

EXPLORING YOUR INTELLIGENT BODY

Using mindfulness and simple self-care exercises
to explore how your body can self-correct
musculoskeletal, mental and emotional dysfunction.



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To order a copy of Exploring Your Intelligent Body go to www.eyib.com.au

This book is designed to assist a person to explore how their body works and help them change limiting patterns. If what you are doing creates pain, stop and seek help from a medical professional.

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CONTENTS

	Page
Acknowledgements	7
Introduction	9
Introduction to Ortho-Bionomy	11
Chapter 1 - Your ability to self-correct	19
Chapter 2 - Working with your stress response	31
Chapter 3 - Sleep	49
Chapter 4 - How pain works	61
Chapter 5 - Working with the mind	73
Chapter 6 - Emotional self-care	91
Chapter 7 - Soul wisdom arrives in the space when we listen	109
Chapter 8 - Exploring your ability to self-correct	127
Chapter 9 - Diet and the self-corrective process	145
Chapter 10 - Bringing it all together	169
Chapter 11 - Personal development	175
Recommended Talks	187
References	188

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If I see further it is because I am a dwarf standing on the shoulders of giants

Isaac Newton

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This book is really a snapshot of how we can work with the body's amazing ability to self-correct. There is so much more to learn about how this process works and I hope this contributes to more people being interested in finding new ways to work in alignment with the natural laws of life.

Rob Rich

Sunshine Coast Qld 2020

INTRODUCTION

My life changed in January, 2000. For a couple of decades, I had had ongoing lower back pain, which ranged from a constant nagging ache to savage pain that would stop me doing anything. I had tried many things to find relief including chiropractic, massage, physiotherapy, and acupuncture, and got mostly short-term relief but nothing seemed to really change how my lower back functioned. Then on the recommendation of my sister, I had a session of Ortho-Bionomy. I was sceptical that something that I couldn't pronounce could produce a different result from everything else I had tried.

I was lying on a massage table fully clothed and Alison, the therapist, started pushing on points, then slightly bent me to one side and compressed my foot toward my hip.

The relief was incredible. My lower back softened and relaxed, for what felt like the first time in my life.

It made no sense that something so gentle could create such a big effect. How did this work and why, if this worked, wasn't everyone doing things this way?

The session continued and when I stood up my whole back felt different. I felt taller and was able to stand more comfortably. It occurred to me that I had to learn this modality even if it was only to know how to work with my own body.

Shortly after I attended my first class in Brisbane, and on learning about the principles, I recognised some similarities between the underlying principles of aikido, which I had trained in and Ortho-Bionomy.

That first session has led me to study Ortho-Bionomy for the last 20 years, and today I am learning more about how the body self-corrects than when I started.

This book is really a summary of what I have learnt about how the body self-corrects, some of the science that supports the ideas I have presented, and most importantly tools for you to play with, to help you discover things about yourself.

Your body is amazing. It performs miracles on a daily basis. It converts everything you eat into energy to keep you going, deals with all the microbes that want to use you as a food source, and it organises itself so you can move, lift and carry things under the constant force of gravity. When something goes wrong, it heals itself.

Take a moment to appreciate that last sentence. Imagine if your car or phone could heal itself. How cool would you think that was? Well, your body can and does with many things and with the right information we can extend how well the body can self-correct to include chronic musculoskeletal pain as well as physical and emotional traumas.

The ability to self-heal is incredible. The body is designed to return to a functional state, adapting to whatever illness or injury we have had.

This system relies on having the right information in order to resolve chronic pain and dysfunction. When this information isn't available, the body will struggle to return to a fully functioning state. Over time, our adaptations to past injuries accumulate, and this creates rigidity in the system. Ortho-Bionomy works by putting information into the nervous system that helps the body to recognise the dysfunction and how to unwind the tension patterns and become functional again.

In this book, you will find what factors inhibit the self-corrective process and what you can do to work with them.

Natural forces within us are the true healers of disease.

Hippocrates

My main focus in this book is on musculoskeletal pain, and the relationship between the emotions, the physical body and pain. There is a growing body of evidence supporting this holistic view of working with the body. Working only physically or only emotionally limits the success of a treatment modality. You might get some relief, but the condition may reoccur though time, like my periodic lower back pain 20 years ago.

We are a whole system, from our bones to our thought processes. We need to be able to put information into the nervous system

in a way that connects to the level of the dysfunction and enables the mind/body to understand that dysfunction and stimulate the body to self-correct.

This book has many different exercises that offer you the opportunity to explore how your system functions. Some of these will work well for you and others won't. This is not because the exercise is ineffective, but because it is not what your nervous system needs at present.

Because there is so much research happening in multiple different fields, there will always be more to learn and discover, so I consider this to be an ongoing exploration. In the reference section, I have included some great talks by different researchers who look at different aspects I have examined as well as the numerous papers that support some of the ideas presented here.

A dysfunction can be physical, mental, emotional, or in a movement pattern, and therefore is not limited to a particular level of structure. For instance, lower back pain can be due to a physical dysfunction such as a rotated vertebra, which creates the sense of the lower back being unstable. The body then recruits the muscles around the joint to brace the area.

Alternatively, lower back pain could be associated with an emotional or mental dysfunction such as feeling fearful, feeling like a victim, or from a worry such as experiencing financial hardship, all of these cause stress hormones to be released in your body, this causes the psoas muscle in the lower back to contract, increasing the tension in the lower back.

So, this approach is really about being able to find what level to work on to assist the body/mind to reorganise itself to a more efficient way of functioning.

When we talk about the self-corrective process, we are looking at how we can stimulate the body to work in the way it is designed to. The body's ability to self-correct is what enables us to respond to the changing environment we live in. If that innate ability of the body is stuck, then something is inhibiting the process. To help the body, we need to identify what the dysfunction is and help the body become aware of what is happening. This is very different from trying to "fix" the dysfunction.

The value of working this way is that the body is an intelligent system and it learns how to become more efficient at self-correcting a certain dysfunction. In effect, it up-skills in that area.

