

# *Legally Blind*



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# **Dedication**

This book is dedicated to  
my family and friends,  
teachers and classmates,  
bosses and co-workers  
who helped me move along  
life's winding path.

This book is also dedicated to  
the estimated 1.3 million people  
in the United States who  
are legally blind.

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# Introduction

This eBook has **two themes**.

- The first is a consideration of the **general condition** of having limited vision.
- The second is my **personal experience** of being legally blind since birth.

As we age many people experience vision loss in a variety of forms. Hopefully the information contained in this eBook will be useful to them.

Dealing with physical disabilities can be dramatic. Some people overcome severe physical limitations to achieve the most awesome accomplishments:

- Blind people who ski and skydive.
- Amputees running a marathon supported by an artificial leg.
- A deaf composer writing a symphony.
- People with no arms who drive their car with their feet.
- People who blink their eyes at a computer to speak or write.

Being legally blind (and my personal story) is not so dramatic, it deals with the more mundane challenges that face people with limited vision every day.

# A Matter of Definition

## Blind vs. Visually Impaired: What's the Difference?

*Source: Industries for the Blind and Visually Impaired, Inc.*

**A look into the difference between someone who is blind vs. visually impaired.**

A question people ask often is, “What’s the difference between someone who is blind and someone who is visually impaired?”

- The definition of visual impairment is “a decrease in the ability to see to a certain degree that causes problems not fixable by usual means, such as glasses.”
- Blindness is “the state of being unable to see due to injury, disease or genetic condition.”

In the U.S., there are four **different levels of vision impairment and blindness**—partially sighted, low vision, legally blind and totally blind.

- Partially sighted means a person has partial vision, either in one or both eyes.
- Low vision refers to a severe visual impairment in which visual acuity is 20/70 or poorer in the better-seeing eye and cannot improve with glasses or contacts.
- **Legally blind** means that a person’s central visual acuity is 20/200 or less in the better eye with best correction, or that the widest diameter of visual field subtending an angle of no greater than 20 degrees. If visual aids such as glasses can correct a person’s vision to 20/20, they are not considered legally blind.
- Totally blind refers to a complete loss of sight.

While the phrase “**visual acuity**” may seem new to you, it is a measurement determined by the letter chart tests we all take when we get our eyes checked; the number represents your eyes’ clarity or sharpness. For example, a person with a visual acuity measurement

of 20/70 who is 20 feet away from an eye chart sees what a person with 20/20 vision can see from 70 feet away.

**Does a totally blind person with their eyes open see the same thing as a sighted person with their eyes closed?**

Most people who are born blind say they see nothing. But, people who previously had vision before going blind say they usually see black and sometimes faded shapes, flashes of light or color, and experience vivid hallucinations.

**From what distances are visually impaired people able to see?**

It depends on the type of visual impairment someone is living with. For some people objects are only visible from a certain distance—this distance could be as close as right in front of the eye or as far as 20 feet away.

From a distance, objects may be blurry or faint. Some people may also see in tunnel vision, which is the loss of peripheral vision. Visual impairment can improve with glasses or other types of adaptive technology.

**Can blind or visually impaired people still lead normal lives?**

Absolutely! Many blind and visually impaired people adjust to their disabilities. Being visually impaired or blind doesn't mean they can't live normal lives just like anyone else. They work, go to the movies, explore new parts of town, and even win national talent contests.

Being blind or visually impaired isn't about what they can or cannot do. It's about learning the best way to accomplish whatever goals they set out to achieve.

# My Experience – An Overview

## **Diagnosis:**

I went to my first eye doctor when I was 3 years old. The ophthalmologists said:

- I was myopic (near sighted) and
- I had astigmatism (inability to hold a steady focus) and
- I had nystagmus (quivering of the eye)

Over time I became aware that my eyes did not “work together” but that I would alternate from one to the other without being conscious of it.

My experience of being legally blind evolved in each stage of my life.

## **Childhood:** First Awareness

Until entering pre-school I was generally ignorant of the fact that I was limited vision. Life just was what it was.

Starting in 5<sup>th</sup> grade, I became more aware of my limitations and decided that if I worked really hard all the time I could keep up. I was “the little engine that could”.

## **Adulthood:** Accommodations

In this stage of life I discovered and made adjustments for my limited vision. For example, at work I asked for large computer screens. When I went to movies I usually sit in row 3 or 4.

## **Maturity:** Selective Focus

In this stage of life I focused on the things I did best and let others take care of the things that were hard for me to do because of my limited vision.

## **Elderhood: Doing What Pleases Me**

By this point in life I knew what was easy and difficult for me to do because of my limited vision. I decided not do things that I found difficult and did not give me joy. For example, I do not like browsing in shops loaded with small items.

