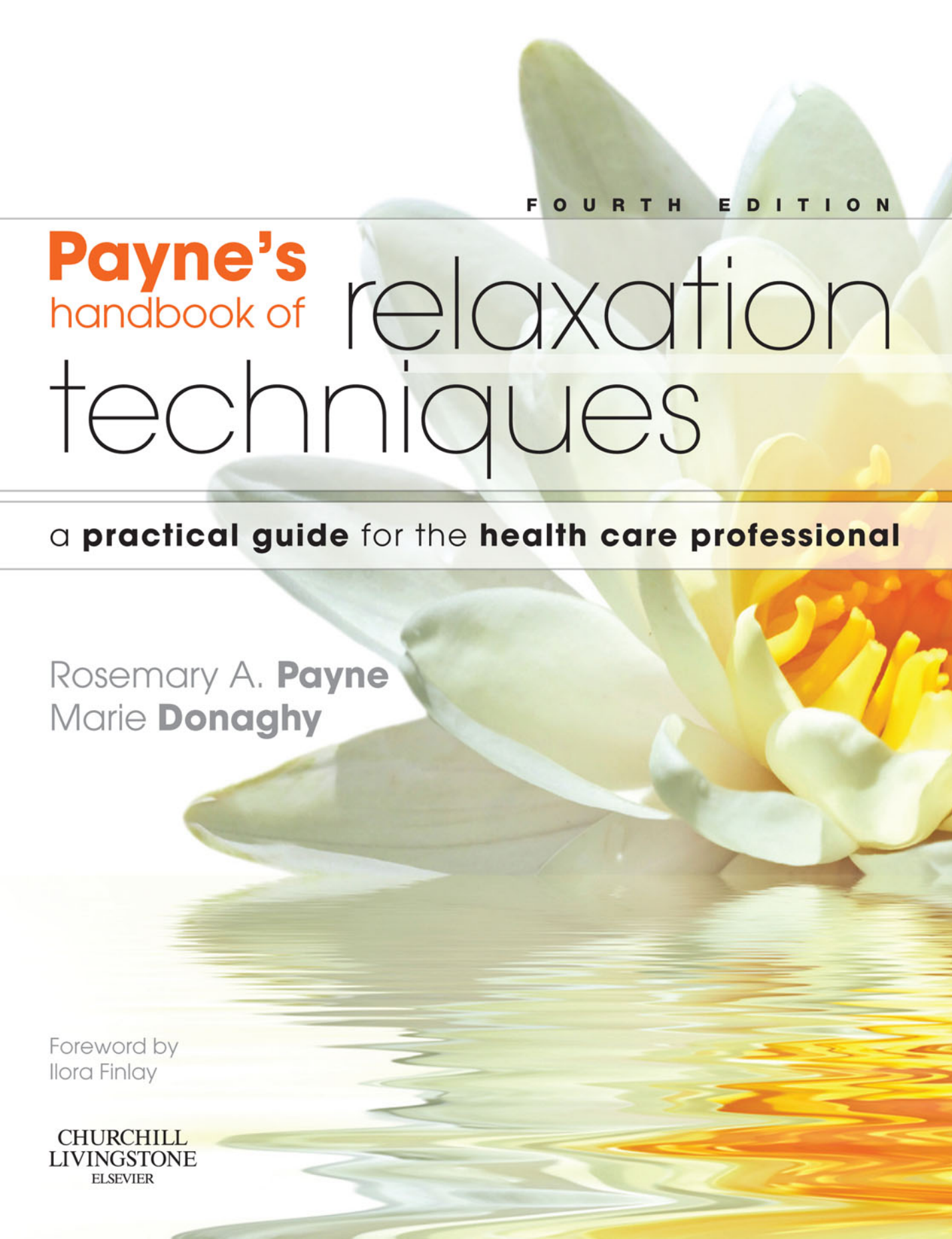


FOURTH EDITION

Payne's handbook of relaxation techniques

a **practical guide** for the **health care professional**

Rosemary A. **Payne**
Marie **Donaghy**

Foreword by
Ilora Finlay

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Payne's handbook of relaxation techniques

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Foreword

Relaxation is often seen as a panacea for stress. As such, it has given rise to many different approaches designed to cope with everyday stressors.

When people are ill, however, stress and tension mount; sleep is affected and other body systems negatively influenced. Some people with a chronic pattern of stress-related behaviour can find it very difficult to unlearn these behaviours and adopt a calmer lifestyle.

Many relaxation techniques are presented in this book. They have been selected with particular criteria in mind: that they should be easily learned and applied without requiring expensive equipment or specialized expertise. Their transferability is also important in that they can be adopted by small groups as well as individuals, and in a wide variety of settings across different age groups. Certain specialized techniques such as yoga are not covered in this book precisely because they require specific training or because, like biofeedback, they rely on special equipment.

An excellent introduction to the topic can be found in this book with its jargon-free style and its readability. Although addressed to health care professionals, it does not demand particular health care knowledge or specific previous training, and therefore has wide applicability. The book takes us through different aspects of relaxation, starting with a discussion on physiological and cognitive dimensions of stress and leading into a chapter containing coping techniques. In our society, where back pain is a major cause of absenteeism, the link between stress, muscle tension and perceptions of illness becomes particularly relevant.

The book then moves through a variety of somatic approaches including progressive muscle relaxation, breathing re-education, physical activity and passive relaxation. Cognitive approaches include imagery, visualizations, autogenics, meditation and some simple cognitive–behavioural techniques.

A common format running through the chapters makes this book easy to dip in and out of and allows the easy comparison of one technique with another. The final chapters relate to issues around measurement, a topic which is essential for any kind of audit. There is also a chapter indicating which conditions are likely to benefit from particular techniques. The book is essentially a practical manual with a step-by-step approach, allowing the reader to feel in touch with the practicality of each technique.

If you are feeling stressed, then this is the book to pick up. Its pages will make you feel both more relaxed and more in control.

Ilora Finlay FRCP FRCGP
Baroness Finlay of Llandaff, Professor of Palliative Medicine, Cardiff University; President of the Chartered Society of Physiotherapy, London, UK

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Preface to the fourth edition

For this fourth edition, the book has moved from single to dual authorship. This has allowed a more comprehensive review of the literature which has informed the evidence for practice outlined in the book. In accordance with earlier editions, the aim has been to produce a book containing a broad range of techniques which may be found useful by practitioners and students whose backgrounds lie in a wide variety of professional fields.

The book is addressed primarily to health care professionals such as nurses, occupational therapists, physiotherapists, speech and language therapists and social workers. General practitioners and psychologists also may find it useful. It can equally be used by lay people since it is written in a jargon-free style.

