

Oxford Handbook of Clinical Specialties

J.A.B. COLLIER

AND

J.M. LONGMORE



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Preface

When someone says that he is 'doing obstetrics'—or whatever, this should not hide the fact that much more is being done besides, not just a little of each of medicine, psychiatry, gynaecology and paediatrics, but also a good deal of work to elicit and act upon the patient's unspoken hopes and fears. At the operating table he must concentrate minutely on the problem in hand; but later he must operate on other planes too, in social and psychological dimensions so as to understand how the patient came to need to be on the operating table, and how this might have been prevented. All the best specialists practise a holistic art, and our aim is to show how specialism and holism may be successfully interwoven, if not into a fully watertight garment, then at least into one which keeps out much of the criticism rained upon us by the proponents of alternative medicine.

We hope that by compiling this little volume we may make the arduous task of learning medicine a little less exhausting, so allowing more energy to be spent at the bedside, and on the wards. For a medical student coming fresh to a specialty the great tomes which mark the road to knowledge can numb the mind after a while, and what started out fresh is in danger of becoming exhausted by its own too much. It is not that we are against the great tomes themselves—we are simply against reading them too much and too soon. One starts off strong on 'care' and weak on knowledge, and the danger is that this state of affairs becomes reversed. It is easier to learn from books than from patients, yet what our patients teach us may be of more abiding significance: the value of sympathy, the uses of compassion and the limits of our human world. It is at the bedside that we learn how to be of practical help to people who are numbed by the mysterious disasters of womb or tomb, for which they are totally unprepared. If this small book enables those starting to explore the major specialties to learn all they can from their patients, it will have served its purpose—and can then be discarded.

Because of the page-a-subject format, the balance of topics in the following pages may at first strike the reader as being odd in places. However, it has been our intention to provide a maximally useful text rather than one which is perfectly balanced in apportioning space according to how common a particular topic is—just as the great *Terrestrial Globes* made by George Phillips in the 1960s may seem at first to provide an odd balance of place names, with Alice Springs appearing more prominently than Amsterdam. To chart a whole continent, and omit to name a single central location out of respect for 'balance' is to miss a good opportunity to be useful. George Phillips did not miss this opportunity, and neither we hope, have we. It is inevitable that some readers will be disappointed that we have left out their favoured subjects (the Phillips' Globe does not even mention Oxford!). To these readers we offer over 300 blank pages by way of apology.

Ferring, 1987

J.A.B.C.
J.M.L.

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We thank Dr P. Riley for checking all the drug doses and Mr E. Buckley for reading the proofs.

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We thank the following authors, publishers, and journal editors for permission to reproduce illustrative material: Dr R. A. Hope; Dr D. Kinshuck; Mr A. Land; Mr A. Swain; the *British Journal of Hospital Medicine*; the *British Medical Journal*; the *Journal of Pediatrics*; the Association for Consumer Research; John Wright; Edward Arnold; Lange; Oxford University Press and Churchill Livingstone.

Notes

Pronouns For brevity, the male pronoun *he* has been used in places where *he* or *she* would have been appropriate. For balance and fairness, we had intended to alternate *he* with *she*, but the female form is one letter longer than the male, and this had serious consequences for some of our most condensed pages. To those whom this offends, we offer our apologies.

Drugs While every effort has been made to check drug dosages in this book, it is still possible that errors have been missed. Furthermore, dosage schedules are being continually revised and new side effects recognized. For these reasons, the reader is strongly urged to consult the *British National Formulary* or the drug companies' printed instructions before administering any of the drugs recommended in this book. Except in chapter 4 (*Paediatrics*) the main drug doses given are for adults. Children's doses are given in parentheses, expressed as mg/kg or $\mu\text{g}/\text{kg}$.

