

THE COMPLETE GUIDE TO

Kesh Patel

# BODYWEIGHT TRAINING



BLOOMSBURY



### **Dedication**

To my girls, Suzanne, Maya and Lena, who keep me looking and feeling young; and to all those, who are keeping it real by promoting and practising skilful human movement everywhere.





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# **BODYWEIGHT TRAINING**

**Kesh Patel**

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# // CONTENTS

Acknowledgements	6	
Foreword	8	
Preface	10	
<b>PART ONE</b>	<b>INTRODUCTION TO BODYWEIGHT TRAINING</b>	<b>12</b>
<b>Chapter 1</b>	Why train with bodyweight?	14
<b>PART TWO</b>	<b>EXERCISE CONSIDERATIONS AND PROGRAMME DESIGN</b>	<b>18</b>
<b>Chapter 2</b>	Training strategies	20
<b>Chapter 3</b>	Training formats	28
<b>Chapter 4</b>	Warming up	32
<b>Chapter 5</b>	Cooling down	52
<b>PART THREE</b>	<b>BODYWEIGHT SKILLS</b>	<b>64</b>
<b>Chapter 6</b>	Stability skills	67
<b>Chapter 7</b>	Manipulative skills	97
<b>Chapter 8</b>	Locomotor skills	111
<b>PART FOUR</b>	<b>MOVEMENT SEQUENCES AND FLOWS</b>	<b>142</b>
<b>Chapter 9</b>	Transitional sequences	145
<b>Chapter 10</b>	Locomotor sequences	164
<b>Appendix</b>	Sample workouts	178
References and Further Reading		186
Glossary		187
Index		190

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and self-actualised Lee Saxby who has taught me the virtues of viewing life through an evolutionary lens – and that there are no mysteries in this world, just a lack of knowledge.

The concepts and methods highlighted in this book have not only arisen from hours of personal practice and exploration, but also from the endless study of methods and techniques from the areas of natural movement, gymnastics, Parkour, dance, mixed martial arts, and other bodyweight disciplines. However, the ability to perform impressive bodyweight skills was never the driving force behind writing this book. Practice and experience has led me to discover that you need to make the right shapes in order to move well. Once you learn to make the right shapes, the fun continues as you heuristically explore the many ways you can sequence these shapes to create movement that is playful yet purposeful, and effortless yet skilful. With that in mind, I'd like to pay my respects to the following people who not only understand the importance of making the right shapes, but consistently put this knowledge into the philosophy, art and practice of bodyweight skills. They have deeply influenced the content in this book and have provided me with motivation to write with humility and respect. To Alvaro Romano, Carl Paoli, David Belle, Dewey Nielson, Frank Forench, Magnus Scheving, Mike Fitch, Scott Sonnon, Richie Hughes, and anyone who embraces the skill, art and culture

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# FOREWORD

## DEFINITION

**Bodyweight** The vertical force exerted by a body's mass as a result of gravity

Gravity is fundamental to life on earth. It has shaped our bodies, developed our brains and stimulated the evolution of our unique sensory system – a system designed to inform us about the location, amplitude and effects of gravity acting on our bodies. Science has yet to decide on a definitive label for this sensory system and complex words such as ‘proprioception’ and ‘kinaesthetic awareness’ are often used. But to animals, children, athletes and coaches creating movement on planet earth, this sensory system delivers a definitive sensation – one that is vital to the creation of skilful movement and experienced as ‘bodyweight’.

The control and application of bodyweight is constantly demonstrated in nature and on the sports field: from the astonishing agility of a squirrel and the rapid acceleration of a cheetah; to the devastating left hook of Mike Tyson and the seemingly effortless 300-yard drive of Tiger Woods – each owe their efficiency and power to the application and control of bodyweight. However, nowhere is the importance of awareness and control of bodyweight illustrated more clearly than when observing a child progress through the ‘motor skill milestones’ dealing with the associated challenges of learning to crawl, squat, walk, and run.