It focuses on methods which do not require specialized expertise or elaborate equipment but consist of simpler approaches which can be applied in the stressful situation. The division between somatic and cognitive is, to some extent, an arbitrary one, and one which has no place in the holistic context to which the authors subscribe. However, for the purpose of organizing material in the book, such a presentation has been adopted.

As in previous editions, the book is structured in four parts. Section One sets the scene, describing the states of relaxation and stress and providing guidance on preparing for relaxation. Sections Two and Three guide the reader through 21 somatic and cognitive approaches, each occupying a separate chapter. The book ends with an introduction to assessment followed by a chapter devoted to recent research on conditions and disorders, where best treatment, as determined by the evidence, is suggested.

Two chapters are completely new: one on mindfulness meditation, which has been included to reflect the growing interest and popularity of this approach, and the other on choice of technique for 35 specific conditions. Assessment, cognitive therapy and physical activity chapters have all been substantially rewritten. The book has also been restructured in the sense that chapters have been moved around to create a more convenient order and it is illustrated with a new set of photographs in keeping with changing fashion.

It was felt that a relatively slim volume would be of advantage. Consequently, certain chapters such as 'Other techniques' and 'Childbirth' have been removed. Evidence sections throughout have been updated and given a new emphasis, but the early work has not been entirely eliminated since it provides a useful historical context for understanding the different approaches. It is hoped readers will find this arrangement helpful.

It is not intended that health care professionals should, on the strength of reading this book, consider themselves teachers of autogenics or the Alexander technique. Such methods require lengthy training. These two methods are, however, included to indicate the importance of their contribution to the field; they are described for interest and for the applicability of their central ideas. For example, images of warmth and heaviness (autogenics) are relaxing in any context, and postural advice (Alexander technique) helps to promote a sense of well-being. Such concepts have universal value.

Like its forebears, this new edition is essentially a practical manual, easy to follow and conveniently sized to carry around.

Rosemary Payne
Marie Donaghy
2009

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Preface to the first edition

A few years ago, when giving a talk on relaxation techniques, I was asked by a social worker if the techniques I was describing could all be found in one publication. I said I knew of no book which contained them all. Since then, other healthcare professionals have, on different occasions, put similar questions to me. Is there a book which focuses on the practical side of relaxation training? Can the detail of the methods be found under one cover?

Many books mention relaxation techniques but tend not to present them in any depth, unless the entire work is devoted to a single method. It seemed that there was a gap which needed to be filled.

It is estimated that 80% of modern diseases have their beginnings in stress (Powell & Enright 1990) and that stress-related illness accounts for at least 75% of GP consultations (Looker & Gregson 1989). As concern about the safety, efficacy and cost of psychotropic drugs grows (Sibbald et al 1993), there is increasing interest in non-drug treatments, of which relaxation training is an example.

The book is addressed to healthcare professionals such as nurses, occupational therapists, physiotherapists, speech and language therapists and social workers; GPs and psychologists also may find it useful. It can equally be used by lay people since it is written in a jargon-free style.

Factors of practicality have governed the selection of methods. Thus, techniques which require expensive equipment or specialized expertise are not included, while the methods chosen are those which lend themselves to presentation in small group settings.

The book begins with a review of some of the theory surrounding stress and relaxation. This is followed by a chapter on general procedure which is applicable to all methods. Chapter 2 discusses stress, beginning with a further passage of theory and moving on to consider a variety of practical coping skills. The following 21 chapters deal with specific techniques: 12 chapters are, broadly speaking, concerned with physical or muscular techniques and nine deal with mental or psychological methods. There follows a chapter concerning 'on-the-spot' techniques for dealing with stressful situations, using skills drawn from earlier lessons. Assessment is addressed in Chapter 25* and the final chapter takes a look at a few topics not so far discussed: the relation between the approaches themselves, some ways in which they can be combined, and a brief reference to approaches which are not included. Physical and psychiatric disorders are not within the scope of this work.

Techniques whose main purpose is to promote relaxation are termed primary. The 'muscular' methods belong in this category, as does autogenic training. Where relaxation is not the main purpose, the technique can be seen as secondary: visualization, meditation and the Alexander technique fall into this category. Other approaches which enhance relaxation may be still further removed. These include cognitive techniques such as uncovering irrational assumptions and modifying automatic thoughts. Here, relaxation can be seen as a side-effect rather than a goal (Fanning 1988).

It is not intended that healthcare professionals should, on the strength of reading this book, consider themselves teachers of autogenics and the Alexander technique. These two methods are included to indicate their contribution to the field; they are described for interest and for the applicability of their central ideas. For example, images of warmth and heaviness (autogenics) are relaxing in any context, as also is postural advice (Alexander technique). Such concepts have universal value.

Indications of the effectiveness of the techniques are included but the book does not set out to review the evidence from the scientific literature. Other works do that, for example Lichstein (1988). Pitfalls associated with some methods are listed at the end of the relevant chapters.

The word 'relaxation' is used in two ways here, as it is in other works: first, in a general sense where it signifies a global state of rest; and second, as a technique such as progressive relaxation. It is difficult to

* To avoid confusion, the chapter numbers have been changed to match the chapter numbers in the fourth edition rather than the first. Please also note that some chapters have been deleted since the first edition.

avoid both meanings in a book of this sort; however, efforts are made throughout the work to distinguish the meanings wherever ambiguity arises.

The author is aware of the implications of gender-weighted language. She is also aware of the cumbersome phrasing that can result from a determination to avoid sexist forms of speech. In an attempt to avoid both traps and for the sake of clarity, it has been decided to refer throughout the book to the trainer as female. The trainee is referred to as male in Chapters 2–15 and as female in Chapters 16–27.

The words 'trainer' and 'instructor' are both used, the choice being largely determined by the nature of the method: for example, in autogenics, progressive relaxation and behavioural relaxation training the word 'trainer' is often used, while in imagery, meditation, Alexander technique and Mitchell's approach, the word 'instructor' seems more appropriate. The word 'therapist' is also used where it seems fitting.

A number of people have helped in the making of this book. One important contributor is Keith Bellamy, whose photographs have done so much to make the book what it is, not forgetting Sarah McDermott, who acted as the model. With regard to the text, Ian Hughes has given invaluable help in his careful reading and refining of the chapter on measurement. I would also like to mention those who have read other chapters and to whom I am indebted for their helpful suggestions. Alexandra Hough, Wendy Mair, Margaret Polden and Jim Robinson have all been kind enough to do this, and Christopher Rowland Payne undertook to read the whole manuscript. Thanks also go to Michael Adams, Joyce Gibbs, Olga Gregson, Andrzej Kokoszka, Brenda MacLachland, Pat Miller, Alison Ough, Stuart Skyte, Dinah Thom, June Tiley and Elizabeth Valentine. Finally, a word of appreciation for the members of all the groups with whom I have worked. Without them, this book would never have been written.