Aiery flatterers in a misty night¹

Divers men may walke by the Sea side, and the same beames of the Sunne giving light to them all, one gathereth by the benefit of that light pebles, or speckled shells, for curious vanitie, and another gathers precious Pearle, or medicinall Amber, by the same light. So the common light of reason illumins us all; but one imployes this light upon the searching of impertinent vanities, another by the better use of the same light, finds out the Mysteries of Religion. Some men by the benefit of this light of Reason, have found out things profitable and useful to the whole world; As in particular *Printing*, by which the learning of the whole world is communicable to one another, and our minds and our inventions, our wits and compositions may trade and have commerce together, and we may participate of one anothers understandings as well as of our Clothes, and Wines, and Oyles, and other Merchandize: So by the benefit of this light of reason, they have found out *Artillery*, by which warres come to quicker ends than heretofore, and the great expense of bloud is avoided: for the numbers of men slain now, since the invention of Artillery, are much lesse than before, when the sword was the executioner. Others by the benefit of this light have found where was the easiest, and most accessible way, to sollicite the Chastitie of a woman, whether *Discourse*, *Musicke*, or *Presents*, and according to that discovery, they have pusued *hers*, and *their* own eternall destruction. By the benefit of this light, men see through the darkest, and most impervious places, that are, that is, *Courts of Princes*, and the greatest *Officers* in Courts; and can submit themselves to second, and to advance the humours of men in great place, and so make their profit of the weaknesses which they have discovered in these great men. All the wayes, both of *Wisdom*e, and of *Craft* lie open to this light, this light of naturall reason: But when they have gone all these wayes by the benefit of this light, they have got no further, than to have walked by a tempestuous Sea, and to have gathered pebles, and speckled cockle shells. Their light seems to be great, out of the same reason, that a Torch in a misty night, seemeth greater than in a clear, because it hath kindled and inflamed much thicke and grosse Ayre round about it. So the light and wisdom of worldly men, seemeth great, because he hath kindled an admiration, or an applause in Aiery flatterers, not because it is so in deed.

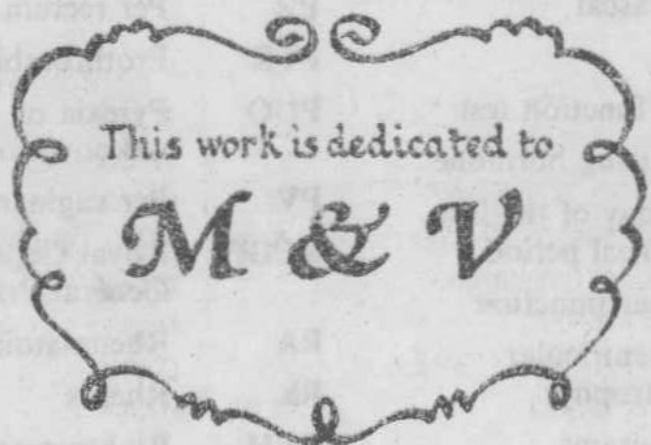
¹ John Donne, Christmas day 1621, OUP

Symbols and abbreviations

▶	This is important	DIC	Disseminated intra-vascular coagulation
▶▶	Don't dawdle!—prompt action saves lives	DIP	Distal interphalangeal
-ve	Negative	dl	Decilitre
+ve	Positive	DM	Diabetes mellitus
↑	Increased (eg blood level)	D&V	Diarrhoea and vomiting
↓	Decreased (eg blood level)	DVT	Deep venous thrombosis
↔	Normal (eg blood level)	ECG	Electrocardiogram
ac	Ante cibum (before food)	EEG	Electroencephalogram
ACTH	Adrenocortico-trophic hormone	ENT	Ear, nose and throat
AIDS	Acquired immuno-deficiency syndrome	ESR	Erythrocyte sedimentation rate
Alk	Alkaline (Phos = phosphatase)	FBC	Full blood count
ANF	Antinuclear factor	FPC	Family practitioner committee
AP	Anteroposterior	FSH	Follicle stimulating hormone
APH	Antepartum haemorrhage	g	Gram
ASO	Antistreptolysin O (titre)	GI	Gastrointestinal
AV	Atrioventricular	GP	General practitioner
BMJ	<i>British Medical Journal</i>	GU	Genitourinary
BP	Blood pressure	h	Hour
Ca	Carcinoma	Hb	Haemoglobin
CCF	Combined (right & left sided) cardiac failure	HB _s Ag	Hepatitis B surface antigen
CI	Contraindications	HIV	Human immuno-deficiency virus
CNS	Central nervous system	HVS	High vaginal swab
CSF	Cerebrospinal fluid	Ig	Immunoglobulin
CVP	Central venous pressure	IM	Intramuscular
CVS	Cardiovascular system	IPPV	Intermittent +ve pressure ventilation
CXR	Chest X-ray	iu	International unit
D	Dimension	IUCD	Intrauterine contra-ceptive device
D&C	Dilatation (cervical) and curettage	IV	Intravenous
DHSS	Department of Health and Social Security	IVI	Intravenous infusion
		IVU	Intravenous urography
		JRCGP	<i>Journal of the Royal College of GPs</i>
		JVP	Jugular venous pressure