With my clients, one of the milestones I look for is when someone, who has had chronic pain for quite a while, has become pain free and then feeling better, they overdo some activity they haven't been able to do for years. This will aggravate the original area and some pain will return, but after a night's sleep, it disappears. This means their system has enough information to self-correct the presenting dysfunction. We then move onto working with the posture, so the system becomes more stable under gravity when loaded. Postural work makes the body far more resilient.

If you don't want your clients to get better, then don't do postural work with them.

Arthur Pauls

Arthur Pauls, the Osteopath who developed Ortho-bionomy in the 1970s, used to say, "if you don't want your clients to get better don't do postural work with them."

So, with Ortho-Bionomy, we work with the posture right from the first session, but once a person is pain-free, the ability of the body to change posture increases as there is less fear of change within the system.

Even after 20 years I still find the ability of the body to self-correct to be amazing. It doesn't matter how long a dysfunction has been present, when the right information is put into the nervous system, the body can change incredibly quickly.

One of the most useful things about this approach is to stay curious about what is happening. Curiosity invites you to notice new things, and this new information may be the piece you need to unwind a dysfunction. So, as you read this book, stay curious, experiment with the exercises and see what you notice. Fine tune them to suit your mind/body.

AN INTRODUCTION TO ORTHO-BIONOMY

Ortho-Bionomy is a hidden treasure, a form of bodywork that has been around since the mid-1970s, yet few people have heard of it. Ortho-Bionomy is great for working with both acute and chronic painful conditions.

Ortho-Bionomy developed out of Osteopathy. As I mentioned before, the primary focus of Ortho-Bionomy is to stimulate the body's ability to self-correct.

There are no forced manipulations or painful techniques in Ortho-Bionomy, because we don't need them to assist the body to change. When you apply force or cause pain, the body is quite likely to treat this as a threat. This turns on the protective mechanism and focuses the awareness on minimising the likelihood of being injured. While this is happening, the nervous system is not paying attention to what it can learn about the dysfunction. Without the system learning how to self-correct the dysfunction, there is greater likelihood of the body returning to the same pattern and the painful condition recurring. When no force or pain is used in the treatment, the body can relax and feel safe. This is when the nervous system shifts into the right mode to notice new information, which is the internal version of being curious.

Ortho-Bionomy is non-invasive. You remain clothed during sessions. It is wholistic in that we work with the whole of the physical body, including the alignments of bones, tension in the muscles and fascia, the ligaments and the movement of fluids, and the interaction of suppressed emotions with the physical body. Ortho-Bionomy also works on the reflexive responses of the body, helping to balance the fight/flee response with the rest/digest response. It also works energetically on the patterns that you have built up in response to past experiences, injuries or negative beliefs.

This is done by working with your nervous system in order to increase awareness of the dysfunction(s), so your innate ability to self-correct can function. The Ortho-Bionomy practitioner's role is one of facilitating change by putting information about the dysfunction into the nervous system in a form that the body can understand.

This is a quite different approach from trying to "fix" the body. The body is complex systems within a complex system, so the likelihood of an external person having all the necessary information to actually fix you is fairly low. This is why it often takes so long for a dysfunction to change and remain stable long term using forced manipulations or painful techniques. The greater the complexity of the dysfunction, the more precise a forced manipulation needs to be in order to stimulate the system to change and the more likely the protective mechanism will lock down preventing change from occurring.

Of course, there are a few issues with attempting to impose change. Force or painful techniques can cause further injury. Also, the body can become more rigid after the session as it tries to prevent further pain. There is also an increased risk with conditions like osteopenia or osteoporosis that force can cause damage to the weakened bones.

In reality, what fixes the body is the body itself. Just as the band aid or stitches don't heal the wound, the forced manipulation doesn't fix your skeletal alignment. The change that occurs with a forced manipulation is that the skeletal system around the mobilised joint has to adapt to the force and this can stimulate the body to self-correct. This can also trigger the body's fear response, especially in the upper back, where a spike in stress hormones often occurs with a forced manipulation. The best approach I have found to working with skeletal misalignments is to put information into the nervous system and then get out of the way and let the amazing ability of the body to heal itself to do the rest.

This distinction means that the Ortho-Bionomy practitioner is not an expert on your body. It is more like having a conversation, exploring the dysfunction together, than being told the solution. This process of discovery means that when the body unwinds a dysfunction, it has learnt something and is therefore empowered to take a more active role in maintaining the more functional way of operating.

Ortho-Bionomy is principle-based, rather than technique based. This means, the practitioner adapts the techniques to meet your body. This is what is going to make the most sense to your nervous system. Like in a conversation, it can sometimes take time to work out what is the most effective way to present information. Some people like traction, others compression, some joints need information about the alignment of the bones, other joints need work on the ligaments to create more support for the joint before information about alignment can be used. Sometimes the trauma of an injury reduces the range of movement, so releasing that clears the physical limitation more effectively than working with the bones or muscles.

Ortho-Bionomy principles are useful for working with more than just your body. How we deal with conflict, how we organise

ourselves within our relationships, how we work with other people, can all be influenced by incorporating the principles, and this will lead to increased awareness and improved interactions with others, or alternatively a way to approach things when something goes wrong.

The majority of people who choose to learn Ortho-Bionomy are from one of two groups: first, therapists who seek a way of working that is gentle on their own body, extending their working career, and giving better results for a broad range of painful musculoskeletal conditions they see in their clinic.

Second are people who, like myself, have had incredible results with Ortho-Bionomy and are keen to learn how it works. Ortho-Bionomy training is really a self-development process that increases your awareness from a structural level right through to the energetic level.

A change happens on a psychological level when you feel chronic pain or rigidity in your body dissolve effortlessly after years of trying many things. This change leads you to ask the question: if a long-term chronic condition can release without force, what else can I change by getting a better understanding of what the dysfunction really is?

How can I increase my awareness to find the information my system needs in order to self-correct?