Rosemary Payne
Cardiff 1994

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First of all, I want to thank Marie for agreeing to join me as an author of this fourth edition. She has improved the book in many ways and her work has been greatly appreciated. Thanks also go to Michele Hipwell who gave advice over the chapter on mindfulness and Ian Hughes whose guidance in earlier editions continues to stand out. I am also grateful to Dee Jenkins, my computer engineer, who has so often come to my rescue when my own computer skills proved inadequate. Helen Taylor, Anne Pitman and Danuta Ramos have also helped in different ways and I am indebted to them and others. Finally, a word of thanks to our publishers who have supported us throughout.

Rosemary Payne

I would like to acknowledge colleagues, students, friends and family who have made huge contributions to my thinking over the years and who have helped shape my view of health, relaxation, physical activity, and mind–body integration. I would like to thank in particular Nanette Mutrie for her friendship and wise counsel over the years. My thanks to the staff in the School of Health Sciences at Queen Margaret University who have encouraged and supported my research activities. To Michael, Claire, Kirsteen, Neil, James and Mirrin, my thanks for all the fun and joy you bring to our lives. Finally I would like to thank Rosemary for inviting me to co-author this fourth edition of her book. Her guidance has been invaluable.

Marie Donaghy

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Section **One**

Setting the scene

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Introduction

CHAPTER CONTENTS

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Structure and content 04

It could be said that relaxation is doing nothing (Beck 1984). In spite of this. many people find it difficult to relax. Doing nothing, it seems, is not as easy as it sounds and the existence of a wealth of relaxation techniques appears to endorse this view.

For many people a hobby provides a source of relaxation. As an occupation devoid of deadlines, the hobby allows the mind to freeflow in an unconstrained manner, inducing a sense of inner calm. Activities which give pleasure tend to fall into this category. Some of these require moderate to high levels of physiological arousal such as active non-competitive sport, while others, such as listening to music or watching the waves breaking on a favourite beach, do not. Both, however, are characterized by an absence of stress.

It is when these activities fail to relieve stress that formal relaxation training can play a useful role. Such a training programme can help to lower a stress-induced high physiological arousal level, thereby protecting the organs from damage. It can also help to make the body's innate healing mechanisms more available. On a cognitive level, relaxation training can calm the mind and allow thinking to become clearer, and on a philosophical level, as practised in some Asian countries, it can bring an increased awareness of the self (Donaghy et al 2008).

The word 'relaxation' is often used with reference to muscles where it signifies release of tension and the lengthening of muscle fibres, as opposed to the shortening which accompanies muscle tension or contraction. Such a definition could be applied to the methods described in the early chapters of this book. However, since relaxation has a mental as well as a physical dimension, this definition is too restricted for our purposes.

A more comprehensive view comes from Ryman (1995) who defines relaxation as 'a state of consciousness characterized by feelings of peace and release from ... anxiety and fear' as well as tension. This includes psychological aspects of the relaxation experience such as the pleasant sensation it induces and the diminishing presence of stressful thoughts.

Thus, the word 'relaxed' is used to refer either to lax muscles or to peaceful thoughts. It is assumed that a link exists between them since an apparently general state of relaxation can be induced by using either physical or cognitive methods.

Purpose of the book

The book seeks to provide a compendium of different relaxation techniques and to describe them in relation to their underpinning rationales. Their selection has been governed by factors of practicality such as the following, that the method should:

- be easily learned and applied
- not require specialized expertise on the part of the trainer
- not require elaborate equipment
- be portable and capable of being used without attracting attention

- be convenient for use with individuals and small groups
- be suitable for all ages.

It is addressed principally to healthcare professionals and students who are not familiar with the topic of relaxation or to those who want to extend their knowledge about relaxation techniques. The book may also be helpful to people with chronic conditions such as rheumatoid arthritis, multiple sclerosis or enduring mental illness who wish to teach themselves relaxation as a personal coping mechanism.

Relaxation training has certain advantages which may make it particularly attractive to some people, such as being non-invasive and giving the client a sense of being in control. Benefits to employers and organizers include its low financial cost.

Structure and content

A variety of methods and techniques are presented, with one chapter devoted to each. The techniques are drawn from recognized sources and appear in slightly paraphrased versions of the originals. Each method is described and presented in a step-by-step manner. Rationale is contained in a short paragraph and there is a section on evidence of effectiveness. However, evidence to support the techniques is limited and cannot in all cases be used to inform the rationale. For this reason the rationale has been kept separate from the evidence.

Each chapter directs the reader to available research but it is beyond the scope of this book to provide a systematic review of the literature. Where appropriate, the reader is referred to other works such as the narrative review of Kerr (2000) whose paper covered progressive relaxation, the Mitchell method, massage, the Alexander technique, Benson's relaxation response and hatha yoga.

Chapter topics feature somatic and cognitive approaches. The present authors write from a firmly holistic position where any kind of division runs counter to their philosophy. However, for descriptive purposes it was found convenient to separate techniques with a cognitive focus from those with a somatic focus. Such a division is however, largely artificial.

Somatic approaches presented in this work are:

- breathing awareness
- Jacobson's progressive muscular relaxation
- Bernstein and Borkovec's modified version
- Everly and Rosenfeld's passive relaxation
- Madders' release-only
- Ost's applied relaxation
- Poppen's behavioural relaxation training
- the Mitchell method
- the Alexander technique
- differential relaxation
- stretchings
- exercise.

Cognitive approaches presented here are:

- cognitive–behavioural methods
- self-awareness
- imagery
- goal-directed visualization
- autogenic training
- meditation
- Benson's relaxation response
- mindfulness meditation.

A table summarizing the principles of each method and suggesting applications for its use may be found in Appendix 1.

The range of methods is not comprehensive since it does not include those methods which require long training periods, such as hypnosis, yoga and advanced autogenics, or elaborate apparatus, such as biofeedback. However, some of these methods are referred to for interest and background information. In the case of yoga, as taught in the West, the component parts of breathing, stretchings and meditation may be found in separate chapters.

Most methods described here are claimed to be relaxation techniques. However, there are a few which induce an indirect relaxation effect by increasing the sense of well-being. The Alexander technique is one of these.

There is a difference between methods which create 'deep' relaxation and those which create 'brief' relaxation. Deep relaxation refers to procedures which induce an effect of large magnitude and which are carried out in a calm environment with the trainee lying down, e.g. progressive relaxation and autogenic training. Brief relaxation refers to techniques (often contracted versions of the above) which produce immediate effects and which can be used when the individual is faced with stressful events, the object being the rapid release of excess tension. Thus, whereas deep relaxation refers to a full process of total-body relaxation, brief relaxation applies these procedures in everyday life.