## **Family and Friends**

Throughout this process my family and close friends thoughtfully watched out for me, especially at night if there were no streetlights. They were not overly protective but had a sense of what I could and could not see.



# Stories from My Life

## Kindergarten

When I entered elementary school, I was called to the nurse's office to have a physical exam. This included having my eyes checked. This led to a humorous but telling interaction with the school nurse:

*Nurse: Please read the chart.*

*Me: What chart?*

*Nurse: The chart on the wall.*

*Me: Yes, but which wall?*

Once I understood the request, I could quickly spot the large E at the top of the chart. I don't remember if I got to the second row.

## 1<sup>st</sup> – 4<sup>th</sup> Grades - Sight-Saving Class

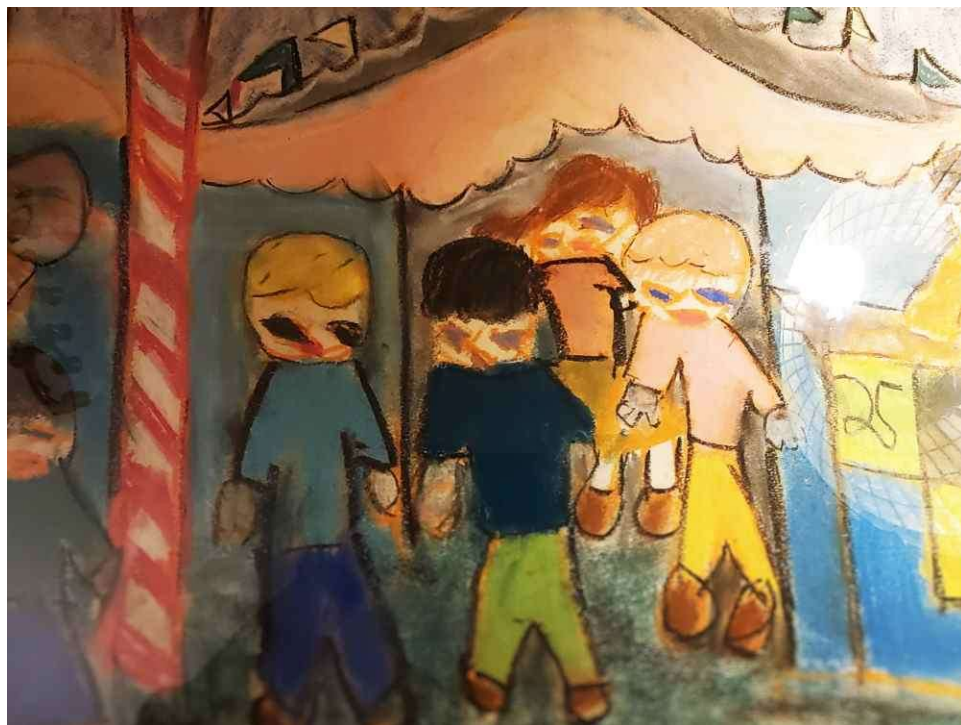
Unlike today, at that time one school had a special class for kids with visual and some other physical disabilities. There were about 15 students in the class from 1<sup>st</sup> to 6<sup>th</sup> grade. It was like being in a one room schoolhouse. Our teacher attended to us all often in small groups. Each year we would spend a part of the day in a regular class. By fifth grade I spent all day in the regular class, and it was the "advanced" fifth grade class.

As a teacher was a wonder:

- We learned to write on paper with wide lines.
- She wrote our math worksheets in big dark letters.
- We learned to read with books that had large print.
- She would read us stories and then put poster paper on the black board and have us use chalk to draw whatever we wanted about the story (see picture below).

