I have never worn glasses and would have expected to in my mid 40s, before I met Leo. The book is a mine of practical, readily usable information. I find it useful to direct people to the Vision Training Plan in the book so they can see immediately that there are 3 or 4 actions specifically for their vision challenges.

Katrina Patterson, INLPTA Certified NLP Trainer, Feldenkrais Teacher and Vision Coach

Long interested in investigating the seemingly far-fetched claims people have made that vision could be improved naturally, without glasses, I attended Leo Angart’s course, in which he puts the principles in this book into action. To my amazement, by doing the exercises over the several days of the course, my wife and I both found we needed, on average, between our four eyes, about 3/4 of a diopter less prescription correction per eye.

Both of us, who had been requiring increased prescriptions every couple of years, were now able to return to the prescriptions of several years before (about a diopter less per eye) and spend more time wearing no glasses at all within a few days. As important, we learned that some of the factors that make it hard for many of us to see clearly, also put long-term pressure on the eyes, setting them up for more serious problems in old age. Thus, some of the exercises Leo describes here not only improve sight, but also appear to protect our eyes over the course of our lives.

Norman Doidge, MD, author of *The Brain That Changes Itself*
Acknowledgments

I wish to thank Dr. William H. Bates for his courage and determination in following his convictions and thus building the foundations upon which Vision Training rests.

I also wish to thank Master Choa Kok Sui for his dedication in developing the pranic healing approach. It was pranic healing that cured my eyesight. I realized early on that energy is a key factor if you want to have consistent success in regaining your eyesight.

A heartfelt thank you to my NLP trainers – John Grinder for inspiring me to start this adventure, and Judith DeLozier and Robert Dilts for teaching me to look for the difference that makes the difference. My approach is built on NLP methodology.

A special thank you goes to my dedicated sponsors, in particular Katrina Patterson in London, who encouraged me to put all this knowledge into a book. I also want to thank Lulu Heinse in Ireland and Monika and Maurice Cruz first in Manila and now in Melbourne for inviting me. Also a thank you to Wolfgang Gillessen in Munich for his valuable input in making the German version of this book a reality.

My proofreader put in long hours to make my manuscript much more enjoyable to read. Thank you to Candice Temple.

Finally, I want to thank the many people who attended my workshops and benefited from what they learned and I thank you for reading and benefiting from this book.
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1. Introduction

Vision is the most precious of our senses. You see the splendor of a sunset, you see the smile on the face of someone you love and you see the innocence in the eyes of a child. Mother Nature has made certain that this sense is perfectly developed as we grow up. It may come as a surprise to you to hear that eyesight acuity is actually a skill we learn as we mature, and that the eyes of an infant are not fully developed. A baby begins to recognize colors at the age of about 4 months. Hand and eye co-ordination develop next and then co-ordination between eyes and body. At about 12 months of age babies begin to walk and from then on their vision continues to develop in the way that nature intended.

I am writing this book based on my own experience of wearing glasses for more than 25 years. Initially, like most people, I believed there was nothing that could be done about failing eyesight. It seemed that it was just a consequence of growing old - the only thing in question being whether hair or eyes would go first. At the time, 1991, my eyesight measured 5.5 diopters of near-sight. That means it was necessary for me to wear glasses for most things, including reading. In fact I needed two pairs of glasses, one for reading and another for distance.

A friend of mine had been working on improving his eyesight, but he had been trying for three years and was still wearing glasses. Long-term projects do not appeal to me. I like to feel that I am making progress in 20 minutes or less, otherwise I am not interested. I don’t expect to have 20/20 vision after just one exercise, but I do want to sense that I am progressing and not just imagining that something is happening. So the approach I teach works fast.

In 1990 I became interested in something called neuro-linguistic programming (NLP). A seminal book in that field is *Trance-formations*, by Richard Bandler and John Grinder. The book is basically a transcript of a hypnosis seminar. On page 177 the authors describe a regression where they take a client back into their childhood. As we know, as children we generally have perfect eyesight. In a flash of inspiration, Grinder brought the client back to the present, but with the eyesight of his childhood. Suddenly the client was able, as in his childhood, to see without glasses.

I was very excited about this. Imagine what it would be like if you could visit a hypnotherapist and emerge, after a mere hour, with perfect eyesight. Unfortunately, the universe had other ideas, since I could not find anyone who could lead me through this process. However, my interest was aroused because I concluded that there must be a way of regaining one’s eyesight naturally.
Margaret Corbett admonished the hundreds of teachers she trained in the 1940s and 1950s never to advertise, lecture, or publish articles. More understanding is generated by the knowledge that she was arrested (and acquitted) twice for practicing optometry without a license …

In 1974, my colleague in San Francisco, Mrs. Anna Kaye, who’d been quietly transmitting Bates Method principles for several decades, was visited by undercover agents. She was told she was breaking the law on sixteen counts …

You may now realize why substantiated objective proof is scarce. (1986: 184–185)

Goodrich contributed greatly to the field of Vision Training through her two books Natural Vision Improvement (1986) and Perfect Sight the Natural Way (1996), as well as her lectures and workshops around the world.

In 1997 Thomas R. Quackenbush published Relearning to See, which is perhaps the most comprehensive book on the Bates Method to date. The book adheres very closely to Bates’ original work and Quackenbush often quotes Bates’ publications extensively. Thomas Quackenbush is based in Holland.