Chapter **One**

1

Relaxation: what is it?

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How to choose a technique 13

Evidence of effectiveness 14

Relaxation suggests a state of ease which is characterized by limited body tension and freedom from unnecessary worries and fears. It is associated with feelings of warmth and tranquillity and a sense of being at peace with oneself. Thus, the state of relaxation involves a complex interplay of psychological and physiological systems which include the nerves, muscles and major organs such as the heart, lungs, kidneys, liver and spleen.

Mechanisms thought to be responsible for bringing about the state of relaxation have been explored, giving rise to a number of theories. Some of these emphasize physiological aspects such as autonomic activity and muscle tension while others focus on psychological elements such as self perceptions and interpretation of life events. The major theories are briefly described below.

Physiological theories

Body systems related to the states of stress and relaxation include the autonomic and endocrine systems on the one hand and the skeletal system on the other. An integrated response of all these systems occurs in the presence of stress.

The autonomic nervous system and the endocrine system

Physiological arousal is governed chiefly by the autonomic nervous system. This has two branches: the sympathetic, which increases arousal when the organism is under threat, and the parasympathetic, which restores the body to a resting state. Their actions are involuntary and designed to enable the organism to survive (Fig. 1.1).

Organs involved in activating these changes include the adrenal glands, situated above the kidneys (Fig. 1.2). These glands consist of an inner

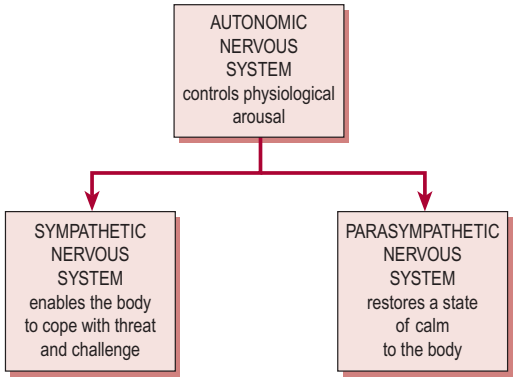


Figure 1.1 • The autonomic nervous system.

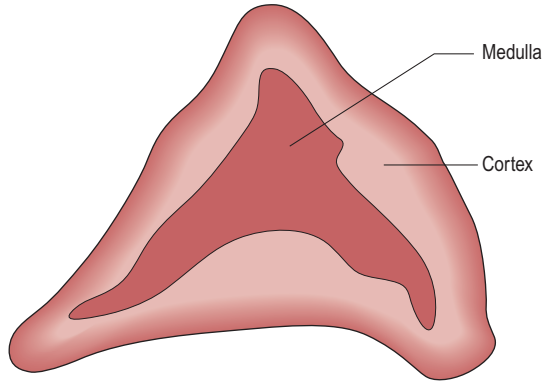


Figure 1.3 • Cross-section of an adrenal gland.

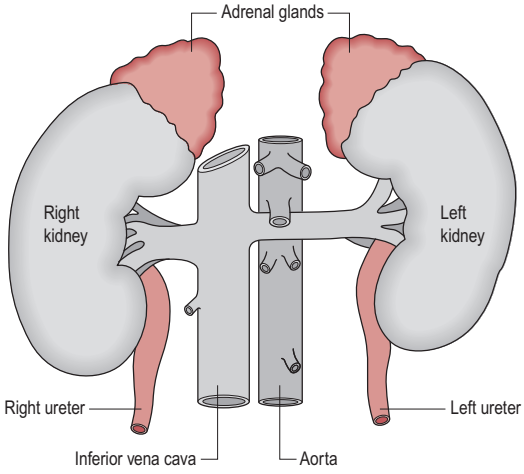


Figure 1.2 • The positions of the adrenal glands and some of their associated structures. (From Wilson 1990 with permission.)

part or medulla and an outer part or cortex (Fig. 1.3). Receiving directions from the hypothalamus via the spinal cord, they release hormones which modify the action of the internal organs in response to environmental stimuli.

When a situation is perceived as challenging, the brain immediately responds via the spinal ganglia, by stimulating the adrenal medulla to release catecholamines such as adrenaline and noradrenaline into the bloodstream. The function of these neurotransmitters is to prepare the organs for action in a manner which has been collectively known as the 'fright/fight/flight' response. It is characterized by an increase in heart rate and a redistribution of the blood from the viscera to the voluntary muscles. Blood pressure and respiratory rate are also increased, alertness and sensory awareness are heightened, muscle tension is raised and there is a mechanism for losing body heat. These factors enable the individual to make a physical response. The autonomic systems and their actions are shown in greater detail in Figures 1.4 and 1.5.

Some of the changes which occur as a result of sympathetic stimulation produce noticeable symptoms, for example, faster breathing, stomach cramps and sweating. States such as fear and anger illustrate this and underline the link between emotion and the internal organs. When the changes are pronounced and occur frequently, the organs concerned can become fatigued and this has given rise to the concept of psychosomatic illness.

Closely associated with the autonomic system but acting in the longer term, the pituitary gland releases the adrenocorticotrophic hormone (ACTH). This stimulates the adrenal cortex to produce substances, the most important of which is cortisol which helps to maintain the fuel supply to the muscles. In this way it supports the action of the catecholamines (Waugh & Grant 2006). There is also evidence suggesting that the stimulation of normal levels of cortisol enhances the immune system (Jefferies 1991). High levels of cortisol such as those created by prolonged stress or by pharmacological doses are, however, associated with a suppressed immune system.