HERE IS A QUICK SUMMARY OF THE ORTHO-BIONOMY PRINCIPLES

Structure Governs Function

From a bodywork perspective, we work with the skeletal structure, and your relationship with gravity. Getting your bones in alignment so they support your weight enables your body to move more efficiently.

A muscle spasm, for instance, is part of a compensation pattern for an unstable joint. The body recruits the muscles to create more stability. Working with the joints allows the body to become more stable and therefore the tension in the muscles is no longer required.

From a practitioner's perspective, understanding the structure of the body is the starting point, so we can explore how this current situation is the same or different from what we have noticed/experienced before in other clients, and in the same client previously.

As most of us have fairly similar things we do — walking, sitting, lying down — we will have some similar patterns, but as we do these things quite differently, there will be some patterns that we all have in common and some that are our personal adaptations to our experience, emotions, injuries, and lifestyle.

Function also affects the structure – if you repeatedly do the same action your body will try and become more efficient at that movement. This builds up functional patterns that can then interfere with movements that require a different range of motion. Ortho-Bionomy uses movement-based techniques to shift these patterns. This can be really important for athletes as training can create imbalances within the body that if left can lead to overuse injuries.

In a broader life perspective, if you create a structure that works for you, then you become more functional.

If there is dysfunction in an area of your life, assess its structure. In most cases, when things naturally evolve without a plan, there is little structure, which is fine unless it becomes dysfunctional. Taking some time to put a structure into place simplifies the situation and makes it more functional.

Structures do not have to be rigid or curtail creativity. Creating a framework so the repetitive parts of what you are doing can be done with minimal effort leaves the fine tuning or variations from the norm to be focused on. This creates greater stability and enables you to achieve more with less effort

The Rule of the Artery is Supreme

This idea dates back to A. T. Still, the father of Osteopathy in the late 1800s, and refers to the stagnation of fluids being a cause of disease. Fluids, especially lymph, require movement to flow efficiently. The modern take on this is, "Motion is Lotion."

In bodywork, fluids refer to air, blood flow, lymph, and life force.

Fluids are far more important to health than most people think — right up until they have a dysfunction of the system that moves fluid around the body.

In Ortho-Bionomy, we make the connection from the fluids to the fascial tension patterns that restrict fluid movements.

Fascia is a band or sheet of connective tissue, primarily collagen, which lies beneath the skin. It attaches, stabilises, encloses, and separates muscles, bones and other internal organs.

We then look at why the fascia tension patterns are there. Often this relates to posture, which is how you use your bones to support your body weight under the constant force of gravity. Therefore, we take a wholistic approach and work at assisting the posture to become more efficient in order to help the fascia to relax and the fluids to move. There are also other causes for fluid retention that require different ways of working.

If you would like to test the idea that fluid movement matters, hold your breath. At a guess, within a couple of minutes you will have experiential clarity on the value of fluid movement to life.

The Body Has the Inherent Capacity to Heal and Balance Itself

The ability of the body to self-correct is also known as homeostasis and is fundamental to life. We simply do not have the capacity to understand what is happening in someone else's body in fine enough detail in order to fix it.

An example of this is that there is no such thing as standard anatomy. Just as we look different on the outside, we look different on the inside as well.

For example, you grow your bones in relationship to gravity, but your age, diet, ability to digest and absorb the nutrients you eat, the emotional environment you grew up in and currently live in, the impact of the activity you do and genetics all play a role in your skeletal development.

It takes anywhere from 15 to 25 years for the pelvis to fully ossify (turn to bone). If you are a couch potato it might take 25 years, while if you play sport, the impacts will speed up the process.

Each of us also constantly remodels our bones as we age: the angles of things like the neck of the femur change.

So, with all these variables, how can a practitioner really know with enough confidence that a forced movement will not cause injury?

It is really a testament to the resilience of the human body that there aren't more injuries from forced techniques and that when injuries do occur the body can often recover from them — unless the person is one of the really unlucky ones.

By working with the body's ability to self-correct, we avoid having to know. Since we don't use force, there is no risk of injury and the worst that can happen is no change to the underlying dysfunction. This shows that the information provided to the nervous system is not the information it needed to change the dysfunction.

One of the findings of pain research is that when the body feels safe, the intensity of pain reduces³². With Ortho-Bionomy, we find that when the body feels safe, the ability of the body to change dysfunctional patterns improves dramatically. Often a chronic condition that has been present for years can unwind quite quickly if the body feels safe and the right information is presented to the nervous system for it to make sense of the dysfunction.

Follow or join another person's energy while maintaining your own balance

From a bodywork perspective, this refers to holding your own space, both physically and energetically, while noticing what is happening for someone else. In a broader context, this refers to trying to see things from another's perspective while remaining true to yourself, like experiencing how another person sees the world without losing your own inner perspective.

If you can see another person's perspective, you can then find where/how you can meet them. What do you have in common? People from opposing political parties often want the same end goals, for instance making the country a safe place to live, but they see that the only way to get to that goal is by very different means. Finding common ground allows you to connect and change dysfunction elegantly without losing yourself in the process.

Flow With Force, Do Not Resist It

In a bodywork sense, if you try and force the body to change, you have to overcome the body's protective mechanism by applying more force. The other approach is to understand that the body is functioning in the most efficient way it can at this time with the information it has.

So, for instance, a muscle that is tight is being recruited by the nervous system to create more support for the body. Pounding the muscle into submission is one way to work with this. A more efficient way is to recognise that the body is actively choosing to recruit that muscle, then investigate why this is necessary. When you change the underlying driver of the pattern, the muscle will no longer need to be recruited, and so the tension will release.

In a broader context, the same principle can make potential conflicts become fertile ground for personal growth. When you resist, you take a fixed position opposing all other options. This usually requires limiting your thinking about how to deal with the situation. If you study the situation without a fixed viewpoint, opportunities to change the situation on a much deeper level can often be found.

No problem can be solved from the same level of consciousness that created it.

Einstein

Soften Around the Tender Spot

One of the simple ways of demonstrating the way the self-corrective process works is to release muscle tension in the mid-neck (or other areas of the body) by softening around the sore point.