Indian ophthalmologist Dr. R. S. Agarwal became interested in Bates’ work in 1930 and has since been actively teaching the Bates Method in Pondicherry in India. Over the years Agarwal published many articles in Mother India, a monthly journal of the Sri Aurobindo Ashram, as well as developing a synthesis of traditional ophthalmology and the Bates Method which was published in Mind and Vision and Secrets of Indian Medicine. A popular book called Yoga of Perfect Eyesight was published in 1971. This book is still in print and contains many wonderful stories of how Dr. Agarwal helped people regain their eyesight.

In the U.K. the Bates Method has taken root and is represented by the Bates Association of Great Britain. The method is described in The Bates Method by Peter Mansfield (1997).

During the 1990s there was a marked movement towards complementary approaches in dealing with health problems. For example, acupuncture was accepted as a valid treatment method and is now taught in several medical schools.

However, the economic advantages of prescribing drugs or devices is financially much more lucrative than simply training the eyes to regain their normal state of clear vision. Even more lucrative is recommending refractive surgery, which costs thousands of dollars per eye.

From the consumer’s point of view, the most effective way to treat the problem is not necessarily the most expensive way. Hopefully the new millennium will see an increased interest in effective, non-invasive methods by people in general and by science in particular. Currently the percentage of people wearing glasses is almost 60 percent of the general population. In Asia this figure is fast approaching 80 percent of the population. Something needs to be done to put it right.

Vision Training, started early on, is the simple answer to maintaining good eyesight.
Visiting the optometrist

Some optometrists are opposed to reducing a prescription to less than the results of their test. If your optometrist belongs to that category, then I suggest you find someone else!

Let the optometrist measure your eyes using his instruments. By the way, just measuring your eyes with the automatic equipment is only a rough estimate. The machines vary and have a plus–minus error factor of half a diopter (one line on the eye-chart). When the optometrist has finished his test you will have what he determines to be 100 percent correction of your vision. Usually you will find this to be incredibly sharp and in some cases so sharp it actually hurts the eyes. Ask the optometrist to reduce the prescription by 0.5 or 1 diopter. Then go outside into the street and look though the test lenses he has prescribed. It is not enough to just look around in the optometry shop or the shopping mall. You need to see how the glasses work in daylight and by looking at the real world.

For the best results, get a prescription which gives you distance vision that is slightly soft. This will give a correction of about 20/40 distance vision. However, make sure that your prescription is not under-corrected by more than 1 diopter. If you reduce the correction more by than this there is a chance that you will actually begin to strain the eyes, in which case progress in Vision Training will be greatly reduced.

Understanding your prescription

The prescription you get from the optometrist looks like Greek to most people. It makes no sense whatsoever. Actually it is much simpler than it looks. Firstly it shows one measurement for the left eye and one for the right eye. Usually this is indicated with an
Optical dimensions of the eye

This section is for those of you who are interested in the scientific aspects of the eye’s optical dimensions. I am amazed that the eye is so small and that there are such huge differences in dioptric power between the cornea and the lens.
lenses. These lenses are also used for hyperopia to relieve eyestrain.

A lens with a minus reading of diopters, which is used for correcting myopia, does not have a true focal point because it causes light rays to diverge. The strength in diopters of a minus lens is determined by measuring the distance from that lens to the point where the diverging rays would converge if their path was reversed.
The three dimensional filed

Left eye

Optic nerve
Optic chasm
Lateral geniculate nucleus

Right eye
The image is now converted into energy flowing through millions of nerve fibers packed together into the optic nerve, which leads to the geniculate body located in the middle of the brain. Here the nerves branch out. Seeing involves about two thirds of the brain. Many parts of the brain receive input from visual perception. For example, there are parts of the brain that recognize shape, another part perceives color and yet another is in charge of determining where objects are in space. Your peripheral vision is especially sensitive to motion. In prehistoric times, when people lived in the wilderness, it was very important to be aware of danger approaching. Today we use this ability to navigate our way through traffic or down a crowded street.

In Vision Training we involve both the physical part of seeing and the mental and psychological sides. The physical side involves practicing exercises which are designed to relax the eye muscles and affect the shape of the eyeball. This is equivalent to moving the lens back and forth until the image is sharp. With eyesight this is a dynamic process that constantly works to keep objects in focus. Your eyes are far superior to any video camera ever developed. Anyone with normal eyesight can focus on something very close and just an instant later adjust to focus on something far away. Your image is always in focus and crystal clear. A video camera is too slow to make that kind of shift without a cut.

**It’s a wonderful world out there**

All five senses are involved in creating our experience of the world around us. Vision is perhaps the most important of our senses because it serves as the interface between our internal world and the physical reality around us. Your work is likely to involve a significant visual component—seeing what you do, seeing where you drive, seeing a client and so on. It does not mean that you can’t function without sight; you can, but it means a significant loss of connection.

For some people, sight is the most important sense. They like to see something before they believe it is possible. In learning, the visually inclined person prefers to see something demonstrated before they can understand and learn. The majority of people in the world belong to that group. Others prefer to hear someone talk about a topic of interest. This is the lecture format used in most of higher education. For these people, the auditory is an important sensory input. Finally, there is the last group of people who need to try something out physically before they really understand it. The kinesthetics are often great craftspeople since they have a feel for the material with which they work. The sense of touch is exceptionally sensitive as well.

Sometimes the senses connect, so that an input of one sense leads to an experience of another. For example, for some people the smell of freshly baked bread triggers memories of childhood. Newly cut grass is another common smell that evokes such recollections. Sometimes a perfume worn by mother or grandmother provides a direct link to memories of days gone by. On other occasions it can be the sense of taste that evokes recollections. Many people tend to order the same dish in a favorite restaurant as the flavor conjures up pleasant scenes from the past.
8. The Basic Principles of Vision Training

There is the old philosophical division between the objectivist who says, “When I see it I will believe it” and the subjectivist who says, “Believe and you will see.” Scientists aim to be totally objective and only believe what they can see and measure with instruments. However, many people feel that a human being is not just an accidental mix of chemicals that happened to fall together. A human being is more than its physical anatomy.