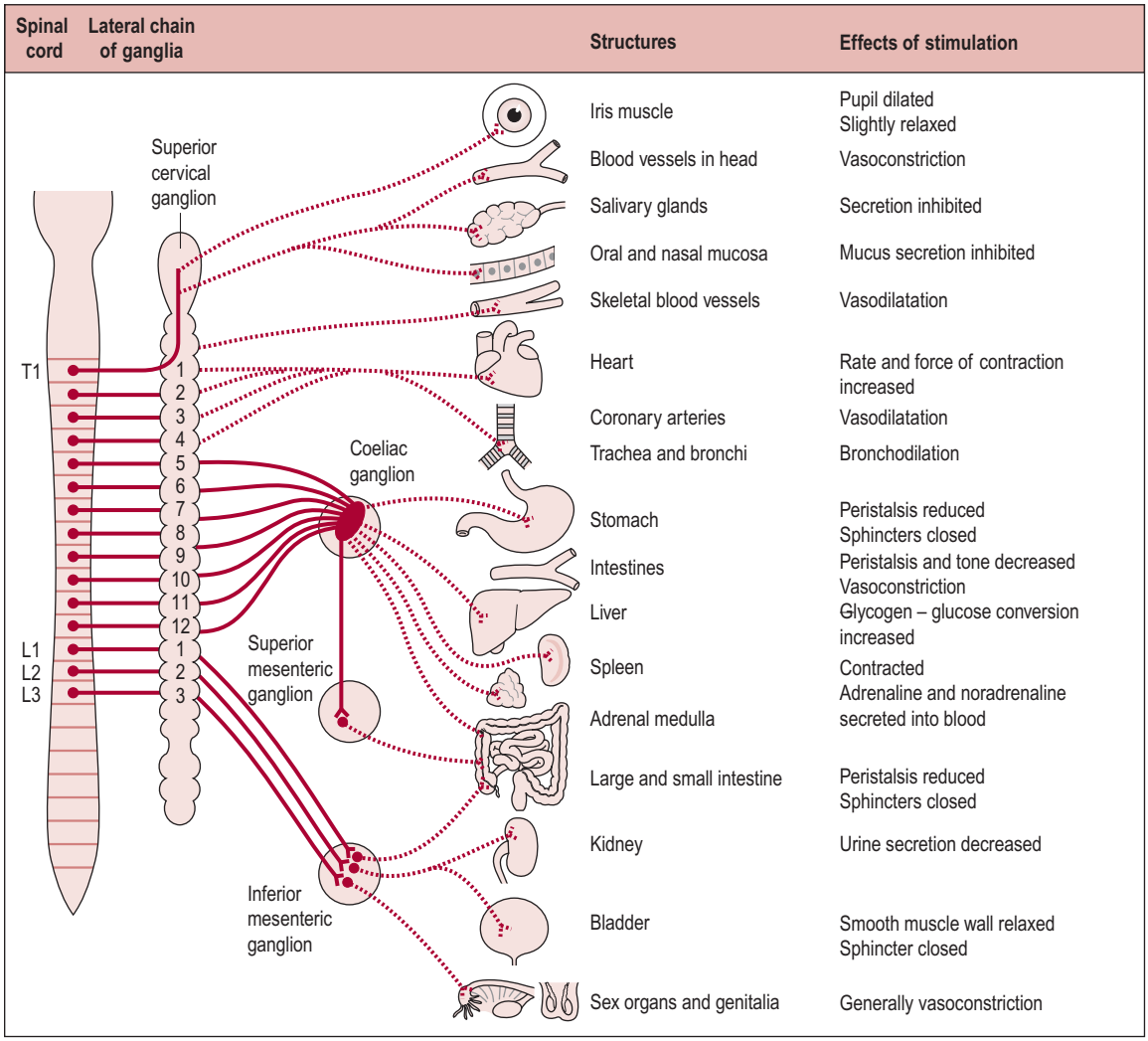


Figure 1.4 • The sympathetic outflow, the main structures supplied, and the effects of stimulation. Solid lines, preganglionic fibres; broken lines, postganglionic fibres. (From Waugh & Grant 2006, Fig. 7.42, p171, with permission.)

Under challenge, all the above hormones are released (Fig. 1.6). When the situation of challenge passes and the stress response is no longer needed, neurotransmitters are released to restore balance to the autonomic system. The organs which were previously stimulated now weaken their hold and their actions subside as a state of equilibrium settles on the body metabolism. A shift occurs away from sympathetic dominance towards parasympathetic dominance. If the products of sympathetic activity are not burnt up in physical activity, they lie in the bloodstream, where they can irritate other organs and promote the development of vascular deterioration (Gill 2008). It is important, therefore, to reduce their impact and this can be done either by controlling the stressor or by introducing a method of relaxation. The relaxation response method of Benson aims to counteract the effects of sympathetic activity by promoting the action of the parasympathetic, thereby exploiting the reciprocal nature of the two parts of the autonomic nervous system (see Ch. 22).

Activity of the parasympathetic, however, is not always benign (Poppen 1998). Asthma is exacerbated by bronchial constriction and gastric ulcers by acid secretion. Both bronchial constriction and