kg	Kilogram	PPH	Post-partum haemorrhage
kPa	KiloPascal	PR	Per rectum
l	Litre	PTR	Prothrombin ratio
LFT	Liver function test	PUO	Pyrexia of unknown origin
LH	Lutenizing hormone	PV	Per vaginam
LMP	First day of the last menstrual period	RCGP	Royal College of General Practitioners
LP	Lumbar puncture	RA	Rheumatoid arthritis
LVH	Left ventricular hypertrophy	Rh	Rhesus
μ g	Micrograms	RVH	Right ventricular hypertrophy
MCV	Mean cell volume	SC	Subcutaneous
mg	Milligrams	SCBU	Special care baby unit
min	Minute(s)	SE	Side effects
ml	Millilitre	sec	Seconds
mmHg	Millimetres of mercury	T°	Temperature
MSU	Midstream urine (culture of)	T ₄	Thyroxine
NBM	Nil by mouth	TB	Tuberculosis
NEJM	<i>New England Journal of Medicine</i>	TIA	Transient ischaemic attack
NHS	National Health Service	TPR	Temperature, pulse and respirations
NSAIDs	Non-steroidal anti-inflammatory drugs	TSH	Thyroid stimulating hormone
OHCM	<i>Oxford Handbook of Clinical Medicine</i> (1985)	u	Units
ORh - ve	Blood group O Rhesus negative	U&E	Urea and electrolytes
PA	Posteroanterior	UTI	Urinary tract infection
P _A CO ₂	Partial pressure of CO ₂ in arterial blood	VSD	Ventricular septal defect
P _A O ₂	Partial pressure of oxygen in arterial blood	WCC	White blood cell count
PCV	Packed cell volume	Wt	Weight
PET	Pre-eclamptic toxæmia	yrs	Years (old)
PIP	Proximal interphalangeal		
PO	Per orum (by mouth)		

Note: other abbreviations are given in full on the pages where they occur.



This work is dedicated to

M & V

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Principal sources: *The British Medical Journal*; S Clayton 1985 *Gynaecology by Ten Teachers*, Edward Arnold.

History and examination

History As with taking a history in any subject, listen to the patient's presenting complaint and then for a fuller picture request information to cover the following points.

1 The menstrual history: age at menarche, normal cycle length, regularity, usual pattern of bleeding in time and quantities—if heavy ask about the passage of clots. If flooding occurs ask how many pads or tampons are needed at one time/per period. If there is dysmenorrhoea ask when it began and the days on which it occurs. Note date of last menstrual period (LMP) or menopause. If postmenopausal ask about bleeding since. Record information: No. days bleeding/ No. days from day 1 to day 1 of periods eg 5/28.

2 The past obstetric history: note features of antenatal period, delivery, outcome and puerperium for each pregnancy. Note weights of babies. Ask about terminations and miscarriages. Note gestation, the reason performed and method of termination.

3 If there is pelvic pain ask about the characteristics. Uterine pain tends to be colicky and a diffuse sacral pain. It may radiate into the labia and down the medial side of the legs. Ovarian pain tends to be felt in the iliac fossa and may radiate down the outside of the legs. Ask about dyspareunia (pain on intercourse): if present try to distinguish whether it is superficial pain or deep pelvic pain. Ask about discharge.

4 Further enquiry should cover past medical history, previous infections (especially if sexually transmitted), problems with intercourse, contraception and any symptoms related to bowels or micturition. Emotional problems should also be considered.

Examination Detailed general examination should be carried out when surgery is contemplated. In those bleeding profusely exclude shock. Take measures to correct it prior to further examination. Note if the patient looks well or ill.

The abdomen should be inspected for abnormal contours and examined for tenderness, masses and ascites. Auscultation may help distinguish pregnancy from other masses either by hearing uterine souffle (a soft blowing noise in time with the heart rate) or by hearing a fetal heart.

Vaginal examination should include careful inspection of the external genitalia. Examination may be carried out in one of four positions: lateral, semi-prone (Sims'), dorsal (on back) or in lithotomy. The object is to achieve good views of the vaginal walls and cervix, to note and be able to sample discharge, and to carry out bimanual examination to assess the size and position of the uterus, and to examine the adnexae for tenderness and masses. Explain to the patient what you are going to do, and why. Be gentle. Use a chaperone.