Find a sore point in the mid neck.

Bend your head toward the sore point using a combination of moving your ear to shoulder (lateral flexion) and nose to shoulder (rotation) and if the point is on the back area of the neck, you will need to add some chin to ceiling (extension). This movement should feel comfortable and soften the muscle under your finger.

Hang out there for 10 - 30 seconds, then straighten up and recheck the sore point. Has the level of pain or tension changed?

As we will see in the chapter on pain, a sense of safety reduces the intensity of pain. By softening around the tender spot, we take the load off the area, make it feel safe, and give information to the nervous system about the alignment of the bones underneath the contracted muscles. This allows the body to reorganise itself and releases the tension and pain.

Exaggerate the Preferred Position

When we talk about exaggerating the dysfunction, we are taking the load off the area by meeting the body as it is and then shifting it in the same direction a small amount, the size of which will vary depending on the body. However, this is comfortable and feels safe for the body to relax the muscular holding patterns around the joint. In the absence of the muscular tension, the opposing tension patterns in the ligaments that have been wound up by the misalignment are then able to pull the bone back into alignment.

In a broader context, exploring the dysfunction to enable a better understanding of what is happening is important in order to avoid recreating the situation. If we fail to fully understand the dysfunction, we will miss the subtler signs that the imbalance is still there and it will be more likely to recur. By taking the time to explore the dysfunction, we can learn from it. This greater awareness is the first step in allowing mental and emotional patterns to unwind as well.

Less is More

With Ortho-Bionomy, we work by putting specific information into the nervous system. We want the body to pay attention to feedback from the joint we are working with.

To do this, we apply a light compression into the joint once we have found the position that may help the body understand the dysfunction.

So, this is like dropping a pebble in a pond: the ripples are the information. If you throw a handful of pebbles in to the pond, the ripples become chaotic, and meaning is lost.

Since many ways of working with the body are aimed at changing what the muscles are doing, when you shift to working with the nervous system, the actual amount of work you need to do is greatly reduced.

The nervous system is sensitive, and too much information all at one time can overload it. Particularly if there is acute pain or trauma in the system, this causes the body to feel unsafe. The system then holds tension through the muscles to slow down the rate of change in order to protect itself.

So, we aim to give the right amount of stimulus, then allow the body to have time to integrate it. The body will have an initial change during the session, and this will continue for 2-3 days as the body reorganises itself.

For most people, a one-hour session of Ortho-Bionomy will be well within the body's capacity to deal with change without being overwhelmed.

No Pain to Release Pain

There is a difference between a "good" pain such as when we have feedback from an area in our body that has relaxed and is starting to move again after months or years of tension, and a "bad" pain when the body perceives a threat to it due to an external force being applied such as a stretch that is applied too fast, or sustained pressure on an area of tissue damage.

Often the use of painful techniques is aimed at creating an endorphin release, which initiates a healing response in the body. This may change some localised patterns but is unlikely to change the underlying conditions that are creating the painful dysfunctional or postural patterns in the body. For instance, having a massage therapist work with an elbow into the Iliotibial band (ITB) (the tough connective tissue band down the outside of the thigh), which is usually a very painful technique, may reduce tension short term but will need to be repeated often because that is a compensation pattern. The underlying driver of that pattern is distorted hip ligaments. If the hip ligaments are worked with and assisted to recoil, the tension through the ITB disappears within seconds.

Pain releases stress hormones into the body, which can make the body feel unsafe, particularly if there is a lot of pain already and therefore the body focuses on avoiding more pain or further injury. The protective mechanism turns on and the body prepares to resist. The opposite occurs when we avoid painful techniques in a session.

An added benefit of not using painful techniques is that the parasympathetic nervous system (the rest/digest response) is stimulated, which makes deeper sleep more likely, improves digestion and allows the body to recover from the stresses of everyday life.

In a broader perspective, if people feel safe, they will make far better decisions and be able to integrate socially in a far more harmonious way than when they are scared.

In chapter 3, we will look at the connection between fear and pain in a much more complete way.

No Attachment to an Outcome

As the human being is a complex system, there is no real way to predict how an individual is going to respond to a particular treatment. This is why a doctor may try multiple drugs to see which creates the least adverse responses. The complexity of the system means it is always an experiment.

The same holds true for bodywork in general and Ortho-Bionomy in particular, because we work by putting information into the system and we can't be sure how the system will respond until we do something and feel for the body's response.

So, in Ortho-Bionomy, we see it more like a conversation. How your body responds teaches us how to interact with your nervous system, this then informs us on how to fine tune what we are doing to meet your body more effectively. Of course, there are similarities between how your body responds and how other bodies respond, but keeping it as an exploration enables the practitioner to be more present and attentive to how you respond during the session.

The aim is to find what is driving the dysfunction and to work with that. The body changes quickly and effortlessly when we work with the driver of the dysfunction, and it is highly likely that the system will be stable and more efficient once it releases. This is why long-term chronic conditions can change quickly when working in this way.

If the body needs a particular piece of information, it doesn't matter how many years it has lacked it. Once you have created complex compensation patterns, these can remain fairly constant through time, although further impacts such as falls or car accidents can complicate things even more. The nervous system is always looking for how to reorganise itself to become more efficient. When this information is available, the body changes.

However, since we don't have complete knowledge of everything that is happening in someone else's mind/body, we are not sure what information the body needs until it starts to respond. So, for instance, if the symptom is a sore shoulder, several things could be creating that pain. By working in a structured way, we can use a process of elimination to offer the body different information, and feel for how it responds. This response may be muscles releasing, a rebound (the body pushing out against the gentle compression), a recoil (the body pulling in against gentle traction), changes in temperature, a pulsing, fascial unwinding (movement that originates in the body).

The key attitude is to not get attached to a particular outcome, but remain curious about the body's response.

In a broader context, if we are attached to a particular outcome, we are more likely to use force, and experience tunnel vision. This means we are more likely to miss more subtle information that would help us fine tune what we are doing to meet the body in a way that would stimulate the self-corrective process.

