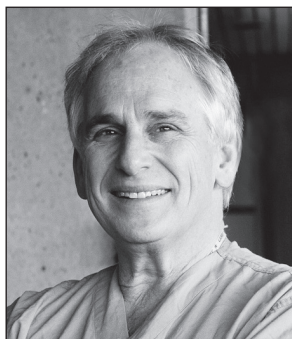


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Table of Contents

	<i>Why read this book?</i>	ix
SECTION 1	The prostate gland	1
	1 The prostate gland	3
	2 Diseases of the prostate	7
SECTION 2	Prostate cancer	11
	3 What is cancer?	13
	4 How common is prostate cancer and what causes it?	19
	5 Reducing the risk of prostate cancer	25
SECTION 3	Detection	37
	6 Screening: Detecting prostate cancer before symptoms occur	39
	7 Symptoms and signs	45
	8 Making the diagnosis: Blood and urine tests	49
	9 Making the diagnosis: Ultrasound, and cystoscopy	55
SECTION 4	After diagnosis: Determining the state of the cancer	65
	10 The stage and grade of prostate cancer	67
	11 Prognosis: An educated guess about the future	73
	12 Additional tests for staging the cancer	77
SECTION 5	An overview of treatment	85
	13 An overview of prostate cancer treatment	87
	14 Treatment options for cancer that has not spread beyond the prostate	93
	15 Making your decision about treatment	101

SECTION 6	Active surveillance, radiation therapy, and hormone therapy	107
	16 Active surveillance	109
	17 Radiation therapy	113
	18 Hormone therapy	127
SECTION 7	Surgery	139
	19 The doctor has suggested surgery: What should I do?	141
	20 Transurethral prostatectomy: Removing the central core of the prostate	145
	21 Radical prostatectomy: Removing the whole prostate	149
	22 Before your surgery	159
	23 Recovering from surgery and follow-up	165
SECTION 8	Treatment of more advanced cancer	179
	24 Treatment options if the cancer has very likely spread	181
	25 Recurrence of cancer following surgery or radiation	185
	26 Treatment of bone pain from metastatic cancer	191
	27 Castration-resistant prostate cancer	197
	28 Emergency situations that may arise	203
SECTION 9	Coping with cancer	207
	29 Living with a diagnosis of prostate cancer	209
	30 Sexual activity and quality of life	219
	31 Urinary incontinence after treatment	227
SECTION 10	Lifestyle issues	233
	32 The benefits of a healthy lifestyle after diagnosis of prostate cancer	235
	33 Managing stress	241

SECTION II	Special topics	245
	34 Nonconventional therapies.....	247
	35 Complementary and alternative treatments.....	251
	36 Clinical research: Looking for better answers.....	261
APPENDICES	A Health information on the Internet	265
	B Suggested websites.....	269
GLOSSARY		271
INDEX		277

CHAPTER ONE

The prostate gland

What is the prostate gland?

The prostate gland is part of a man's urinary and reproductive system, located just below the bladder (Figure 1). Women do not have a prostate gland. Its size can be anywhere from that of a walnut to a small apple, and its two semicircular lobes (left and right) encircle the urethra, which is the tube that carries urine out from the bladder and down through the penis.

The prostate gland is normally rubbery, pliable, and smooth. Because it is next to the rectum (Figure 2), a physician is able to feel its size and consistency with a gloved finger during a digital rectal exam (DRE) (Figure 6, p. 47). If it feels enlarged or hard or if there is a hard lump, this is an indication that the prostate has undergone a change (although this does not necessarily mean cancer). If the prostate is swollen, sore, and soft, it may be infected or inflamed.

