgical instruments and equipment.

Indo-German Surgical Corporation

123 Kaliandas Udyue Bhavan
Near Century Bazar
Prabhadevi
Post Box No. 19129
Bombay 400 025
India

Indian manufacturer of ophthalmic surgical instruments and appliances. Recommended by experienced ophthalmic consultants.

Suzhou Medical Instrument Co
 34 Daru Lane
 Suzhou
 Jiangsu
 People's Republic of China 215005
 Fax: 86 512 5244789

A Chinese company manufacturing surgical instruments, operating microscopes etc

Operating Microscopes

These must have co-axial illumination and preferably a variable magnification. Microscopes from Western Europe, America or Japan are extremely expensive. Much cheaper microscopes can be obtained from India through the Indo-German Surgical Corporation or from China through Suzhou Medical Instrument Company.

Scan Optics
 30/32 Sterling Street
 Thebarton
 SA5031
 Australia
 Tel: 6188 234 9120
 Fax: 6188 234 9417

Scan Optics manufacture a reasonably priced and reasonably compact portable operating microscope especially designed for rural and outreach work.

Magnifying operating spectacles

These are made by various companies both in the Western and Developing World. Reliable manufacturers from the Western World include:

Keeler
 Clewer Hill Road
 Windsor
 Berkshire
 SL4 4AA
 UK

Heine
 Kientalstrasse
 78036 Herrsching
 Germany

They are also available through the Indo-German Surgical Corporation and the Suzhou Optical Company (addresses above).

Operating theatre lights

Daray Lighting Limited
 7 Commerce Way
 Stanbridge Road
 Leighton Buzzard
 Bedfordshire
 LU7 8RW
 UK
 Tel: 01525 376 766
 Fax: 01525 851 626

Daray manufacture a portable and very robust operating light which will run off both a car battery or a mains electrical supply

Portable cryoprobes

Restored Sight Projects Limited

Singleton Court
Monastow Road
Monmouth
NP5 3AH, UK
Tel: 01600 716 911

This company manufactures the small portable cryoprobe described in this book.

Bright Instrument Company Limited

St. Margarets Way
Stukeley Meadows
Huntingdon
Cambridgeshire
PE18 6ED
UK
Tel: 01480 454 528

This company manufactures small cylinders of a gas substitute which is ozone-friendly for use with hand held cryoprobes.

Cheap pocket electrolysis equipment which will run off torch batteries is also available through various suppliers. One unit is known as the 'One Touch' Epilation Unit and is manufactured by:

Inverness Corporation

Fairlawn
N.J. 07410
U.S.A.

Autoclaves

These are manufactured both in developed and developing countries.

L.T.E. Scientific Limited

Greenbridge Lane
Greenfield
Oldham
OL3 7EN
UK
Tel: 01457 876221
Fax: 01457 870131

This company manufactures a wide range of high quality surgical autoclaves

Hyaluronidase

This is very useful for improving the quality of local anaesthesia but may be hard to obtain. It can be ordered through:

C P Pharmaceuticals Ltd

Ash Road
North Wrexham Industrial Estate
Wrexham
LL13 9UF
UK
Tel: 01978 661 1261
Fax: 01978 660 130

Rallis India

Pharmaceutical Division
B-9/2 M.I.D.C. Waluj
431136
India

ORGANISATIONS OFFERING HELP AND INFORMATION

1. **ICEH (International Centre for Eye Health)**

London School of Hygiene and Tropical Medicine
 Keppel Street
 London
 WC1E 7HT
 Tel: 020 7958 8162
 E Mail: sue.stevens@lshtm.ac.uk

This is a research, training and information centre concerned with all aspects of ophthalmology in developing countries. It also has a Resource Centre which provides help, information and teaching materials and produces the Journal of Community Eye Health.

Web: www.iceh.org.uk

2. **The CBMI (Christian Blind Mission International)**

Nibelungenstrasse 124
 D6140 Bensheim
 Germany

This is a Christian charitable organisation involved in the treatment and prevention of eye disease and the rehabilitation of blind people.