If you adhere rigidly to the objective model then you are limited by the sensitivity of your measuring equipment. Some say that we do not know yet what it is, because we do not have the equipment to measure this phenomenon. Vision is one of the senses that it is difficult to be scientific about. Currently, machines can only give an approximate measurement of the components of your eyesight. Your own perception of vision will always be a subjective one and it will vary from individual to individual. Another example is the perception of color. Each and every one of us has a slightly different perception of color. Science can measure the wavelength of light with precision but your eyes will see it in their own way.

Perceptions can also hold us back. For example, in the 1950s it was considered impossible for people to influence their blood pressure and skin temperature. Then came biofeedback and it became possible to do just that. At one time it was considered impossible to run a mile in less than a minute. For many people it currently seems impossible that one could regain one’s eyesight. In fact we can do amazing things. There are many examples of people who have overcome serious illnesses without any medical assistance. Medicine is often powerless in the face of many health problems, yet the human mind has the power to effect very dramatic changes.

A very dramatic demonstration of this is the case of people with multiple personality disorder (MPD). Chicago psychiatrist Bennett Brown conducted an experiment with ten of his MPD patients. He had their eyes measured in three of their personalities. So we have ten people and 30 measurements. To the astonishment of the researchers they noticed objective measurable differences in the curvature of the cornea from one personality to another. Dramatic changes in visual acuity took place within the span of a few minutes as the patients changed from one personality to another. In fact, visual differences are only a minor part of the physical changes an MPD patient can go through when switching personality. Some of them have serious illnesses such as diabetes in one personality and not in others. Some are drug addicts in one personality but in another they can be completely normal individuals without drug dependency.
Then reverse the sequence and check whether it is more powerful for you if you believe something with absolute certainty before you move the experience into your mind’s configuration for something that is real.

Now you have one of the most important tools for getting your mind to work for you and help change limiting beliefs. This is equivalent to a master’s degree in visualization.

**The belief change cycle**

We are constantly changing and updating our beliefs. For example, as a 4-year-old child you believed that it was dangerous to cross the street without an adult holding your hand. At one point you probably also believed in Santa Claus – I still do!

NLP developer Robert Dilts found that beliefs go through several stages as they update and change. The first stage of a belief change is a feeling of uncertainty. You don’t believe your belief quite as much anymore. The belief has moved down the certainty scale. If you are open to doubt, then you are open to belief. The new belief seems more attractive. It is moving up the certainty scale. At one point you can simply let go of the old belief. Dilts suggests that you place it in your “museum of old beliefs.” This is an ingenuous way of keeping the old belief in such a way that it no longer influences you. It is something you used to believe that is no longer relevant. Finally, the new belief becomes a certainty. Take your old beliefs about your ability to regain your eyesight through these stages and empower yourself. Remember – seeing is believing.

<table>
<thead>
<tr>
<th>Old belief</th>
<th>Open to believe</th>
<th>Museum of old beliefs</th>
<th>Wanting to believe</th>
<th>New belief</th>
</tr>
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<td></td>
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do a short regression exercise which creates a context in which your subconscious can help you discover what might be the inner reasons for keeping your vision dimmed.

People usually discover innocent associations made by the mind of a child. For example, one man told me that he realized he had made a connection between wearing glasses and wisdom. As an 11-year-old he wanted very much to be like his dad – who wore glasses. A woman told me that her twin sister was fitted with glasses, so she faked the test. She wanted to be like her sister.

One exceptional case that dramatically illustrates this dynamic involved a 7-year-old girl in London whose vision went from normal to -4 diopters in just ten days. After some investigation her mother discovered that this little girl had been bullied in school and had concluded that absolutely nothing could be done to improve her situation. She could not stop the bullying herself and did not believe that her parents or teachers could help her either. Consequently, her mind dimmed her vision.

Psychologists researching attention have discovered that vision can collapse by as much as 60 percent towards the near point when people were asked to solve math problems that were very difficult or impossible for them to work out. This may be one of the reasons why so many children start to have vision problems.
10. Getting Energy to Flow

In China the system of acupuncture is a major part of the country’s medicine. The aim of the Chinese approach is to achieve a balance between the yin and yang energies. One of the basic models in Chinese medicine and acupuncture is the concept of the five elements. According to this model the healing energies flow from water to wood, to fire to earth, to metal and back to water. This journey also describes the seasons of the year. Each element is associated with one of the major organ systems of the body.

The water element is considered to be a winter energy and is associated with the bladder on the yang side and the kidney on the yin side. The wood element is the energy of spring and is associated with the gallbladder, which is yang. The yin side of wood energy is the liver. The fire element is summer energy. On the yang side it is associated with the small intestine and the triple warmer. On the yin side it is associated with the heart and circulation. The earth element is Indian summer and equinox. The spleen is on the yin side and the stomach is on the yang side. Finally, the metal element is autumn energy, which is associated with the lungs on the yin side and with the large intestine on the yang side. This completes the circle.

Across the circle there are lines of energy that enhance or balance these elements. The five-element model enables the Chinese medicine practitioner to know whereabouts in the system he should intervene in order to achieve optimum balance and health. Around the eyes and the head there are many acupuncture points which can be targeted to direct energy. As mentioned above, we want to have a free flow of energy through the eyes and head. If the energy flow is blocked, the organs, in this case the eyes, are depleted in energy and will function less efficiently.