Furthermore, the influence of gravity and bodyweight is not confined to the locomotor system, but can also be observed in the physiological and pathological mechanisms of the body. The development of bone density, heart disease and obesity are directly linked to how often we support and move our bodyweight – in fact, I would suggest that the cause of all acute and chronic injuries can ultimately be boiled down to inappropriate loading of tissue due to the lack of skill in applying bodyweight (either yours, someone else's or some things!).

I am not alone in my belief that the role of gravity in human health and the role of bodyweight awareness in acquiring human movement skill is not fully appreciated in general fitness, athletic conditioning or physical rehabilitation. However, one person who does fully appreciate all aspects of gravity, bodyweight and all that this expansive subject entails is Kesh Patel. He has seen beyond the shiny, overcomplicated fitness methods and the unnecessary acrobatic prowess that YouTube superheroes aspire to. Instead, he has created *The Complete Guide to Bodyweight Training* as a logical, step-by-step guide to greater health, functionality and performance. Kesh has applied his exceptional thinking brain so that you can switch yours off, engage your movement brain

and start reconnecting your body to gravity and the many benefits associated with intelligent bodyweight training.

Lee Saxby

*Widely regarded as the world's best barefoot running coach, Lee Saxby has spent over 20 years studying with leading researchers across the fields of biomechanics, sports rehabilitation and evolutionary biology. He understands barefoot movement and natural locomotion better than anyone else, and has used his extensive practical experience to fix injured people and develop performance athletes worldwide.*

## PREFACE

As I sit here writing this preface, I am a happy, healthy and fit human. I have spent over 20 years of my life helping others achieve optimal fitness and health, and developing and delivering education in this area. During that time, I've also explored many different approaches to physical conditioning, but no one method has intrigued me more than bodyweight training. So much so that at the age of 30 I began a commitment to learn as much about it as possible, a commitment that continues to this day. This book is a culmination of this process to date, and is by no means exhaustive. It's a journey that has included countless hours watching, learning and experimenting with the techniques of somatic education, yoga, gymnastics, dance, climbing, barefoot running, Parkour, Ginastica Naturel, Methode Naturelle, martial arts, Animal Flow, Body Flow, and other bodyweight-based disciplines.

I've always been obsessed with human movement, or more specifically, the process of movement and the way in which it presents itself. Natural movements are effortless yet skilful, purposeful yet playful – and it's these factors that often unconsciously draw us toward such movements with wonder, curiosity, and inspiration. For most adults in today's world, these traits of natural movement are rare though not completely elusive. Consider gymnastics, dance, or martial arts – why are we constantly inspired by those who practise these activities? These disciplines all

have one common denominator – their practice is guided almost exclusively by bodyweight skill. The outcome is that these individuals all have a high level of body awareness and impressive power-to-weight ratios. From an aesthetic point of view, such an outcome may translate into natural, fluid movements; from a performance perspective, this can result in biomechanical efficiency, reduced risk of injury, and the difference between winning and losing.

When it comes to optimal health and fitness, bodyweight movements make sense. From a developmental perspective, our bodyweight was the only tool we had to shape movement behaviour during our early years. Key factors in this process were gravity and ground reaction force – and we quickly learned how to work with both by making the right shapes with our body in order to navigate our immediate environment. These shapes invariably allowed us to develop the important skills of stabilisation, manipulation and locomotion that would last well into adult life. When viewed through an evolutionary lens, these skills would likely have played an important role in human adaptation and survival.

Unfortunately as adults, we have either forgotten how to perform these key skills through lack of practice, or we often practise them with poor skill. Therefore, when faced with a situation where these skills are required, we end up making the wrong shapes, and using excessive and often unnecessary muscular force. This leads to poor



economy of effort, increased risk of injury, overtraining, stress and poor adaptive capacity. To make things worse, we further exacerbate these unskilled movements through structured repetition and redundant goals, neither of which have any meaning in a developmental or evolutionary context.

While lack of skill, and poor practice, are significant contributors to skill loss, modern living environments are also to blame. Unnatural environments, which are saturated with technological advancements, serve to lessen the feedback we get from our senses, and subsequently create poor movement habits. As modern humans, we are literally running software (behaviour) that is incompatible with our hardware (anatomy and physiology). The solution? We need to update and reboot our operating system by changing our behaviour to run more in line with our developmental (and ancestral) design.