► Take a cervical smear if indicated (p 32).

The vulva comprises both the labia majora and the labia minora. The labia minora are situated anteriorly enclosing the meatus of the clitoris. The vulva is bounded anteriorly by the labia minora, posteriorly by the labia majora, the vaginal opening and Bartholin's glands. The clitoris is a small, sensitive organ covered with mucous epithelium. Its opening may vary from a pin-hole size of 10 mm diameter. It may be hidden by lamina or prepuce. The clitoris has a long, narrow, fibrous, cylindrical structure.

The vagina is a fibrous canal. The walls have three transverse folds. The outer portion into the vagina which has four folds (anterior, posterior and two lateral). The posterior vaginal wall is longer than the anterior. The posterior fornix is deeper. The vaginal canal is usually situated in the middle of the pelvic cavity. It is a canal which carries the menstrual blood down towards the uterus and the cervix. The vaginal canal is about 7-10 cm long and 2-3 cm wide. It is lined with columnar epithelium. The amount of cervical mucus varies in different ages. The cervical canal (the part of the cervix which is in the uterus) and the uterine tubes.

The four major organs of the female reproductive system are the uterus, ovaries, fallopian tubes and the vagina. The uterus is pear-shaped and is situated in the middle of the pelvic cavity. It is about 7-10 cm long and 2-3 cm wide. It is lined with columnar epithelium. The amount of cervical mucus varies in different ages. The cervical canal (the part of the cervix which is in the uterus) and the uterine tubes.

In most women the cervix is anteverted. This means that the long axis of the uterus is directed forwards. The body of the uterus is angled forward on the cervix. This is described as anteversion. In about 20% of women the uterus leans backwards in relation to the cervix (retroverted uterus). It lying in the midline it is said to be axial. The position of the uterus is examined by vaginal inspection. When an anteverted uterus is examined on bimanual examination it is possible to feel the body of the uterus between the two hands. On vaginal inspection it may be possible to see in which plane the cervix lies.

The ovaries are about 2.5 cm long x 2 cm wide x 1 cm deep. They may be enlarged due to follicles formed during normal menstrual cycle. They are sometimes felt in the lateral fornices.

After vaginal examination and to state the position of the uterus the size is estimated. This is often equated to the size of the uterus at different weeks of pregnancy. Whether the ovaries are felt and the presence of any abnormal pelvic masses.

In order to inspect the vagina two different specula may be used. The speculum has two parts and consists of a long handle with the blades joined at the distal end. The blades are inserted into the vagina and opened with the hand. The speculum is used for looking at the cervix. The speculum is used for looking at the cervix. The speculum is used for looking at the cervix.

Gynaecological anatomy

The vulva comprises both the labia majora and the labia minora. The latter join anteriorly encircling the erectile tissue of the clitoris. The vestibule is bounded anteriorly by the labia minora, posteriorly by the fourchette. The vagina, urethra and Bartholin's ducts enter it. The hymen is connective tissue covered with squamous epithelium. Its opening may vary from a pin-hole size or to take two fingers. It may be ruptured by tampons or intercourse; the remaining tags being called carunculae myrtiformes.

The vagina is ~10cm long. The walls have rugose transverse folds. The cervix projects into the vault which has four fornices (anterior, posterior, and two lateral). The posterior vaginal wall is longer than the anterior, hence the posterior fornix deeper. From puberty until menopause the vagina is usually inhabited by Doderlein's bacilli (lactobacilli) which break down vaginal glycogen to lactic acid thereby keeping vaginal acidity at ~pH 4 and so discouraging growth of other flora.