SECTION ONE – THE PROSTATE GLAND

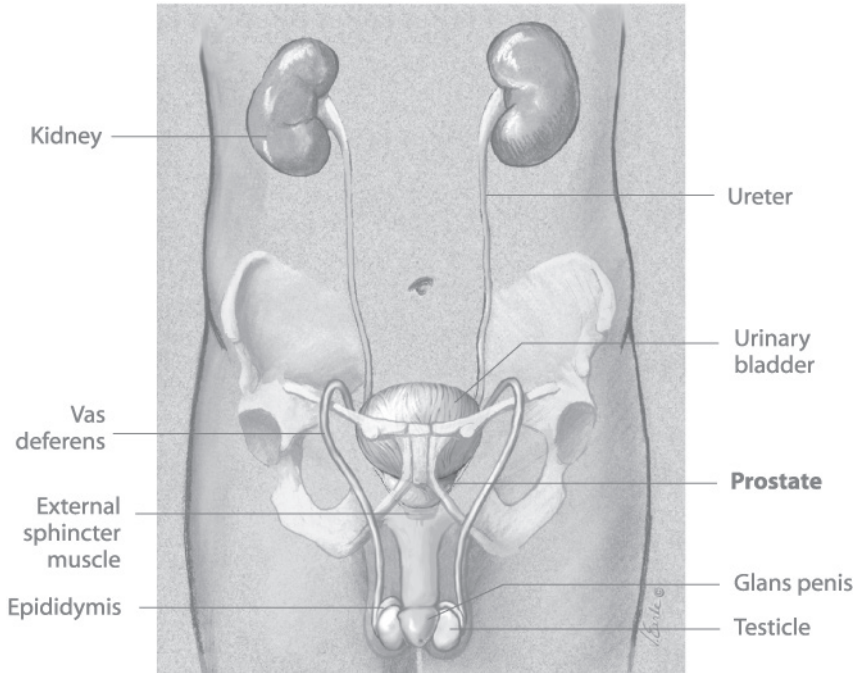


Figure 1: General anatomy, frontal view.

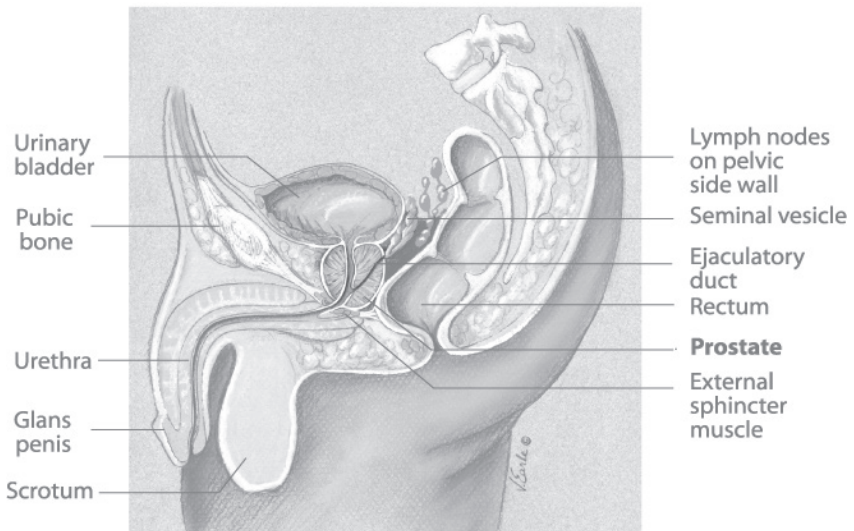


Figure 2: General anatomy, side view.

What does the prostate gland do?

The prostate gland has two main functions. The primary function is to produce seminal fluid (also known as semen or the ejaculate). Second, because it surrounds the urethra, the prostate gland's muscle fibres squeeze the urethra slightly and help control the flow of urine.

The prostate is made up of thousands of tiny fluid-producing glands interspersed within its blood vessels and muscular framework (Figure 3). As shown in Figure 1, sperm travel from the testicles upward through a tube called the vas deferens and then downward to enter the upper portion of the prostate. There, each vas deferens joins the tube from the two seminal vesicles (two glands that lie above and behind the prostate gland). These glands produce most of the volume of the semen. The sperm and the fluid from the seminal vesicles then mix with secretions emitted from the prostate to form the seminal fluid that is expelled at the time of ejaculation. The seminal vesicles are considered to be extensions of the prostate gland.

During ejaculation, the muscular sphincter at the neck of the bladder tightens and closes, preventing urine from passing into the urethra. The ejaculate, now containing both sperm and fluid, flows from the ejaculatory ducts into the urethra, and out through the end of the penis.

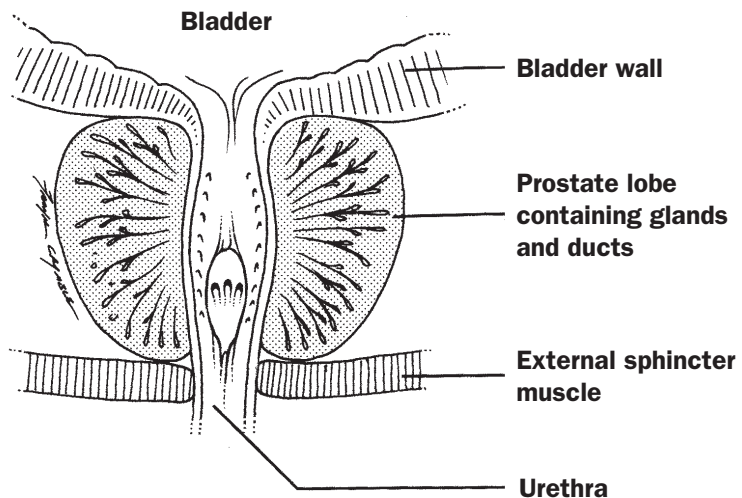


Figure 3: The prostate contains many glands and ducts.