We can best stimulate the self-corrective response by approaching the dysfunction holistically, and acknowledging that we do not know how a person's healing journey is going to proceed.

All Levels of the Work Embody the Principles

This means we approach the dysfunction in a coherent way.

In Ortho-Bionomy, we are focused on what level the dysfunction is at and how we can interact with it. So, when nothing works, we ask questions such as:

- What level is the dysfunction at, e.g., is it in the muscle? Joint capsule? An emotional holding pattern? A functional pattern associated with repetitive use?
- How does this dysfunction fit in with the rest of the body?
- What are the compensation patterns?
- What is driving this dysfunctional pattern?
- How can we work with these patterns to introduce new information in order to stimulate change?

The answer to these questions is in how your body responds. If your system responds really well to traction, then the practitioner will pay more attention to your ligaments and fascia before working with joint alignment.

With Ortho-Bionomy, when what we are doing is not working – there is no response from the body, we lighten our contact, look for where the body has the capacity to change, and build trust so the body feels safe enough that it can release the protective mechanism. Paying attention to what information other areas of the body respond to can also give us more information about what the nervous system likes, we can then offer this form of information to the area of dysfunction.

In challenging cases, it is a bit like finding the right language to communicate in. This might start off with information about skeletal alignment, keeping in mind that repressed emotion, particularly trauma, can make all change feel unsafe. If this is the case, then creating safety becomes the priority before physical change is possible.

A great example of this is working with a whiplash injury.

The protective mechanism in a whiplash is really important and techniques that cause pain will make the body feel unsafe, so holding the muscular tension makes sense for it. This in turn reduces movement. Often when I work with someone with whiplash I will start in the pelvis so the body has a chance to experience that it is alright to release and move without it threatening the system.

By the time we get to the neck (within the first session) the body trusts it is OK to relax. We then support the neck in the shape it is in because the exaggeration of rigidity is stillness. This support takes the load off the neck and slowly as the body feels safe (usually 30-45 seconds), the nervous system starts to try and work out what the underlying dysfunction is. Often, with whiplash, the 6th cervical vertebra (C6) is jammed in a forward position, which changes how the rest of the neck functions. This creates a head position that is forward of the body, with tension up the neck. Once the neck feels safe and the neck is placed in a position to take the load off the C6 vertebra, the body can reorganise the alignment of the vertebra and the whole neck relaxes back into a more functional position.

In a broader context, being consistent with your approach to life creates a sense of safety for people who are in some sort of relationship with you. This creates a life where you create trust and are dependable.



CHAPTER 1.

YOUR ABILITY TO

SELF-CORRECT

YOUR ABILITY TO SELF-CORRECT

Have you ever had the experience that you have overdone it with physical exertion and gone to bed with pain, yet woke up the next day to find that the body has reorganised itself and the pain is gone?

That is how the body is meant to work. When pain stays around, the body needs help to understand how to reorganise itself. In this book, we look at what can get in the way of the self-corrective process, and we will explore ways of working with these things so your body can reorganise itself in a more efficient way. Try the different exercises and see how your body responds.

How Your Body Works

Your body/mind is an amazing, complex system made up of different components. It has an innate intelligence that coordinates and controls your internal environment to enable you to survive and hopefully thrive under challenging conditions. The constant force of gravity, the constant presence of microbes, stresses from mental, emotional and physical challenges — all need to be countered by your system. In general, it does this incredibly well.

Your self-corrective process is part of how your body deals with these challenges.

Another name for the self-corrective process is homeostasis. All the systems in your body have sensors and feedback mechanisms in place to allow your body to maintain itself within a narrow band, which enables you to survive. For instance, your body temperature is on average 37 degrees C. However, variations of 0.5 degrees are normal on a daily basis, with a low at 4 am and a high at 6 pm.² This range allows all the biological functions in the body to continue to function. Your survival relies on your ability to maintain this normal range.

Your body also has the capacity to self-correct on a musculoskeletal level, as well as on a mental and emotional level. We are designed for this to happen, and it is an anomaly when it doesn't.

As a species, humans in general really suck at dealing with emotional pain, and there is an evolutionary reason for this. If you are walking through a forest and your best mate gets eaten by a bear, you don't stop to grieve for him then and there. Your flight response is triggered and you run as fast as you can. Then later, when you feel safe, you have a ceremony to grieve for your friend.

That is what should happen, but we live in a fear-dominated society, with whole industries set up to keep us anxious and worried. The cost of doing this is illness — physically, mentally and emotionally.

With some people, it is preferable to experience physical pain rather than deal with the underlying emotional pain. Examples are people who cause harm to themselves by cutting, and those who use opioids, alcohol and other drugs to try and avoid emotional pain. However, it is also common for people to feel physical pain such as in the lower back as part of resisting overwhelming emotions. So, having tools that work on all levels is important in order to unwind the interplay between suppressed emotion and physical dysfunction.

We live in a society with incredibly high suicide rates, which is a sign we desperately need better tools and education for working on the emotional level. I have found the tools in this book to be the most efficient way to release emotional suffering as well as to work on physical dysfunction and pain.

On a physical level, our body is constantly under pressure from gravity, so let's have a look at how it deals with this.

Your Body Uses Your Bones to Support Itself Under the Constant Force of Gravity

Ligaments support your joints in a particular alignment. The postural muscles then support the ligaments. When there is a slight misalignment in the skeletal system, the weight of the body falls down through the ligaments at an angle, and the ligaments distort under the load. The body then recruits more muscle fibres to create support around the joint. You may have experienced this as having stiffness around a joint.

If there is more instability, the body recruits the global muscle fibres (your movement muscles). These muscles are not designed for constant load and you will often feel fatigue, aching, or pain.

If the joint is very unstable, the muscle supporting it will go into spasm, as it is constantly recruited beyond its capacity to function properly.

In order to try and reduce the load on the global muscle fibres and reduce pain in general, the body creates changes in posture. This can include shifting weight off the painful area, as well as bracing the area so it won't move. The postural adaptations use the fascia to draw load off the painful area. This shifts a localised, painful issue to a more global postural issue.