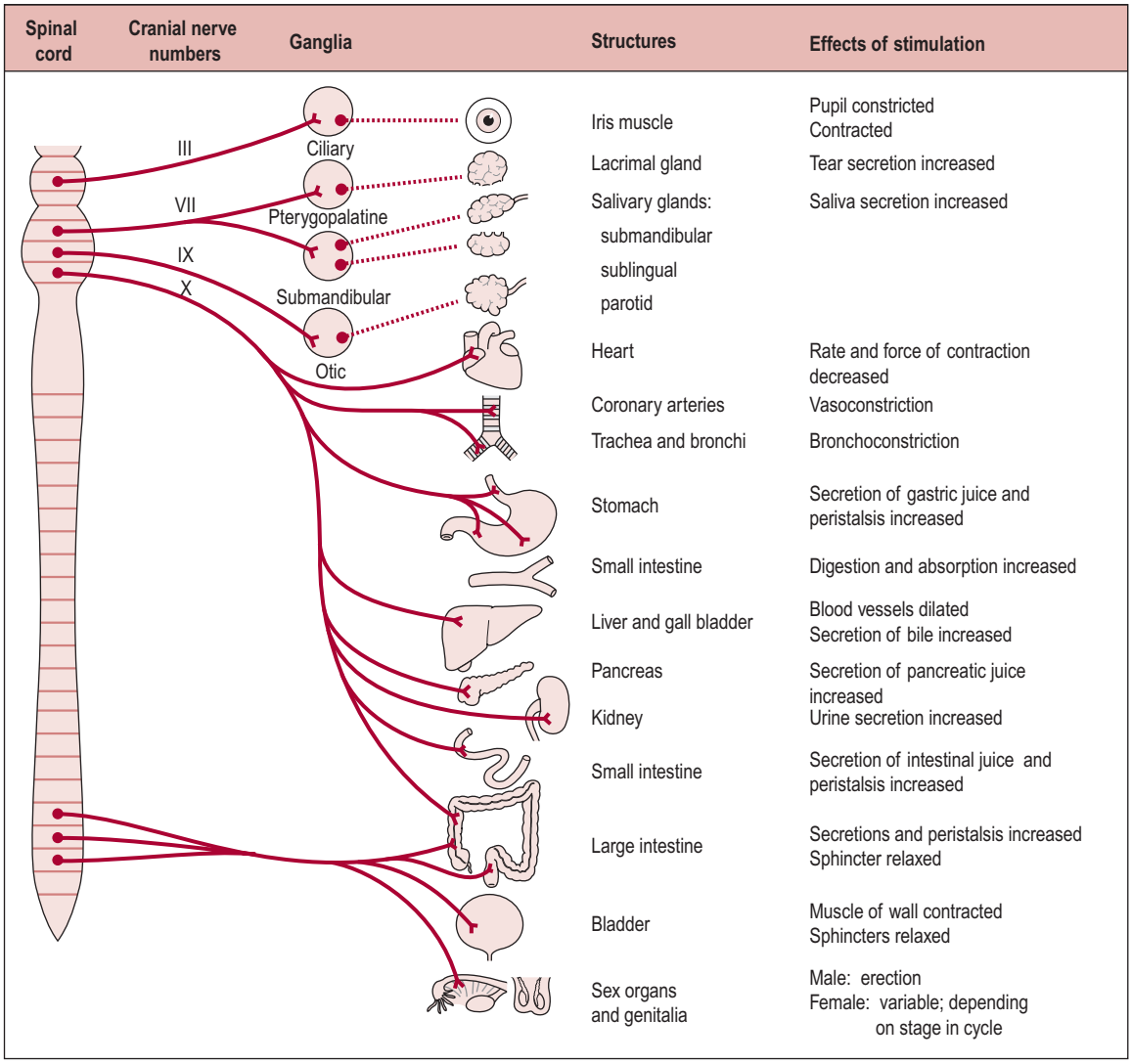


Figure 1.5 • The parasympathetic outflow, the main structures supplied and the effects of stimulation. Solid lines, preganglionic fibres; broken lines, postganglionic fibres. (From Waugh & Grant 2006, Fig. 7.43, p172, with permission.)

acid secretion are associated with parasympathetic dominance, yet the conditions of asthma and gastric ulcer are often relieved by relaxation and aggravated by stress. The theory is not consistent (p155 and p164).

Psychological theories

Three types of psychological theory concerning relaxation are discussed in this section:

- cognitive
- behavioural
- cognitive–behavioural.

Cognitive theories

'Our thoughts define our universe,' writes Piero Ferrucci in *What we may be* (1982). The way we view what happens to us determines how we feel about it. This idea epitomizes the cognitive approach which sees feeling as a function of thought. Interpretations, perceptions, assumptions and

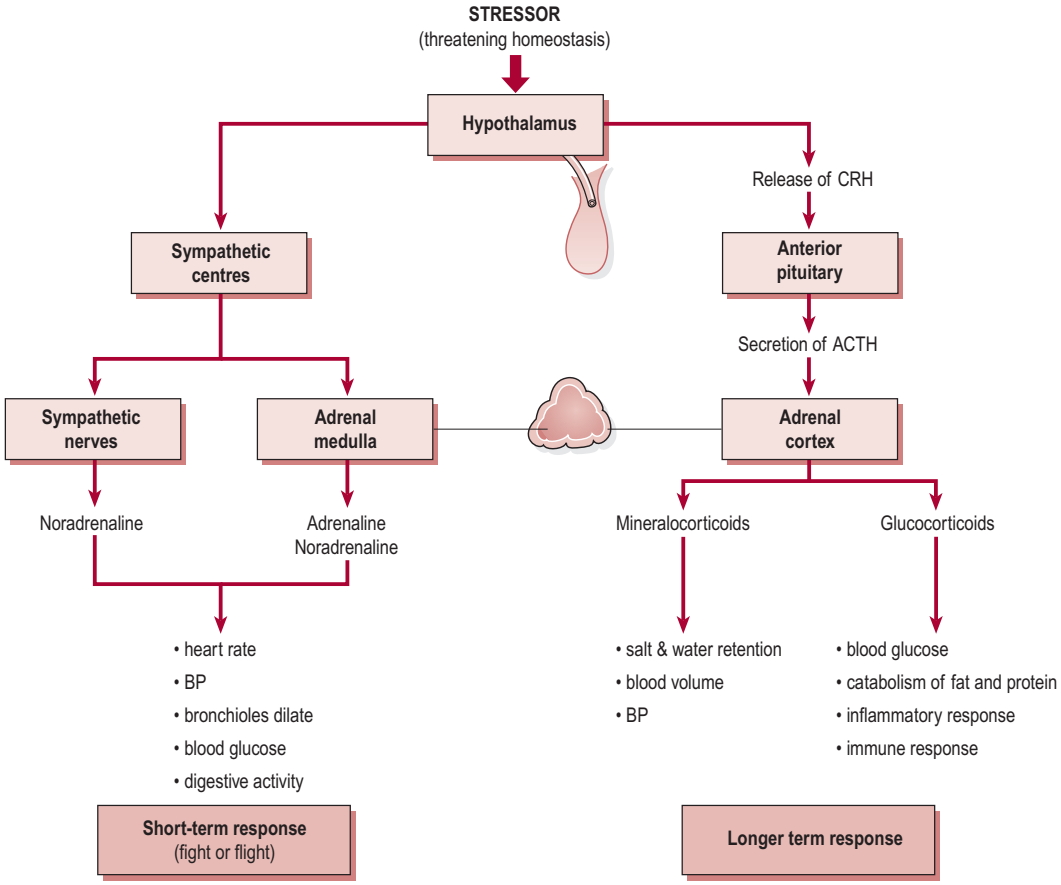


Figure 1.6 • Responses to stressors that threaten homeostasis. CRH, corticotrophin-releasing hormone; ACTH, adrenocorticotrophic hormone. (From Waugh & Grant 2006, Fig. 9.12, p224, with permission.)

conclusions will all give rise to particular feelings, which in their turn govern our behaviour. This means that our experience of stress and anxiety is related to the way we interpret events in our lives: we may, for example, appraise situations in ways which make them appear unnecessarily threatening (Lazarus & Folkman 1984).

Ellis (1962, 1976), a psychotherapist, attributes much anxiety to the irrational responses made by individuals, and cites the following example:

> *If person X puts me off, it must mean she doesn't like me, and if she doesn't like me it's probably because I'm unlikeable.*

In this example the individual is basing his view of himself on one isolated event. Ellis also indicates that such a person tends to think in terms of absolutes, for example: 'I must be liked by everyone, otherwise I'll feel worthless'. An individual locked into this pattern of thinking is doomed to disappointment and anxiety because of the impossible standards he has set for himself.

Treatment consists of identifying the irrational beliefs, challenging them and considering more rational alternatives. These ideas form the basis of Ellis's rational emotive therapy.

Beck (1984), a contemporary psychiatrist, also sees anxiety (and depression) as stemming from wrong thinking. To Beck, the distress is created by faulty thinking patterns which allow the individual to have a distorted view of events. For example:

- an individual blames himself whenever something goes wrong although he is not responsible
- he feels he is unemployable after one job rejection

- he blows up a minor mistake into a catastrophe: accidentally scratching his car, he sees it as irredeemably damaged.

Such a person tends to magnify his weaknesses and to see his minor mistakes as disasters; he dwells on his failures and dismisses his achievements.