To get the energy flowing we can use pressure or massage – acupressure – rather than needles. With acupressure we use the fingers and two basic movements. The first is press and release, and the second is small circular movements in counter-clockwise movements to release energy and clockwise movements to energize. It is good practice to do three counter-clockwise movements first to cleanse and then clockwise movements to energize.

The Five Elements
There are ten steps in this exercise. The purpose is to get the energy flowing through your eyes and head. You may notice that some of the points feel slightly tender. This indicates that energy is not flowing very freely at that particular point. The massage movement will start things moving again and you will feel a wonderful freshness and openness after this exercise.

1. The first point – bladder meridian B2, which improves all eye problems – is located at the root of the nose and up under the eyebrow. Place the tip of your thumb as close as possible to the inner corner of the eye and press upwards. You will sense a tender spot
where there is good daylight and measure out the 3 meters on the ground. Place sticky labels on the floor to mark the spots that indicate 1, 2 and 3 meters away from the chart.

**Test both eyes**

Now stand on the 3 meter marker and observe the chart with both eyes. Which line can you see? Note the lowest line on the chart where you can make out the letters. They do not have to be crystal clear, just good enough for you to be able to identify the letters.

Write the result down:

\[
20/ \quad 6/
\]

**Test your left eye**

Cover your right eye with your hand. What is the lowest line where you can identify the letters? Note it down:

\[
20/ \quad 6/
\]

**Test your right eye**

Cover your left eye with your hand. What is the lowest line where you can identify the letters? Note it down:

\[
20/ \quad 6/
\]

If you can’t see the first letter of the eye-chart from a 3 meter distance then you have more than 5 diopters of myopia and you need to do the vision check with the string which is explained on page 86.

**In summary**

If you can see the 20/25 line then you have only slight myopia and may only need to do eye exercises for a few days to correct to 20/20.

See page 109.

If you can see up to the 20/30 line then there might be a bigger problem but it is still manageable by doing the eye-chart exercise on page 110.

If you can see the 20/40 line then you can still drive legally without glasses, but it is time to take the Vision Training exercises seriously.

See pages 113–118.
How to check if your myopia is more than 4 diopters

Visual acuity is directly related to the furthest point that you can see clearly. There is a linear relationship between the distance to your far point in centimeters and the power in diopters needed to correct your vision.

You will need a piece of string about 1.5 meters long, a bookmark shaped piece of paper/card with text printed on it (about 16-point font) and two differently colored ink markers.

1. Tie a knot at each end of the string so you have something to hold on to. Tie the string to a chair or ask someone to help you with the measurement.

2. Hold the knot on the string under the middle of your eye on the top of the cheek so that you are looking down the length of the string. Close the other eye.

3. Hold the bookmark against the far end of the piece of string, and bring it inwards to identify the point where you start to be able to see the top line of text. Find the point where it becomes crystal clear. Mark this point with one of the marker pens. This is your far point for that eye.
your eye muscles and, as a result, your corneas will begin to revert to their natural shape.

Tibetan wheel exercise

This exercise will stretch your eye muscles much more due to the sharp angle between the Tibetan wheel chart and your eyes. By moving your eyes in various steep angles around the dial you begin to stretch your eye muscles and as a result they begin to recover their normal flexibility and your corneas will revert to their original shape, thus restoring clear natural vision.
1. Activate your hands by gently touching the center of each palm with the opposite fingertip and then shake your hands vigorously.

2. Close the four fingers of your left or right hand, whichever you prefer, to form an imaginary arrow. Close your eyes and imagine soft apple-green energy flowing from the center of your palm down through your folded fingers in such a way that it creates a beam of this green energy.

   Raise your hand and direct this stream towards the energy center located between your eyebrows.

   Imagine that the energy flows in an endless stream from your fingertips into the point between your eyebrows and fills your eyes with cleansing apple-green energy. This should last for as long as it takes you to breathe in and out six to eight times. Then bring your hand down.

3. Next imagine that you are wearing a glove of transparent green or violet energy, which extends about 10 cm from your fingertips. Use your extended energy fingers to scoop away tired and old stress from your eyes. It is important that you clean the eyes all the way to the back of the eyeball. You will feel all the tiredness and tension being swept away from your eyes.
4. Now imagine lavender or pale violet energy flowing from your palm and direct this towards the energy point between your eyes. This lavender energy will re-energize your entire visual system. Once again do this as you count six or eight breathing cycles.

5. Turn your head to the left if you are right-handed. Find the energy pool located at the back of your head at the same level as your eyes.

6. Project apple-green energy and briefly clean the energy center. Then project white energy into the back of your head and imagine this energy flowing from your fingertips into the back of your brain. This energizes the visual cortex located at the back of your head. Continue this process – energizing and flowing into the center of the brain – where it separates into two streams following and energizing the optic nerve and
flowing into the back of the eyes – energizing the retina, the fovea, the muscles around the eyes, the lens, the cornea and the eyelids. Imagine your eyes filled with brilliant stimulating white light. Allow your intuition to guide you as to when you have had enough.

7. Imagine that your hand is a paint-roller dipped in sky-blue energy. With one or two sweeps, paint a layer of blue around the energy you have projected into your eyes. The blue will stabilize the energy.

8. Finally, rub your palms together until they get nice and warm. End the exercise with about 30 seconds of palming. You may see beautiful colors swirling around. This is the energy being absorbed into your system.
Another problem is convergence (the ability to focus both eyes on the same point). Often one eye will be focusing on the paper while the other actually focuses a few centimeters in front and behind the page causing you to get tired easily. In some cases people have what is known as mono-vision, where you use one eye for reading and one eye for seeing at a distance. To correct for convergence at the reading distance we use convergence charts that train your eyes to fuse the images from both eyes into one three-dimensional image.