Changes in the posture also affect your resilience to impacts. Tight, rigid structures are more likely to break than bend. Also, your body's capacity to deal with gravity is reduced, so you will require more muscular holding rather than having more passive support of your skeletal system.

Although you have a rich supply of sensory receptors in the fascia that covers the bones (the periosteum), we do not seem to prioritise the information from these receptors.

You can check this for yourself. Move your arm, and you will be able to feel where it is in space, but you won't be able to feel where the bones are within your arm.

This is fine in most situations, but when you have a misalignment of the bones, your body doesn't know where the bone was, nor where it ended up.

One of the important pieces of information the body needs in order to reorganise itself is where your bones are and how they relate to each other across the joints. A slight rotation of a vertebrae can make a big difference to how stable the spine feels.

We can also add the hydrostatic pressure of the fluids within the body. Tension through the fascia also affects the movement of fluids, especially lymph. The fluids push out against the confinement of the fascia, your body then uses this pressure to rebound up against gravity. If you have an inefficient posture, this rebound mechanism won't be functioning properly and your muscles will have to work harder just to counteract the force of gravity. When the hydrostatic force is properly functioning, there is a springiness that rebounds out when compressed. Think about squeezing a water balloon and how there is resistance to the compressive force.

As the nerves originate deep within the body from the spinal cord and run to the muscles that are more superficial, they pass through layers of fascia. If there is a strong tension patterns in layers of fascia due to the body needing to adapt to inefficient postural patterns, there can be pressure on the myelin sheath around the nerves. This is one possible source of referred pain.

If your posture requires a lot of muscular support from your global muscles, it may take all your energy just to do day to day tasks, and the possibility of anything more challenging seems daunting. Fortunately, if you can find an Ortho-Bionomy practitioner, they will be able to help your system become more efficient.

We are not just physical beings. If you have ever had an emotion, you will have experiential clarity on how emotions can affect your physical body.

Of course, we are not just physical beings. Some of the most important forces that act on our physical system arise from our emotions and thoughts.

If you have ever had an emotion such as grief, anger, heartbreak, shame, humiliation, fear or terror, then you will have experiential clarity on how strongly these emotions can affect your muscular system as well as your digestive and immune systems.

When we allow ourselves to fully experience the emotion for a few seconds, the feeling flows through us and is gone. However, when we are in a state of overwhelm like when stressed or grieving, it is more likely that we will resist the emotion, and the tension from doing this will be held in the body. My personal experience leads me to feel that we use our fascia to hold these resisted emotional tension patterns.

There is a difference between holding the patterns of resistance to holding the emotions within the body. If you have a Facebook profile, you will probably have seen memes stating that a knee problem is associated with such and such an emotion. There is no scientific evidence to support this prescriptive model of the relationship between the body and a particular emotion. We are all different, and have different functional patterns so we create holding patterns that are unique to our system. In fact, emotions are not stored in the body. Rather, the resistance to an emotion is what is being held in the body.

In survival situations, it makes sense to repress emotions in order to continue to function.

Then when you are safe it is important to feel the repressed emotion to allow it to move through you.

Think of the traumatic situations our ancestors faced such as warfare, exposure to the elements, deaths of offspring — often many, early deaths of parents, famine etc. The human system is designed to recover from traumatic experiences, but our social conditioning and lack of efficient tools get in the way of the body/mind self-correcting.

The issue we have is, we often don't pause long enough to release the resisted emotions. As soon as we stop, the discomfort of our own resistance comes up and we find a distraction to make it go away.

This inability to stop will directly contribute to chronic health conditions, anxiety, issues with sleeping and relaxing, and therefore faster aging and reduced immune system function.

The truth is, you can either experience the emotional angst in all its discomfort for about 3 seconds, or you can resist it, and have it show up in different ways for the rest of your life.

To be clear, you only need to feel the underlying emotional pattern for about 3 seconds (in my experience). How long you feel the resistance is up to you. You can choose to dive into the discomfort or try and resist it. It is the resistance that increases the discomfort.

In chapters 6 and 7, we will give you some great tools to transform how you work with emotions and any malfunctions of the physical body that are of emotional origins.

Thoughts are another powerful influencer of the physical body. If you have a look at body language, you will see postural changes that are affected by thought processes. For example a low self-esteem will tend to have a person hunch forward with their head down, which is also the posture of someone who is depressed. In fact, this is a two-way street: your posture also affects how your mind works. In chapter 6 we will explore this in more detail.

The current theory of how the body/mind interacts is the Bio-Psychosocial model, which includes many different aspects when looking at causes of pain. The Bio-Psychosocial model includes things like tissue damage and misaligned vertebrae (Biological components), negative thought processes, trauma (Psychological processes) and things like poverty, financial stress, homelessness (social processes) as contributors to chronic pain. This is a much broader view of how humans' function than the narrower Bio-medical model that was the dominant theory prior to the findings from pain research and functional magnetic resonance imaging (fMRI) studies. The Bio-medical model viewed the human as a physical body that needed fixing. This is the basis for a lot of bodywork modalities where the focus is just on the muscles or bones.

Your ability to self-correct is affected by a broad range of contributing factors, so exploring what has the greatest impact on your system will help you find how to work with your dysfunction.

So, what do we mean by self-correction?

Our self-corrective response is what makes it possible for us to survive: our ability to balance our internal environment in response to changes in the external environment. All our systems rely on homeostasis, including biochemical balances, heart rate, carbon dioxide/oxygen ratio, balance, and body temperature. The body coordinates these systems in much the same way. You have a narrow band the body requires, and sensors pick up variations. Then the body has positive or negative feedback pathways to control the variable.

Imagine if you were standing up and started to slowly lean forward. As you near the edge where you were going to fall, your body will automatically either move a foot forward to take the load (we call this walking) or tighten up your back muscles to hold the weight moving further past your centre of gravity. If you have had lower back pain, you might find that your stress response might kick in, creating tension in your lower back with only a slight forward bend. This is an example of your protective mechanism at work.