The first step in therapy is to identify the automatic thoughts that make up the faulty thinking patterns. This is done by keeping a diary of anxiety-related events together with a description of the thoughts and fantasies and levels of emotion which accompany them. These thoughts are then tested against reality by asking what evidence there is to justify them. Are they plausible? Should they be challenged? Does it matter if what the person fears happens? If the automatic thoughts do not stand up to reality testing, he will need to modify them. Another common error is that of overestimating danger and underestimating coping abilities. Recognizing when stress is caused by habitual thinking errors and not by a specific event immediately reduces the impact of the event or situation. Some thought patterns may need to become more positive and less negative, but the principal aim of therapy is to help the individual adopt a more realistic view of himself, his world and his future (Beck 1976).

Recognition of the value of Beck's cognitive therapy is increasing. Over the last 30 years its effects on a variety of major mental health problems have been compared with those of pharmacological treatments, behaviour therapy and interpersonal psychotherapy, and found to be either superior or of equal efficacy (Butler et al 2006, Elkin et al 1989, Gloaguen et al 1998, Hollon et al 2005).

Both Ellis and Beck see the individual as having the ability to control his thoughts, and thus having the power to modify his feelings and his behaviour if he wants to. Their models are respectively concerned with challenging irrational thoughts and questioning faulty thinking patterns. Such approaches belong to the area of cognitive restructuring, i.e. the combatting of 'self-defeating thought patterns by reordering the client's perceptions, values and attitudes' (Lichstein 1988). Although their theories are similar in many ways, their styles of therapy differ: Ellis adopts a confrontational approach while Beck is more collaborative (Neimeyer 1985).

While cognitive theory is referred to several times in this book, the theories of Beck and Ellis are particularly relevant to the chapters on stress (Ch. 2), cognitive-behavioural therapy (Ch. 16) and goal-directed visualization (Ch. 19).

A further researcher whose work has been influential in the cognitive field is Seligman (1975). He focused on the degree of control which a person perceives himself to have over his environment. People who lack this kind of control are subject to a state he termed 'learned helplessness' which predisposes them to depression. Seligman's recent work has been called 'positive psychology'. This work provides guidance on how to lead a meaningful and fulfilling life. Its principles are based on positive emotions, positive psychological traits and positive-minded institutions (Seligman & Csikszentmihalyi 2002).

Cognitive methods may be seen to include most approaches involving the mind. Thus, self-talk and mental diversion are cognitive, as are other techniques which aim to restructure the thoughts. Some of these, however, are less amenable to scientific investigation than the structured approach of Beck.

Behaviour theory

Behaviour theory, by contrast, is concerned with observable actions. Discounting what goes on in the mind, it sees behaviour as conditioned by environmental events. Such events are seen as leading the individual to act in predictable ways. In the case of classical conditioning, behaviour is governed by associations; for example, Pavlov's dog learned to salivate at the sound of a bell because the bell was linked with the smell of food. This automatic association has helped to explain how fear responses can develop. Any stimulus that regularly occurs within a situation where fear is elicited will itself come to trigger a fear response.

In the case of operant conditioning, behaviour is governed by a system of reinforcement (Skinner 1938). Positive reinforcement refers to a response which is strengthened by adding something to the situation; for example, giving an employee a bonus every time she makes a profit for the firm. This results in the employee continuing to work hard. Negative reinforcement refers to the strengthening of a response by removing something from the situation; for example, when a headache is relieved by taking an aspirin, the likelihood of taking an aspirin to relieve the next headache is increased. Together, these two concepts can be used to shape behaviour.

Since these theories were first propounded, behaviour theory has developed in ways which take it away from its original reductionist models. However, it still retains its central principle, that observable behaviour is more worthy of investigation than behaviour which is only inferred, i.e. mental processes.

Behavioural approaches include muscular relaxation, distraction, graded exposure and social skills training. Muscular relaxation is described in the early chapters of this book; distraction consists of activity which diverts the attention; graded exposure offers a step-by-step approach towards mastery over a feared object or situation; and social skills training concerns interpersonal communication and covers verbal and non-verbal behaviour. Assertiveness techniques, developed in the 1970s by Alberti & Emmons, are a central component of social skills training. These writers define the concept as behaviour where people are acting in their best interests without experiencing undue anxiety and without denying the rights of others (Alberti & Emmons 1982). Topics included in assertiveness training are:

- exercising personal rights
- setting personal priorities
- expressing views
- making requests
- refusing requests
- countering manipulative behaviour in others
- allowing oneself to make mistakes.

Behaviour styles can range from aggressive to submissive, but the style of choice in most situations is the assertive one. Knowing when and how to use it is one of the social skills.

Initially it was considered by behavioural therapists that thoughts and emotions were unnecessary to the understanding of behaviour. However, over time it became evident that such matters could not be fully considered in isolation and that a certain overlap between cognitive and behavioural methods existed (Homme 1965). It can be seen from the above items, for example, that assertiveness training contains a strong cognitive element. This has led some researchers to combine the two approaches.

Cognitive–behaviour theory

This theory brings together the ideas from both philosophies. The combined approach was referred to as cognitive–behavioural training. Both Beck and Ellis acknowledged the value of this new development and included behavioural exercises in their cognitive therapies (Davidson 2008). Research has shown it to be at least as effective as medication in a wide range of anxiety disorders (Blackburn & Twaddle 1996, Davis et al 2000). As a component of cognitive–behavioural interventions, relaxation training plays a key part in the treatment of the physiological symptoms in anxiety and other clinical disorders (Donaghy et al 2008).

Cognitive–behavioural principles are described in Chapter 16. They also underlie some of the stress-relieving strategies in Chapter 2 and feature in the goal-directed visualizations in Chapter 19.

From theory into practice

Stress can express itself in any of three modes: the somatic (physiological), the cognitive (psychological) and the behavioural (observable actions). It has been proposed that the pattern of changes produced by cognitive relaxation techniques will be different from those produced by physiological ones, and that benefit can be derived from matching the treatment to the problem. For example, tension headache may be more likely to respond to a somatic approach such as releasing muscle tension than to a cognitive one such as correcting faulty thinking patterns (Lehrer 1996, Yung et al 2004).

Current thinking in cognitive–behavioural theories, however, favours a model in which interactions occur between somatic, cognitive and behavioural processes; for example, a painful joint is not simply a physical symptom but one which also involves psychological factors such as worry, and behaviours such as avoidance of certain activities which are associated with pain (Vlaeyen & Morley 2005). While different techniques may be used to influence the various aspects of anxiety, the aim of any therapeutic intervention will be the seamless integration of its different elements (Ralston 2008).

Relaxation and emotion

Therapeutic interventions should consider the role of our emotions within this seamless integration. What, however, is an emotion? We all know what

it feels like to experience love, joy, anger and jealousy and we also know that changes are occurring in the body alongside these emotions, for example, the experience of fear is accompanied by a fast-beating heart. The conditions of stress and relaxation have both cognitive and somatic aspects. In the case of relaxation, the cognitive aspect refers to the experience of mental calmness while the somatic aspect refers to such physiological matters as diminished nerve and muscle activity.