Do you have presbyopia?

If you have 20/20 vision for reading then you should be able to read these lines in good daylight using the normal reading distance:

<table>
<thead>
<tr>
<th>Vision</th>
<th>Line 1</th>
<th>Line 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>20/50</td>
<td>AbCdEfGhIjK135792468</td>
<td>AbCdEfGhIjK135792468</td>
</tr>
<tr>
<td>20/40</td>
<td>AbCdEfGhIjK135792468</td>
<td>AbCdEfGhIjK135792468</td>
</tr>
<tr>
<td>20/30</td>
<td>AbCdEfGhIjK135792468</td>
<td>AbCdEfGhIjK135792468</td>
</tr>
<tr>
<td>20/25</td>
<td>AbCdEfGhIjK135792468</td>
<td>AbCdEfGhIjK135792468</td>
</tr>
<tr>
<td>20/20</td>
<td>Judgment is the summation, the end result, the interpretation or evaluation of what the eye sees.</td>
<td></td>
</tr>
<tr>
<td>20/16</td>
<td>AbCdEfGhIjK135792468</td>
<td>AbCdEfGhIjK135792468</td>
</tr>
</tbody>
</table>

The numbers in the left column are the Snellen indicators. Note that the quality of light has a great influence on your reading ability. If indoors in the evening your visual acuity for reading will drift up a line or two. Usually you should be able to see the 20/20 line, crystal clearly, at about 15–20 cm in front of your eyes. This is normal visual acuity for activities at the near point. Children can see fine print at about 10 cm in front of their eyes.

Small print exercise

Dr. William Bates maintained that it was impossible to read fine print without relaxing the visual system. Therefore the reading of such print, contrary to what is generally believed, is of great benefit to the eyes.

Simply bring the fine print so near to the eyes that it cannot be read. Of course you realize that you can’t read this close and your eyes do not even try to see, and then relax. Alternately open and close your eyes for a few seconds while looking at the fine print and notice what happens.

People whose sight is beginning to fail at the near point or who are approaching the so-called presbyopic age, should imitate the example of a remarkable old gentleman I met. Get a sample of really small print and read it a few times every day. Start in good daylight then in different kinds of artificial light, bringing it closer and closer to the eye until it can be read at about 15 centimeters or less. Or get a sample of type reduced by photography until it is much smaller, and do the same. You will thus escape, not only the necessity of wearing glasses for reading and near work, but all these eye troubles which now so often afflict people. Nature intended that you should have natural clear eyesight.

This exercise should be done with good daylight illuminating the page. Before reading the text below, remove your reading glasses and rest your eyes for a few minutes by palming. Then turn the page upside down and proceed to scan the white space between the lines and as you do so imagine that the background is brilliantly white like sunlight reflected on...
water or snow. Keep your breathing nice and deep. Continue to scan the white spaces as if you were reading. Go all the way to the bottom of the page. Now turn the book right side up and notice how many more words or paragraphs you can read.

There is no need to read each paragraph – it’s the same text in different font sizes. Continue this exercise for 5 minutes or until you can read to the bottom paragraph. That is, read it from any distance within arm’s length. You will first notice that words appear to become clear, then sentences and finally the whole paragraph will be clear. For some people this process is very rapid but for others they need to practice a few times before they relax enough to allow their eyes to adjust. It is about allowing yourself to explore the possibility of developing more flexibility and discovering how it would look and feel. It is an intriguing question, isn’t it? How would I feel if I could read print this small?

Persons whose sight is beginning to fail at the near point, or who are approaching the so-called presbyopic age, should imitate the example of a
eyes can read at the same level.

Finally, you will want to train your eyes to read in a variety of light conditions. In bright daylight the cone cells are active and provide you with crystal clear vision. In low light you will need to use more of the rod cells which are highly sensitive to light. You naturally move from one type of cell to another and have the ability to read small print in very low light conditions. This is similar to reading the phone book in moonlight as mentioned above. Train your eyes to be able to easily read multicolored menus in dimly lit restaurants.

When you can read the above paragraph in good daylight then progress to read it in lower and lower light. Step inside the room and notice how this changes your ability to read. Continue to find different light levels until you can read fine print with just one candle.

**Lazy reading exercise**

The purpose of this exercise is to develop flexibility in focusing between the near point and far point and sharpening your focusing powers. This exercise also develops the ability to read smoothly without regressing

1. Find a book or a magazine printed with plenty of white space between the lines and a typeface that appears slightly blurred when you hold the page up in front of you.

2. Turn the page upside down so that you cannot read the text.

3. Run your eyes gently and slowly around the margins a few times, looking as if from the back of your head.

4. Now choose two points at the top corners of the page, and another, such as a box of
tissues, at a distance within the room.

5. Shift your eyes from the page to the box and back and forth.

6. Next, scan the white spaces between the lines, going down the page as if you were reading. By the time you are halfway down, everything may seem clearer, but do not strive for clarity, keep going.

7. When you reach the bottom, turn the book or magazine right side up, and look along the white space below the first line of type.

8. Close your eyes now, and from memory paint imaginary white in the space below the first line of type, back and forth.

9. Open your eyes and scan the spaces beneath the first few lines, imagining them as being bright as snow in brilliant sunlight. Repeat this several times, alternately closing and opening your eyes.

10. Now float your eyes back and forth over the lines without reading.

11. Look away then return to the page. The black of the type will seem blacker and the white of the spaces will seem whiter than you have ever seen them. The words will stand out sharply.