Your musculoskeletal system (bones, muscles, fascia, fluids, ligaments) has this capacity to reorganise itself to create a more efficient way of working. In fact, the nervous system is constantly on the lookout for information that will enable the body/mind/emotions to adapt more effectively to the surroundings.

A number of things inhibit the self-corrective process from working. One of these is fear. This can be fear of being injured, fear of movement if you have acute pain, or fear of acute pain if there is chronic pain, or just fear in general.

The stress response is designed for survival situations, but unfortunately, we have a fear-based society, where there is a financial advantage for the media and politicians to keep us fearful. The scare tactics used around elections are a perfect example. One of the unintended results from having a fear-based reality is that the amygdala, the fear centre of the brain can increase in size, this was found to be common in children from abusive households. The more often you think fearful thoughts, the stronger the neurological pathways become. This makes it more likely you will feel fearful. It takes a deliberate effort to change this tendency.

One of the ways fear has this impact on the physical body is to tighten up the psoas major muscle, which runs on the inside of the spine from the base of your ribcage to the inside of the thigh bone.

A tight psoas creates tension in your lower back, and if there is already pressure on a nerve in the lumbar spine, this increased pressure can increase/cause lower back pain.

Pain research has shown that financial stress and poverty increases the intensity of chronic pain. As chronic pain reduces productivity, disturbs sleep and increases the probability that you will be stressed, a tendency to be fearful is an important cause of dysfunction. Our current model of giving people in chronic pain insufficient money to live on, therefore creating poverty, increases the likelihood that they will never get out of the chronic pain trap due to the impact of fear on pain. Fortunately some of the tools in this book are useful for working with chronic pain and so may help break this pattern.

We will explore more of the findings from pain research in Chapter 4, but the takeaway message is that our whole system works as one unit with the physical body affected by the mental and emotional aspects, and vice-versa. In order to be more efficient at stimulating the body to self-correct, we need to have tools to work on all these levels and an understanding of when to use them.

How You Work on a Physical Level with the Self-Corrective Process Depends on what the Dysfunction Is

As our body is made up of different components, bones, muscles etc., there is the possibility that a dysfunction is related to a particular relationship in the physical structure. In order to be able to stimulate the self-corrective response, we need to be able to work with the different components in different ways to communicate with the nervous system what the dysfunction may be.

For instance, to stimulate a muscle to release, you bring the two ends of the muscle toward each other — that is, if a muscle is contracted concentrically (shortened), you will shorten the muscle further by positioning the joint, then add gentle compression to stimulate the proprioception (the receptors in the belly of the muscle and joint capsules that give you feedback about where your body is and any movements you make).

If you are working with connective tissue (fascia, ligaments or tendons), then often gentle traction will stimulate the connective tissue to recoil to the tension needed to support the joint.

If you are working with the alignment of bones, then touch is all that is necessary for the body to locate the bone and reorganise the joint.

The reason so little effort is needed is that the body is actively looking for this information. When the body feels safe, its protective mechanism is not engaged and the system becomes ready to use the information it receives, and changes the skeletal alignment very quickly.

While we do work with the components above, the main focus is to find what is driving the pattern of dysfunction. This can be a skeletal misalignment, an emotional holding pattern, or a dysfunctional movement pattern. Quite often, the painful condition such as a muscle spasm is part of a compensation pattern, so if you release it without changing the driver of the pattern, it will tend to wind up again over a couple of days.

On a structural level, with Ortho-bionomy, we work with the underlying joint misalignment, and the muscle spasm releases of its own accord. In this case, tight muscles become indicators of the underlying dysfunction and can be used to check if the skeletal structure is stable.

Exploring Your Nervous System

As you are a unique individual, what works for someone else may not work for you.

This is the key with stimulating the self-corrective process: you have to meet the body where it needs to be met.

So, the exercises in this book are designed to give you an opportunity to explore how your body/mind works. Some of them will work really well for you, some of them won't. This is not your failure, or the exercises, but rather the exercise wasn't suitable for your system at this time. It might however be exactly the right thing for someone else, or for you in the future.

Keeping a body healthy as you get older is really an ongoing experiment with the aim to collect as many useful tools as you can in order to keep your health for as long as you can. There really isn't much point in living to 100 if you spend the last 50 years with chronic pain.

The following exercises will give you an experience of your body and nervous system in a whole new way, and let you experience how finely tuned your body really is.

1. Stand in bare feet (or socks) with your feet close together.
 - Come up onto your toes then slowly back onto your heels, then come into a middle position.
 - Now with attention on where the weight is on your feet, move your lower jaw to one side.
 - Did your weight shift to the same side or opposite side or not at all?
 - Come back to the middle and move the jaw to the opposite side. What happened to your weight?
 - Now bring your weight back to the middle and just move your eyes to look in one direction. Did your weight move?
 - Try looking in the other direction.
 - Now glare at a point straight in front of you and track your weight shifting.
 - Then shift your attention to your peripheral vision and see if that changes where the weight is on your feet.
 - Sometimes, if your body is rigid, or senses the weight shift as threatening your balance, you may experience muscles contracting to prevent the weight shifting.
 - You can use this as an indication of change.
2. Now bring your attention to the muscles in your ears (did you know you had muscles in your ears?)
 - Keeping your head still, move your eyes from side to side and feel if the muscles in your ears move.
 - This is part of how you look for predators – like dogs move their ears to track sounds.
 - Next, feel the muscles in your ears and glare as if you were angry. What did the muscles feel like?
 - Next, smile with your eyes, so your eyes should be soft and the area around the eyes crinkle. How do the muscles in your ears feel now?
 - The amazing thing is that our social brain allows us to track these things in each other as it gives us information about whether a person is a threat or not. So, if you would like to help someone relax, and smile with your eyes at them. This is also part of the system we use to notice when a person is faking a smile or are pretending to be friendly.
3. Explore how it feels to turn your head from one side to the other.
 - Then turn your head slowly to one side but look in the opposite direction.
 - Repeat a couple of times on both sides.
 - Then recheck the range of movement of the neck: has it changed?
 - Sometimes the restrictions on our movement are due to limitations in automatic patterns we have built up over time. These functional patterns can be challenged with movements that upset the patterning and enable the body/mind to reset itself.
4. Feel your neck with your internal sense. Now, without actually moving, imagine you are raising your arm up to scratch your ear. Can you feel some muscles in your neck and shoulders engage?
 - The premotor neurons in your brain are goal focused. They turn on when you decide on an action, and a message is sent to the primary motor cortex that turns on the muscles needed to make the movement. As you are just imagining the movement, your recruitment of the muscles is minimal, but this is enough to create awareness in the body. In Ortho-

Bionomy, this is one way of releasing structural patterns when the client's body is very rigid, movement is painful or the person can't relax enough to allow movement with out control.