3. **Sight Savers International**

Grosvenor Hall
 Bolnore Road
 Haywards Heath
 West Sussex
 RH16 4BX
 UK

(Formerly the Royal Commonwealth Society for the Blind)

This is a secular charitable organization devoted to treating and preventing blindness in developing countries.

4. **The Fred Hollows Foundation (FHF)**

Prince of Wales Hospital
 High Street
 Bag 800
 Randwick
 NSW 2031
 Australia

The Fred Hollows Foundation aims in particular to eradicate cataract blindness, to train surgeons in developing countries in appropriate methods of cataract surgery and provide low cost equipment and intraocular lenses.

Other Non-Government Organisations Involved in Blindness Treatment and Prevention are:

Carter Centre

(formerly River Blindness Foundation)
One Copenhill
Atlanta
Georgia 30307
USA

Helen Keller International (HKI)

90 Washington Street
15th Floor
New York 10006
USA

HelpAge International (HAI)

PO Box 32832
London
N1 9ZN
UK

International Eye Foundation (IEF)

7801 Norfolk Avenue
Bethesda
Maryland 20814
USA

NABP

BP 5900
Hedgehavgen 0306
Oslo 3
Norway

Nadi al Bassar

9 Boulevard Bab Menara
1008 Tunis
Tunisia

ONCE

Ortega y Gasset 18
28006 Madrid
Spain

Operation Eyesight Universal (OEU)

4 Parkdale Crescent
NW Calgary
Alberta
Canada TSN 3T8

ORBIS International

330 West 42nd Street
Suite 1900
New York
NY 10036
USA

Organisation pour la Prevention de la Cecite (OPC)

58 Ave Bosquet
75007 Paris
France

OST

Place van Meyel 15A
B1040 Brussels
Belgium

SBO

PO Box 555
2003 RN
Haarlem
The Netherlands

ESSENTIAL MEDICATIONS

This section is a list of essential medications required for successful surgery. It is a summary of the various drugs recommended throughout the book.

1. **Disinfectants for chemical sterilisation of instruments and skin preparation.**

Chlorhexidine and Cetrimide (marketed as concentrated solutions called Hibitane and Savlon).

Povidone iodine can be used for both chemical sterilisation and for skin preparation. Chemical sterilisation is most effective with alcoholic solutions but skin preparation must be done with aqueous solutions.

2. **Solutions for irrigating inside the eye**

Hartmann's solution or Ringer's solution are best but isotonic normal saline is acceptable. All solutions for irrigation in the eye must be guaranteed sterile and free of any preservative or contaminant.

3. **Topical preparations**

Drops are preferable to ointments because of the relative ease with which they can be produced locally. However, ointments have a longer shelf life which may be an advantage.

Antibiotics

Chloramphenicol 0.5%

Gentamicin 0.3%

Mydriatics

Cyclopentolate 1%

Atropine 1%

Tropicamide 1%

Phenylephrine 2.5–10%

Steroids

Prednisolone 0.5% or Betamethasone 0.1% or Dexamethasone 0.1%.

Other anti-inflammatory drops are ketorolac (Acular) 0.5%

Topical anaesthetic drops

Tetracaine 0.5%–1% or oxybuprocaine 0.4% or lignocaine 4%

4. **Drugs to lower intraocular pressure**

i. Miotics

Pilocarpine 1%–4%

ii. Topical betablockers

Timolol, Levobunolol or Carteolol

iii. Carbonic acid anhydrase inhibitors

Acetazolamide 250 mgm tablets or 500 mgm by intravenous injection or
Dorzolamide drops 2%.

5. Local anaesthetic for nerve blocks

Lignocaine 1%–2% with hyaluronidase and adrenaline as additives to improve the quality of certain nerve blocks.

6. Antibiotics and steroids for subconjunctival injection

See page 167.

Cefuroxime, gentamicin, and dexamethasone or betamethasone or prednisolone or hydrocortisone.

7. Antibiotics for intravitreal use

Vancomycin

Ceftazidime

Amikacin

(Gentamicin if others not available)

8. Other medications

i. Visco-elastic fluids for injection into the anterior chamber

— HPMC (highly purified methyl cellulose) for intraocular use

— Sodium hyaluronate.

ii. Adrenaline injection 1/1000 for adding to infusion bottles and local anaesthetic solutions.