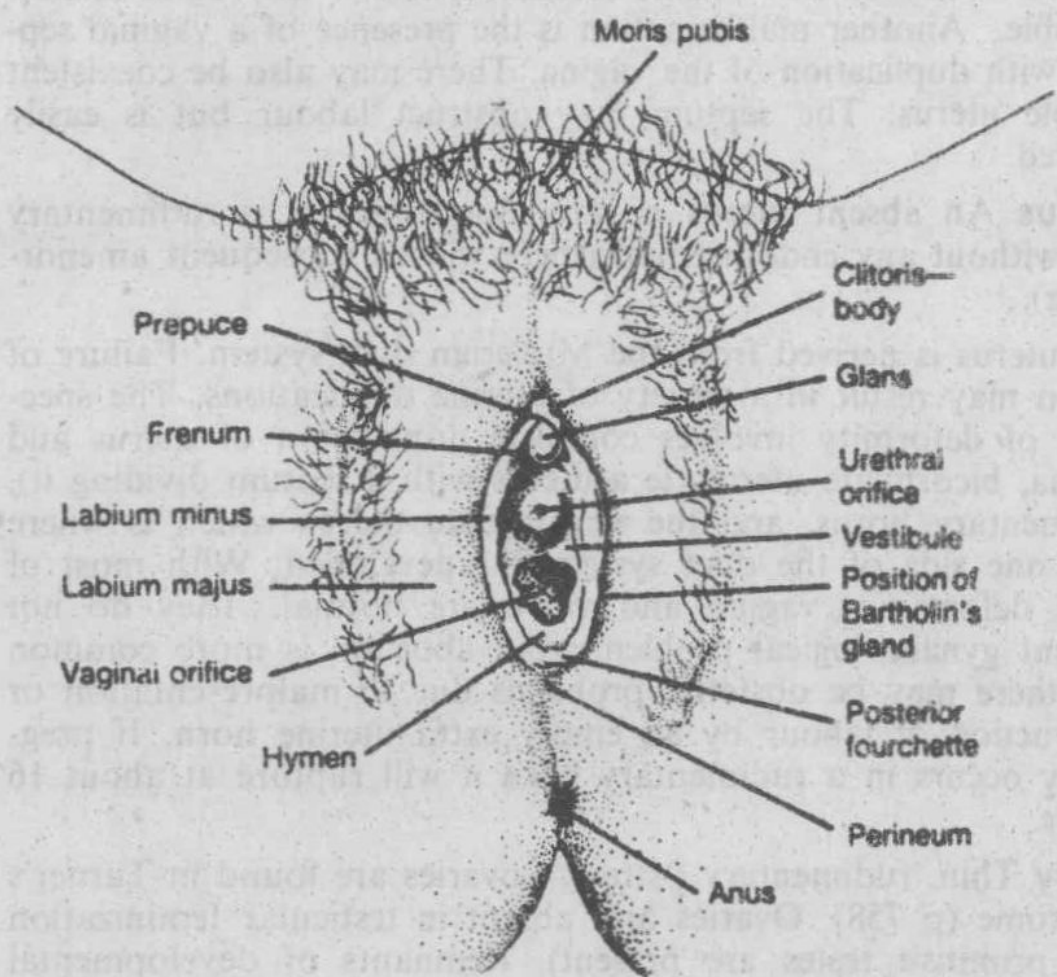
The adult uterus weighs about 70g, has walls 2cm thick and has a 5cm upper portion, the body or corpus, and a lower 2.5cm neck (the cervix). It is lined with columnar epithelium—the endometrium. The amount of cervix projecting into the vagina varies in different women. The central canal (the os) of the cervix is circular in nulliparous women, and slit-like in the parous.

In most women the uterus is anteverted. This means that the long axis of the uterus is directed forwards. The body of the uterus is angled forward on the cervix. This is described as ante-flexion. In about 20% of women the uterus leans backwards, tilted backward on the cervix (retroverted, retroflexed). If lying in the mid-line it is said to be axial. The position of the uterus is extremely important to know for practical procedures (eg insertion of coils). When an anteverted uterus is examined on bimanual examination it is possible to feel the body of the uterus between the two hands. On vaginal inspection it may be possible to see in which plane the cervix lies.

The ovaries are about 3.5cm long × 2cm wide × 1cm deep. They may be enlarged due to follicles formed during normal menstrual cycles. They may sometimes be felt in the lateral fornices.

After vaginal examination aim to state the position of the uterus, the size if anteverted (this is often equated to the size of the uterus at different weeks of pregnancy), whether the ovaries are felt, and the presence of any abnormal pelvic masses.

In order to inspect the vagina two different specula may be used. The Sim's speculum has two right angle bends in it. Use it with the patient lying laterally or semiprone for inspecting the vaginal walls (eg for prolapse). The Cusco's bivalve speculum is inserted with its blades parallel to the labia, then rotated and opened with its ratchet near the anus. It is useful for looking at the cervix. Use lubricating jelly. Explain the procedure.



The vulva. (From S Clayton 1985 *Gynaecology by Ten Teachers*, Edward Arnold.)