Like the emotions, relaxation is linked, on the one hand, to thinking processes and on the other, to physiological ones. Connecting them is the area of our feelings. These are relayed to the mind which makes sense of them; it processes the material, in a way which is based on the information it receives. This leads to physiological changes. However, thoughts can spontaneously arise in the mind, triggering our feelings, which themselves lead to physiological changes in the body. Thus our thoughts can trigger our emotions as our emotions can trigger our thoughts (Donaghy 2007).

Deeply involved in this process is the hypothalamus, a key organ within the limbic system where emotions are thought to originate. The hypothalamus carries impulses in both directions and initiates the chemical changes which accompany emotional activity. A system of feedback thus underlies the integrated actions of emotion, cognition and physiology.

Figure 1.7 shows this two-way flow between the cortex and the limbic system and on to the physiological structures which produce the body's response. In the cerebral cortex there is a complex interplay among the many neuronal connections. The result is that links involving thought, emotion and neurophysiological responses run throughout the brain, allowing it to make constant refinements to our behaviour (Gill 2008).

How does relaxation therapy work?

Some techniques, such as Benson's relaxation response, work by activating the parasympathetic division of the autonomic nervous system (Benson 1976). This is thought to decrease physiological arousal. Some techniques, such as progressive relaxation, reduce muscle tension. Others work by creating a distracting effect which draws attention

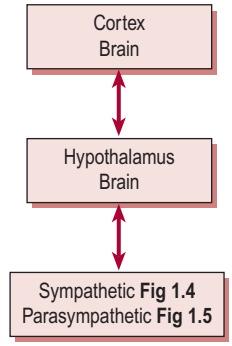


Figure 1.7 • Two-way flow of impulses between the brain and the physiological organs.

away from the source of the stress, as in imagery, or by focusing attention on a specified emotionally neutral object, such as the breath in meditation. In all these, the relaxation acts as a mediator, diminishing the impact of the stressor.

Most techniques, however, have several effects, the principal one tending to generalize across the entire organism since the mind cannot be separated from the body nor the body from the mind.

Practising relaxation skills is essential

All relaxation training involves the learning of new skills or the facilitation of already established ones. Practice is essential for the development of these skills and, for greatest benefit, should be undertaken daily. The length and quality of training and the dedication to home practice are vitally important to the outcome.

Borkovec & Matthews (1988) compared the anxiety levels of individuals trained in progressive relaxation with the levels of those untrained and found that the reduction in anxiety demonstrated in the trained group became considerably more pronounced as practice of the technique increased.

The learning process is aided by demonstration and feedback. Clients are also given information (printed as well as verbal) and this helps them to feel more in control of the procedure, provided the information is in a form which is meaningful to them. Feeling in control is thought to increase the client's motivation (Pomeroy 2007, Wulf 2007). Motivation can also be stimulated by record keeping on the part of the client; for example,

a diary could record times of practice and changes in anxiety levels.

For those who wish to teach the technique, some kind of training is necessary. However, where this is not available the principles which underlie some of the methods can be woven into the skills already possessed by the health care professional. For example, attention to posture is a valuable and universal concept outside the domain of the Alexander technique, and images of warmth and heaviness can be induced without autogenic training.

The health care professional may sometimes feel inadequately equipped to deal with certain stress-induced conditions. Such a situation calls for consultation with a specialist in the area.

How to choose a technique

In selecting a technique for a particular disorder, the health care professional will be guided by the research. Chapter 26 contains research findings on a wide range of disorders for which relaxation training has been used, and Appendix 1 itemizes suggested applications for the different methods. It may be useful to consider the evidence alongside personal choice since a technique which gives the client a positive experience will probably have a relaxing effect.

Another guiding principle is the nature of the disorder and how it matches up with the technique. For example, a sports injury may respond best to a physical method such as progressive relaxation

Case study 1 Tension headache

Matthew works in an office where he spends most of his time seated at a computor. He likes his job and sets high standards for himself – sometimes impossibly high. He has been there for 15 years and has received promotion at regular intervals. He is married to Deborah who works in the local supermarket and they have two children. Matthew's hobbies are building model aircraft and growing orchids; he and Deborah are also enthusiastic ballroom dancers. In the last year or two, however, he has increasingly suffered from discomfort in his neck and from headaches which make his job difficult and interfere with his ballroom dancing events. The headaches seem to get worse as the day progresses. At first, he thought they were brought on by cigarette smoke but a ban on smoking has been imposed and the headaches have persisted. Sometimes things go wrong in the office, such as people taking advantage of his dedication to the work, and this makes the headaches worse. Also, the newly commissioned seating arrangements at work are not as comfortable as the old ones and seem to aggravate the pain in his neck which spreads to his shoulders. He has been arriving home exhausted and has to lie down. He worries about the cause; he also worries about his future in the job.

His friends tell him he should consult his GP, so eventually he does but the GP can find nothing organically wrong. Matthew is advised to start a course of relaxation training as the headaches might be associated with stress. He accepts this diagnosis – after all, many people suffer from stress, nothing to be ashamed of. He finds a therapist and arranges to meet at weekly intervals. His treatment begins with an investigation into his thoughts on the matter: what does he think causes the headaches? Does he have any thoughts which might help to find an explanation for his own particular headaches? It is explained to him that such a dialogue approach has been found to be an effective way of tackling the problem. He is asked to keep a diary to record headache occurrences, rating the severity of each one, the circumstances in which it occurred and his feelings and thoughts about it.

In this way, the therapist gently prepares the ground for Matthew to make his own contribution to the diagnosis. He begins to feel he has been expecting too much of himself; it doesn't work to be a perfectionist; it leads to unnecessary anguish when things go wrong. Instead, he learns to be more assertive. Matthew is also introduced to posture exercises and stretchings to reverse the effects of the work posture. Perhaps his chair could be modified to make it more comfortable. Progressive relaxation is a further way of relaxing the tension, being a technique which has a direct effect on the muscles.

He responds favourably to all these procedures and is encouraged to integrate them into his work situation. He particularly likes the Jacobson technique which he finds easy to learn, effective and something he can do without attracting the attention of other people. Gradually, after a lot of daily practice, he begins to feel more at ease with himself and with his life. He stops worrying about the headaches which grow less frequent and less intense until after a few weeks they stop altogether. He is delighted. Things start to improve at work too. He seems to be getting on better with his colleagues; only yesterday he made a joke which made them all laugh. He feels happier; however, he realizes that the headaches could easily start again, so he decides to continue with daily exercise practice to ensure that he remains free of pain.