Devote 15 minutes a day to this exercise. In the weeks to follow gradually reduce the size of type with which you are practicing until you are able to easily read small print.
This exercise will teach your centering muscles to work in partnership with your focusing muscles. Usually when your eye-crossing muscle lacks tone, you will automatically over-focus and your near point is pushed out beyond the page you are reading. This can lead to presbyopia and astigmatism.

Position this page so the circles are very close to your eyes. The left and right circles will float together and form a three-dimensional image in the center. The inner circle now floats above the outer circle like a multilayered cake. The word SEEING floats on top and
established around 8 years of age. Generally it is assumed that the entire visual system is fully developed by this age.

Severe convergence problems develop when one of the eyes turns in, as in esotropia or when one of the eyes turn out, as is the case in exotropia. This condition is known as strabismus. When the image from one eye crosses the midline of the retina, this operates as a trigger and the brain suspends the image from that eye in order to avoid double vision or diplopia.

To illustrate this phenomenon, look at something at a distance. Now, put your index finger in between yourself and the object. How many fingers do you see? Look at your finger – what happens to the object you were looking at? When you look at something in the distance anything in between will seem to double because the eyes are converged towards (pointing to) a more distant object. The foreground will be slightly out of focus.

Natural convergence can slowly drift out of alignment. This happens very slowly and you probably will not notice this until you get your eyes tested. Convergence issues often play a role in vision problems. If your eyes are always converging slightly in front of what you actually want to see, then your eyes are over-converged and your vision will be out of focus – especially in low light. In environments where your pupils are opened widely, your depth of field will be very shallow. In bright light your pupils will be very small and
your depth of field will be very large, resulting in a sharper image. The world will appear much clearer on a bright summer day.

**Vision Training principles for convergence**

- Practice the string exercise on page 124 which is designed to provide feedback as to when you have convergence.
- Practice moving the convergence to the point of attention. This is to correct for convergence ahead or behind the object you are looking at.
- Check that you have convergence at both near and far viewing distance.

From a Vision Training point of view convergence is quite easy to correct using a piece of string as a feedback device. We use an optical illusion that takes place when you are looking down a string with both of your eyes open. If you have perfect convergence you will see a phantom cross with its center right at the object you are looking at. The center of the cross will be where you focused your attention on the string.

**How to test for convergence**

Fusion is one of the easiest things to check and correct. Take a piece of string, about the length from hand to hand stretched across your chest (about 1.25 meters). Tie the string to the back of a chair or to a door handle. Next you will need a paperclip or a bead, which you can move up and down the string.

1. Place the loose end of the string on the tip of your nose so the string is stretched out.
2. Place the paperclip on the string somewhere in the middle.
3. When you look at the paperclip you should see two phantom lines crossing directly through the paperclip. If you see the cross in front of the paperclip then your eyes are under-converging. If you see the cross beyond the paperclip then your eyes are over-converging. If you see only one string, then one eye is suppressing the image. The brain is only attending to one image and is blocking the affected eye – you are only using one eye. Any misalignment contributes to your vision problem and makes images blurry.
• If the left eye goes in, then move the paddle away from your body’s midline to the left. Cover the right eye as you move the paddle from the center and out, while looking at the stickers and trying to keep them in focus for as long as possible.

If the eye turns then move the cardboard from outside towards the nose.

• If the right eye goes in, then move the paddle away from your body’s midline to the right. Cover the left eye as you move the paddle from the center and out, while looking at the stickers and trying to keep them in focus for as long as possible.

This exercise can be done with almost any prop – whenever is convenient. The movement encourages the mind to adjust the co-ordination of the eye muscles. Repeat this exercise for short periods of time, but do it frequently.
Amblyopia is defined as defective visual acuity which persists after correction of the refraction error and removal of any pathological obstacle to vision. This is a condition of unknown origin where vision in one eye is switched off by the brain. Recently amblyopia has been thought of as a sensory adaptation to strabismus, a condition where one eye looks out in the wrong direction.

Some clinicians believe that there is a sensitive period of development for various visual functions. Experiments made with monkeys suggest that early visual deprivation (age 3 to 6 months) abolishes pattern and binocular vision. A later onset of visual deprivation (up to 25 months) results in reduced contrast sensitivity. Vaegan and Taylor (1980) note that visual deprivation in the first three years of life left only rudimentary vision. Patients with a later onset of vision deprivation suffered less visual loss, and patients deprived after ten years of age suffered no loss. Incidentally, many of the patients in the study showed substantial improvements in vision after optical correction and Vision Training (orthoptic treatment).

Amblyopia may develop due to a number of reasons such as:

- Deviating eye – Amblyopia is likely to develop in children under the age of 3 if one eye is deviating (turning in or out) as in strabismus. In untreated conditions a marked decrease in visual acuity may develop within just a few weeks.

- Defocused eye – When one eye is severely near-sighted and the images appear blurred at all distances (more than 4 diopters), amblyopia is likely to develop. Adults with one eye that is severely myopic may develop amblyopia if Vision Training is not undertaken, even if they wear corrective lenses.

- Deprived eye – Amblyopia can develop as a result of covering one eye for a whole day, for as little as a week, during the early stages of an infant’s visual development.

The medical treatment of choice is patching the good eye, which over the years has been supplemented with active stimulation of the eye using electrical and chemical stimulants. Strategies used include total occlusion, excluding all light and form, such as using adhesive occludes worn on the skin. Opaque black contact lenses, frosted glass and other filters are also used to this end.