6 Genital abnormalities

Vagina Occasionally a membrane persists at the site where Mullerian and urogenital systems fuse during development. When these girls begin to menstruate the loss dams up behind the membrane and fills the vagina (haematocolpos). If this remains undetected the uterus and tubes can also become distended with blood (haematometra, haematosalpinx). Treatment: incise the membrane and evacuate the retained contents. If the tubes have been distended fimbrial damage may result in infertility. More rarely the vagina may be absent, or part of it may be absent. Renal system abnormalities often coexist so IVU and ultrasound should be carried out. Plastic reconstruction of the vagina is now possible. Another malformation is the presence of a vaginal septum with duplication of the vagina. There may also be coexistent double uterus. The septum may obstruct labour but is easily divided.

Uterus An absent uterus is rare. Sometimes it is rudimentary and without any endometrium (there will be subsequent amenorrhoea).

The uterus is derived from the Mullerian duct system. Failure of fusion may result in a variety of uterine duplications. The spectrum of deformity involves complete duplication of uterus and vagina, bicornuate uterus (ie a uterus with a septum dividing it), rudimentary horns, and the unicornuate uterus which is where only one side of the duct system has developed. With most of these deformities vagina and vulva are normal. They do not present gynaecological problems, but abortion is more common and there may be obstetric problems due to malpresentation or obstruction of labour by an empty extra uterine horn. If pregnancy occurs in a rudimentary horn it will rupture at about 16 weeks.

Ovary Thin, rudimentary ('streak') ovaries are found in Turner's syndrome (p 758). Ovaries are absent in testicular feminization (but primitive testes are present). Remnants of developmental tissue (eg the Wolffian system), may result in cysts around the ovary and in the broad ligament.

Uterine retroversion

About 20% of women have a retroverted retroflexed uterus from puberty. When retroversion is not secondary to other pelvic disease the uterus is fully mobile. Such retroversion does not cause infertility. In most women a pregnant retroverted uterus lifts out of the pelvis at about 12 weeks. Rarely it does not and causes retention of urine at about 14 weeks. Catheterization and lying prone may allow spontaneous anteversion. If retroversion is secondary to adhesions from endometriosis or pelvic inflammatory disease, then dysmenorrhoea, dyspareunia and infertility are common. It is the underlying disease that then needs treatment.

The menstrual cycle later and later from the first day of menstruation (day 1). During menstruation the superficial layers of the uterine lining are shed. In the first 4 days FSH produced by the anterior pituitary stimulates the granulosa cells and the primary follicle in the ovary to produce oestrogen. The oestrogen produced has a negative feedback upon FSH. In the oestrogen phase of the cycle the uterine lining is in a proliferative phase, has straight glands and is thin, thick at its maximum. Cervical mucus in the oestrogenic phase is stringy and it allows to dry produce ferning patterns due to high sodium chloride and potassium chloride levels.

14 days before the onset of menstruation for the first day of the cycle is a regular 28-day cycle there is an LH and FSH surge which stimulates ovulation. The primary follicle then becomes an antral follicle. There is proliferation of granulosa cells and progesterone is produced. Under the influence of progesterone the endometrial lining is in the secretory phase. It increases in thickness to 20mm and the glands become convoluted. The cervical mucus becomes viscous and will not fern as there are reduced progesterone production in the next 5 days after ovulation. If fertilisation of an ovum does not occur the corpus luteum breaks down. Falling levels of progesterone cause the spiral arteries in the uterine wall to contract and the lining to be shed.

Menstruation is the loss of blood and uterine epithelium. The cycle length is the number of days between the onset of bleeding on two successive occasions. The mean length is 30 days (± 4 days) at the age of 20 reducing to 26 (± 4) at 40 years. Bleeding ranges from 2-7 days. Bleeding for 3-4 days in a lady with a 28 day cycle is expressed as 3-4/28 when taking notes. Most women lose about 100ml of blood with each period. The average loss is 25ml. 10% of women lose more than 80ml with each period. Iron deficiency anaemia is a risk with losses of greater than 80ml but is not universal in those with heavier periods. 25% of women bleed between 2 and 3 days, 50% 4 or 5 days, 25% 6 or 7 days and <2% bleed for more than 7 days. The longer the loss the heavier it tends to be but heavy losses are not always prolonged. Most women have a similar pattern of loss which 30% of the blood loss is on the 1st day, 30% by the end of the 2nd day, 30% by the end of the 3rd day.

The menopause periods cease usually at 45-50 years of age (p 13)