- In chapter 8, we will use this to stimulate your body to self-correct an elevated first rib.

The nervous system is far subtler and more fine-tuned than we often think, which is why it can respond to new information so rapidly.

Whenever we touch another person's body, we are really in direct contact with their brain. In Ortho-bionomy, we connect to the body with this in mind.

Things That Inhibit Your Self-Corrective Process

As chronic pain is a common problem in our society, there must be some things that inhibit the ability of the body to self-correct. As noted previously, fear is one of them, but also a number of other things interrupt the ability of our body to reorganise itself.

Stress, sleep deprivation or broken sleep, resisted emotions, chronic and acute pain, thoughts, beliefs and willingness to change them are among these. The story we tell ourselves about what is happening is also surprisingly important. But the key piece is often that we do not have the right information in order to self-correct. What this information is will depend on whether the dysfunction is on the physical, mental, emotional or energetic level, and often there is an interaction on all these levels. However, one aspect will be the driver and the other parts the compensation patterns.

In order for the body to self-correct, it needs to feel safe. If the protective mechanism of the body is recruited, the main concern of the body will be to protect itself against injury. As I've emphasised before, this is why there are no forced manipulation or painful techniques used in Ortho-Bionomy. It is more efficient to make the body feel safe and stimulate the self-corrective mechanism than to use force.

So, in the following chapters, we will look at ways of working with each of the areas that can inhibit the body's ability to self-correct, and give techniques to stimulate the body to become more efficient. Of course, you are an individual. Play with exercises, find the ones you like, and start building up a toolkit that enables you to take an active role in your own health care and personal development.

This is really an introduction to a way of working that has been around for decades but has been largely ignored as it requires more patience and listening from the practitioner and less fixing, force and doing.

If you like mindfulness, meditation, yoga or have chronic pain then you will love working in this way.

FACTORS AFFECTING YOUR ABILITY TO SELF-CORRECT A DYSFUNCTION



As this diagram suggests, all these factors interact with each other and affect your body's ability to self-correct. One challenge with breaking things down into different sections is that some of the interactions are missed. In essence, this is one system that interacts closely. So, throughout the book, I will mention these interactions, but in truth, the reality is much more integrated and complex than I have stated. The great thing is that using the tools, you will be able to change what you are experiencing, regardless of the complexity of the system.

The Downward Spiral

Because all the factors that affect your ability to self-correct are interrelated, when there is a dysfunction in one area, the whole system starts to be affected. So, for instance, you are stressed due to a work issue. This affects your sleep, so your emotional regulation is impaired, and this creates greater stress. As a result, your lower back, neck and shoulders are tight and your digestion doesn't seem to be working as well as usual.

The Upward Spiral

You can start anywhere to change the pattern of dysfunction. However, the quickest way is to shift out of the stress response. This will enable your system to return to normal cycling from your sympathetic (stress response) to parasympathetic (rest/digest response). Your body will start to relax and your decision-making will improve, as will your sleep and digestion.

In Chapter 2 we will explore ways to shift out of your stress response. The rest of this book will take each of the other areas and explore how you can work with them.

In essence, in order for your body to be able to self-correct, your system needs to feel safe and have the right information about the dysfunction.

Factors that inhibit the ability of the body to feel safe include:

- Stress
- Lack of sleep
- Pain
- Dysfunctional thought processes
- Resisted emotional patterns
- A diet not suitable for the body

So, these are the topics of the first few chapters, with a focus on tools that can help you notice and therefore change what is going on.

Stimulating The Self-Corrective Response

I am lucky enough to have connected up with some great practitioners who work in different ways to support people to heal themselves. In order to offer different perspectives that will connect to more people, I invited them to contribute to this book.

I have chosen to go from physical to mental and emotional aspects, looking at the science behind why the tools offered in this book work.

Lisa Tyree comes from a more spiritual perspective down to the emotional/mental level, which can also assist in unwinding chronic pain and physical tension in the body.

Hannah Moore, a naturopath, is contributing information from a nutritional perspective.

The idea is that wherever you start from, there will be somewhere you can connect to and improve your own awareness and ability to take an active role in your health.

An Overview Of The Process

Starting with the stress response is essential, because if you are in survival mode, your body and nervous system will have only one focus, to stay alive. Once you are more relaxed, we then want to ensure you are getting more sleep. This will improve your immune system and digestion, enables your system to return to a more balanced way of operating, and most importantly enables you to better regulate your emotions.

Next, we will look at pain, how it works, the difference between acute pain and chronic pain, and the effect of inflammation on how

you perceive pain. Then we will offer you some tools for working with the system in pain.

We will then look at the way your thought patterns influence pain, health, and your ability to self-correct.

Following on from working with the mind, we will look at working with emotions. Because working with resisted emotions is something we all possibly need to improve on, there are two chapters in which we'll look at different ways to explore and release resisted emotional patterns.

We then look at ways of working with a painful musculoskeletal condition from an Ortho-Bionomy perspective, with self-care exercises for you to play with.

Then we look at the relationship between diet and the ability to self-correct, and finally look at how the tools can be used for self-development.

Throughout the book, there is a strong focus on easy-to-use tools that enable your system to change. Take the time to play with these as the real value is in your own experience rather than an intellectual understanding.

Enjoy the process 😊