Amblyopia is treated in childhood and rarely starts after the age of 8. If strabismus is involved, surgical replacement of the eye muscles is often performed in an attempt to straighten the eye so that both eyes track together. This results in a more pleasing
Another way of practicing your distance vision is to use the technique of looking at something that is further away than what you actually wish to see. Your eyes will attempt to focus on that distant object. When you look back at the object you wanted to see, you will notice that your eyes find it much easier to make it out. Experiment with this as you are driving. Look at road signs that are far away in the distance and then at ones that are closer and you will probably find that your vision begins to travel out much further than before. Like the First World War fighter pilots who deliberately sent their eyes 10 kilometers out into the sky, your eyes will also respond to the same strategy and begin to see things in the far distance.

If you would like to develop eagle eyes, play around with some of the ideas I have touched upon here. Make it a game which you can play all the time, whether you are walking, driving or simply relaxing.

**Exercise to improve distance vision**

Prepare for this exercise by palming for a few minutes.

1. Take an eye-chart or a magazine with different sizes of text and place it in good daylight at eye level. Take a standing position far enough away from the chart so the letters are separate but not clear.

2. Start a long swing past the chart, moving the head and body far to one side, then far to the other side, whilst not looking at anything in particular. The chart or magazine will seem to move by as you pass first one way and then the other.

3. Keep swinging and shorten your swing from 60 cm on one side of the chart to 50 cm on the other side. Let the top of the chart pass just below your line of vision so that you are not actually looking at it. If you have difficulty imagining this motion, close your eyes for a moment as you swing and the motion will come more easily.

4. Shorten the swing to 25 cm on each side of the chart, then to 15 cm, then to 5 cm, always keeping the top edge in rhythmic motion from side to side. Remember to breathe throughout this exercise and do a few rest swings with closed eyes now and then, imagining the motion as you swing.

5. When the chart has minimum motion from side to side, take a deep breath and flash all the way down the letters. They will be clear.

Practice this exercise for 5 minutes a few times every day as you move further and further away from the chart on your way to perfect vision.
native Melanesian children (Garner, 1988), which showed a significantly higher prevalence among those who were involved in intensive study than those who were not. Bind (1950) found almost no myopia among Eskimo children. Skeller (1959) reported that myopia was exceptionally rare among all Eskimos. However, in 1969 Young et al., reported that virtually no myopia existed among parents and grandparents, while more than half of the children of school age were myopic.

The ever increasing academic requirements for children is reflected by Sato (1957), where the prevalence of myopia increased from 15 percent in 1914 to an incredible 45 percent in 1955, when records of middle school children in Japan were examined.

Rosner and Belkin (1987) conducted a nationwide survey in Israel noting the degree of myopia and intelligence scores among 157,748 males aged between 17 and 19 years. This represented a largely unselected study population since all Jewish males of this age undergo medical examinations to check their fitness for military service. They found that both “years of schooling” and “intelligence” weighted approximately equally in their positive correlation with myopia.

Is the prevalence of myopia increasing?

Scheerer (1928) and Betsch (1929) examined 25,000 adults over the age of 25 and found that 13.7 percent of them had myopia. Walton (1950) examined 1,000 people aged between 30 and 90 and found 17.7 percent had myopia. British statistics from 2001 indicate that 61 percent of the population had myopia. Unfortunately, myopia appears to be increasing at an alarming rate.

At this point scientists do not know why myopia develops. There are many theories attempting to explain this, ranging from genetic disposition to simple over-use of the eyes for near work.

Does excessive near work lead to myopia?

Gross and Zhai (1994) propose a hypothetical mechanism explaining the development of myopia. They suggest that an individual who does a great deal of close work and who has a larger than normal lag of accommodation, and therefore a degraded retinal image, will be prone to myopia. This is because the lag of accommodation/focusing places the image formed by the optical system behind the retina. As a result, the axial length increases, having the effect of placing the image clearly on the retina.

Continued near work could cause the axial length to increase. This process is hypothesized to operate in the same way as the normal emmetropizising mechanism. Some researchers refer to this as emmetropization at the near point.

Gwiazda et al. (1993) suggest that in an individual who has poor accommodation, the blurred images – not the accommodative effect – are the cause of myopia.
Accommodative responses were measured for newly myopic and emmetropic (normal vision) children under three conditions. In the first situation, the stimulus to accommodate or focus was increased by moving the target closer (therefore simulating proximally induced accommodation); in the second condition the stimulus to accommodate was increased by the use of concave lenses; and in the third condition the stimulus to accommodation was decreased by the use of convex lenses. When convex lenses were used to decrease the stimulus to accommodation, there was essentially no difference in accommodative lag for the two groups of subjects.

When accommodation was stimulated by moving the target closer to the subject, the mean lag of accommodation was similar for the myopes and emmetropes at all but the closest distance of 25 cm, where the lag for the myopes was 0.4 diopters greater than for the emmetropes. However, when concave lenses were used to increase the stimulus to accommodation, the lag of accommodation was significantly greater for the myopes. A -3.50 diopter lens (the highest power used) read approximately 2.7 diopters for the myopes as compared to 1.5 diopters for the emmetropes.

Gwiazda et al., suggest that “reduced accommodation is found for a period after, and perhaps before, the onset of myopia, at whatever age it occurs” (1993: 693).

**Experimentally induced myopia**

The environment has a great influence on vision. For example, laboratory monkeys are found to be considerably more myopic than wild monkeys, and monkeys kept indoors in cages develop more myopia than animals kept in outdoor pens (Young, 1967).