This book proposes that the physical aspect of this software update can be achieved effectively through bodyweight training. By (re)learning and building on stability, manipulative and locomotor skills, we can once again navigate our modern environments with skill and efficiency. This type of fitness is not about humans vs the environment; it's about humans working with the environment. With this in mind, bodyweight training can open up a world of possibility that can not only

re-connect us with the basic skills that shaped our early development, but can also enhance our health and fitness by building on these skills, with the aim of improving our adaptive capacity to meet the demands of modern living. In a nutshell, this type of training simply makes sense.

*The Complete Guide to Bodyweight Training* is not about punishing yourself with mindless exercises, performing meaningless sets and reps, or showing off impressive bodyweight movements. It's about becoming skilful at using your body in a purposeful way. This is achieved using the human motor developmental model as a framework for skill acquisition, and reinforcing this with the principles of biomechanics, the training techniques of gymnastics, and the applications of strength and power training. The drills, progressions and explorations in this book will make bodyweight skills accessible to all fitness levels at any age, and will help to develop higher levels of strength, balance and body control that will be immediately transferable to activities of daily living.

A new breed of fitness is evolving – one that aligns with our evolutionary heritage and early motor development. In a world where humans have readily adapted their environment to suit them, the process of re-learning how to move skilfully with purpose may help us instead to adapt ourselves to suit our environment. Welcome to bodyweight training.

1



# PART ONE

INTRODUCTION TO  
BODYWEIGHT TRAINING



# // WHY TRAIN WITH BODYWEIGHT?

## INTRODUCTION

From a human motor development perspective, the efficient manipulation of our own bodyweight played a key role in our physical maturation. During this process, the external forces of gravity and ground reaction, alongside the internal forces of muscle contraction and elasticity, influenced the size, structure and function of our bodies. Through an evolutionary lens, efficient and purposeful manipulation of bodyweight would have been essential for survival.

For modern humans, although the selective pressures are largely redundant, our work and play environments often demand skilful use of bodyweight movement. Unfortunately, the advancement of technology and environmental adaptation has led to a dramatic decline in the skilful use of our bodies, and a subsequent loss of capacity to adapt to the demands of our environment. What was once natural, skilful and purposeful is now unnatural, inefficient, and meaningless. The modern, unnatural environment is literally affecting our health, resulting in a significant lack of ability to skilfully shift and lift our own bodyweight.

With this in mind, the ability to skilfully manipulate our own bodyweight shouldn't really

be thought of as a form of training, but instead an essential part of our development and a platform for bringing about purposeful adaptation for optimal health and well-being at any age.

## HUMAN DESIGN

It's no coincidence that training solely with bodyweight can improve all biomotor skills. This has resulted in the growth in popularity of bodyweight workouts – replacing many equipment-driven training exercises. Indeed, many disciplines of sport and the performing arts rely on bodyweight resistance as the preferred source of physical conditioning and skill acquisition, e.g. gymnastics, dance, martial arts and running.

We're built for bodyweight movement and exercise – look at our physiology – we have naturally strong feet and ankles, long limbs, mobile hip and shoulder joints, and a unique upright posture that gives us the capacity and flexibility to fully explore our environment. These explorations draw on the simple skills of pushing, pulling, squatting, bending, twisting and balancing our own bodies. And these movements can also be combined and sequenced in various ways to create other natural, yet purposeful movement patterns.

## MAKING THE RIGHT SHAPE = SKILFUL MOVEMENT

But in order to move skilfully we first have to learn how. In early childhood, gravity and ground reaction forces were our guides to creating the most appropriate shapes for any given task, from sitting and standing, through to crawling and walking. These lessons in shape development helped to build bodyweight attitude from an early age. As adults, many of us have lost the ability to make the right shape for any given task, much of which is the result of modern living.

Today's technology has significantly reduced the need for us to physically demand much of our bodies – instead of walking, we drive; instead of using the stairs, we take the lift or escalator; instead of playing outside, we play video games indoors. Technology has also led to the development of over-complicated exercise equipment, which has subsequently led to the creation of over-complicated training methods. Therefore, re-educating and further developing our bodyweight attitude as adults would seem the most natural and efficient way of restoring health, function and vitality, while at the same time providing a much-needed buffer to the stresses of modern living.