The German researcher Levinson was the first person to conduct animal experimentation. Levinson believed that myopia resulted from the pull of the optic nerve when the eyes are held in a downward position, so that the anterior–posterior axis of the globe is oriented vertically. To test the theory, monkeys were placed in a box that was parallel to the floor, with the result that after a few months, myopia was found to occur and increased as long as the experiments were carried on. Griswell and Gross (1983) kept three monkeys in this position. One of them developed 14 to 15 diopters of myopia after nine months, the second developed 7 to 9 diopters of myopia after one year, and the third developed 1 to 2 diopters of myopia after four weeks. Intraocular pressure did not increase during the experiment and the myopia was axial in nature; in other words, the eyeball elongated in a way that is typical of myopia.

**The science of convergence**

Numerous clinical studies report on the efficacy of Vision Training for convergence insufficiency. Cooper and Duckman (1978) reviewed 15 studies of Vision Training for convergence insufficiency over a 47 year period. These studies surveyed nearly 2,000 patients and reported an overall cure rate of 72 percent, with improvement in an additional
19 percent, and failure in only 9 percent of cases.

Impressive cure rates are reported by Duthie and Mayou (1945), who achieved cures in 72 percent of 364 patients with convergence insufficiency.

**The science of strabismus**

Usually strabismus is managed by means of prism lenses or corrected by surgically weakening or tightening the eye muscles. Often there is immense pressure placed on parents to give permission for their children to undergo surgery. However, the result of strabismus surgery is not impressive. In many cases it is only a cosmetic procedure which fails to achieve stereoscopic vision.

**Efficacy of the non-surgical Vision Training approach**

Wick (1987) did a retrospective examination of the records of 54 patients who had undergone vision treatment for accommodative esotropia (the eye turning inwards). The patients were classified based on the Duane classification as having either convergence excess (n = 11) or equal eso-diversions (n = 43).

Over 90 percent of the patients achieved total restoration of normal binocular function with this treatment approach.

Chryssanthou (1974) studied 27 patients with intermittent exotropia (one eye turned out) with ages ranging from 5 to 35 years of age. A total of 89 percent of patients showed definite improvement, with 66.6 percent graded excellent six months to two-and-a-half years after treatment.

Etting (1978) reported a 65 percent overall success rate in patients with constant strabismus, specifically, 57 percent for esotropes (eye turning in) and 82 percent for exotropes (eye turning out). There was an impressive 89 percent success rate with intermittent strabismus, specifically, 100 percent of esotropes (eye turning in) and 85 percent of exotropes (eye turning out). Etting reported an astonishing 91 percent success rate when retinal correspondence was normal.

Flax and Duckman (1978) examined the effectiveness of orthoptics as a viable modality for treating strabismus. They reviewed the pertinent literature and presented an analysis of the data. The result of numerous studies showed a combined functional cure rate of 74 percent. Ludlam (1961) evaluated the efficacy of orthoptic strabismus treatment in a selected group of 149 selected strabismus sufferers who received Vision Training treatment, and determined a 73 percent overall success rate.

In a subsequent study Ludlam and Kleinman (1965) found the long-term success rate of vision therapy for strabismus to be 65 percent. Bryer (1961) investigated the long-term effects of treatment of heterophoria. Of 89 patients whose initial symptoms were completely relieved during treatment, 81 percent remained symptom free on follow-up six
balance swing exercise
Bandler, Richard
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convergence practice exercise 1
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deuteranopia
diabetes
diet
see also nutrition
Dilts, Robert
diabetic retinopathy
diopter(s)
diplopia
divergence, see strabismus
dominant eye
domino exercise
Donders, Francisca Cornelius
double vision, see diplopia
driving
zeaxanthin 1, 2, 3, 4
Testimonials for Leo Angart’s workshops

I enjoyed the workshop immensely and having previously got my vision down from -8ish to 5ish and becoming ‘stuck’ there I am looking forward to making the final step as I do believe that Leo has provided me with the missing keys re the exercise for astigmatism and, more especially, the pranic energy exercise.

Please keep me informed of workshops that I might find relevant.

Andina

Primarily I would like to thank you for organising Leo’s natural vision workshop in London 3 weeks ago, for allowing me to attend at a reduced rate (much appreciated) but most of all for the fact that it was truly amazing: everything that I wished for and more. For this, my heartfelt thanks go, of course, to Leo as well as to yourself, so I would be grateful if you were able to forward my gratitude to him. I thought he led the sessions thoughtfully and gently, in perfect balance with his huge enthusiasm and great energy (and deep knowledge of the subject); considering this is such an emotional issue for so many of us, I felt held and respected as well as instructed … I returned home revitalised and inspired, having brought back so many gifts from the two days … and the manual, also, is truly a gem.

I can report that already, only two weeks after the workshop, having followed Leo’s advice (doing energy work and the, pen ‘exercise several times a day … and the, string ‘every morning), I visited my local contact lens specialist on Monday asking for a lower prescription because I felt my lenses had become too strong … and, being met with a half-scared, half-incredulous stare by the optician, indeed I was found to be right because, to their amazement, they confirmed that my lenses had become too strong and my prescription has now been reduced from -6.50 in both eyes to -6.00 in both eyes! I can’t tell you how victorious I felt going home with a pack of reduced strength contacts! It was wonderful.. and considering that only 2 years ago I was on -7.50 and -7.00 (R and L eye), it is a compounded improvement …

I feel that Leo has given me a renewed sense of motivation and self-belief to continue along this road and persevere to achieve better and better natural vision. I know I can do it with patience and plenty of love.

Elisabetta

I enjoyed the workshop by Leo. Did you know that after the second session I went to buy new contact lenses, 0.5 less than what I usually wear? However, when I measured my eyes the next morning, my grade for my right eye was even lower!! I am now wearing 3.5 in both eyes. I am working to bring both my eyes to -3.0 by the end of September (I started with 4.5 for my right eye and and 4.25 for my left eye). Thanks!!

Ruth