And why should it stop there? Can we not take these fundamental bodyweight skills and manipulate them further into challenging yet purposeful movements that not only build fitness but transfer to everyday activities too?

## USING A MOTOR DEVELOPMENT FRAMEWORK

Motor development refers to the growth and maturation of the muscular, skeletal and nervous systems during infancy and early childhood, and

the processes that undermine these changes. The goal of motor development is threefold: to build the strength required to overcome gravity; to learn to balance over our base of support; and to coordinate our limbs during movement. We meet these objectives as children by acquiring the fundamental skills of stability, manipulation and locomotion – which we explore through simple patterns of pushing, pulling, twisting, crawling, sitting, and squatting, before making the transition to standing and upright locomotion. These explorations are often based on trial and error, and for the most part, are uninterrupted by adult intervention.

Unquestionably, these skills helped to shape our early physical growth, but they also continue to be useful well into adulthood. Locomotor patterns such as walking, running and jumping allow us to move from point A to point B as a means of navigating our wider environment; manipulative skills offer a way of operating within our local environment, and include skills such as pushing and pulling; and stability skills provide a means of support and control of the body during both of the above skills.

For our ancestors survival would very likely have depended on a smooth integration of these skills. At times, the demands of living may have required these skills to be used in an intermittent, vigorous manner, for example, climbing or jumping over an object; and at other times, in an endurance capacity, for example, chasing an animal over a long distance. In return for this effort the rewards were likely to be great, e.g. the acquisition of food – and ultimately, survival. However, the modern day landscape is far different. Somewhere along the way we have lost the very skills that make us unique as humans, as well as the capacity



to adapt that was once the driver for our early physical development. While our hardware – our anatomy and physiology – is still hunter-gatherer, our software – behaviour – is modern-human. Industrialisation, the advancement of technology, and environmental adaptations are changing the way we use our bodies – we are literally being moulded and shaped in ways that humans are not designed to be.

As modern adults, a reintroduction to progressive bodyweight-based stability, manipulative, and locomotor skills will not only improve fitness and health, it can also make our bodies more resilient, prevent injury, and reboot our software with a much needed upgrade.

## BODYWEIGHT CULTURE

Bodyweight training is more than just adding a few push-ups and pull-ups to your training programme. It requires a healthy appreciation and understanding of the laws of nature and physics; and in return, you'll build impressive yet purposeful levels of stability, strength and coordination.

In the past decade, the growing understanding of biomechanical principles has meant that bodyweight training has acquired cult status in certain fitness circles. What was once the domain of gymnastics has now spread to mainstream fitness, with an abundance of websites and YouTube tutorials dedicated to learning bodyweight skills.



In addition, the former meccas of bodyweight training – the beaches and parks – are now being revived as popular social hubs for such activities. In response to this demand, we are seeing more and more outdoor training set-ups conducive to bodyweight training being installed across the nation.

What's interesting to note is that in the main these bodyweight advocates are not interested in performing sets and repetitions. It's not about how much you can lift, or how good you look. A new definition of 'body-beautiful' has emerged – one that centres around skilful body manipulation and movement flow. It's this very aspect of bodyweight training that is appealing to many, and is exemplified in the art of gymnastics, dance, circus, martial arts, and Parkour – all of which have been strong drivers in the creation of bodyweight culture and its cross-over to mainstream fitness.

## BENEFITS OF BODYWEIGHT TRAINING

Bodyweight training can enhance physical and physiological fitness, and mental health in any age group, as well as offer a lot of benefits that other forms of resistance training can't. Specific benefits of bodyweight training include the following:

- Allows for quick, efficient workouts because there is no/little need for equipment
- Uses multiple biomotor abilities, e.g. strength, endurance, power, agility, flexibility, etc.
- Allows for more variation in movement than sometimes restrictive equipment based workouts
- Enhances stability and balance in a natural way
- Is fun and cheap
- Enhances proprioception and position-sense
- Provides a foundation for skill transfer to other activities
- Triggers fast twitch fibres for poise, power and quickness.

12