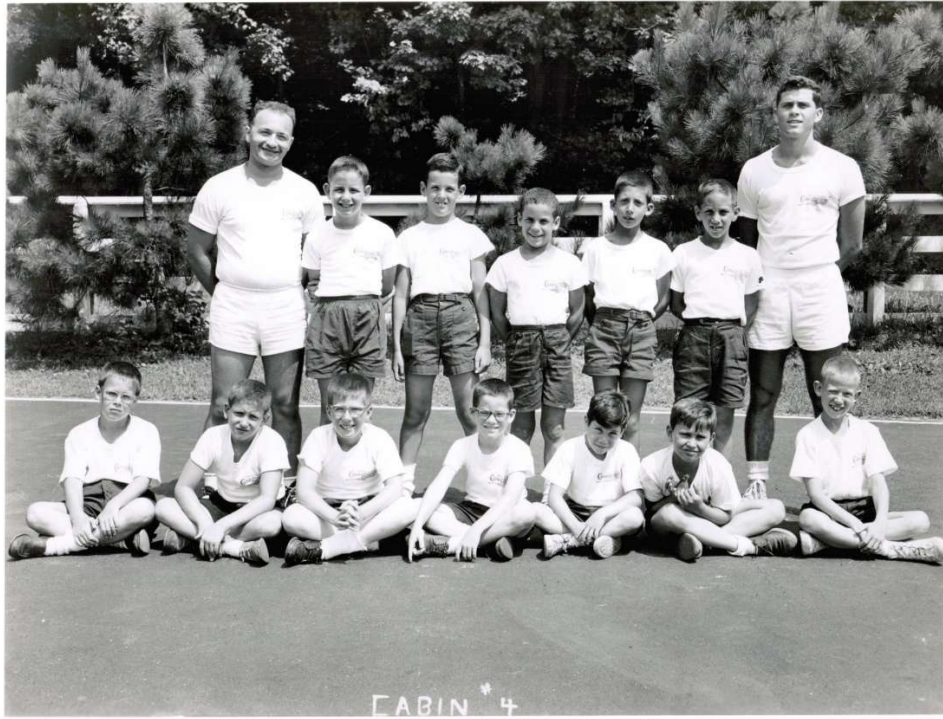
- We sculpted animals out of clay which she would glaze and fire.
- Every year she read us Dicken's Christmas Carol. And we hand drew Holiday wrapping paper.
- We wrote Christmas cards to our school Principal.

What was also amazing is that some of the students in her tiny class went on to attend top colleges and universities and have major careers.



## Summer Camp

After third grade, we went to visit my brother on parents' weekend at his summer camp. I was so excited I asked if I could stay and became a member of "Johnny's Little Salmis" (first row far left).



On my first evening we went on a “snipe hunt”. We had to jump over streams and then when it started to get dark, I knew I had to go back to the camp. Who knew that you had to go out in the dark at camp? Also, I was no great fan of archery and riflery. But I did enjoy arts and crafts.

### **Fifth Grade**

By fifth grade I was attending the “advanced” fifth grade class all day long. Yes, I was in the real world. It was then I realized that I could not read what the teacher would write on the black board and if I wanted to I would have to leave my seat and walk up to the black board. Some people in my situation might have balked, but I knew this was what I had to do, so I did. And, this was awkward because I also had to stay out of the line of sight of the other students so they could see the board.

This reality governed my life through middle school and high school.

## **Middle School**

Middle School was my first foray into Physical Education Classes. PE was often an excruciating experience because I was required to play sports that I could never be good at. I was essentially useless in baseball and basketball and marginal in soccer. I had some hope in wrestling and weightlifting.

In general, I was not physically well coordinated and didn't enjoy sports. Running did not give me pleasure.

## **More Summer Camp**

In Junior high my parents insisted that my younger brother John and I go a summer camp in the Catskills. I was in a special group called the "Construction Engineers". Part of our mission was to go on overnight camp outs in the forest while we fixed things.

Walking through the woods without trails and being outside after dark was a real challenge for me. What were my parents thinking?

## **High School**

In high school the State of Illinois gave me the opportunity to have "cane training". I didn't really expect to use a cane, but figured that knowing how couldn't hurt. In the training I learned tips and tricks that I still use today.

- How, if someone wants to lead you, it is best to hold their elbow so you can better sense their movement.
- How, if you need to go down a stairway, it is best to tap you to start by tapping my right foot on the edge of the top step.
- That it is OK to ask someone near you to read you a sign or message display that you can't read.

I managed my way through high school using my "little engine that could" philosophy. I would often go to bed at 8pm and awake at 4am to do my homework.

## Musical Instruments

My older brother was an excellent pianist. My parents wanted to give my young brother and me an opportunity. I tried the trombone which made no sense at all since it was so hard for me to read the music. I later tried the guitar and harmonica but just didn't have the talent.

Were I to try again I think it would be an electric Cello. I like cello music and the electric cello is so thin I might be able to read the music.

## College

By sophomore year of college, I realized that "being the little engine that could" would not be enough. I was a slow reader and there was more to read than I felt possible. So, I decided that I needed to find something that I wanted to read a lot about and major in that.

Ultimately, I chose Humanistic Psychology that was new at the time. There were also workshops and trainings and internships that could give me real world experience.

BTW, I am the guy at the far left of the front row.



# Insights

## **Acuity and Functionality**

After college I had a life changing experience. I worked with an optometrist who had an unusual approach to addressing nearsightedness.

He used contact lenses that over corrected and made me far sighted. He then had me wear glasses that corrected for far sightedness. It was wearing a pair of binoculars where one lens was on the eye. And just like binoculars it brought the whole world closer.

For the first time in my life I could understand what people with normal vision could see and a large part of it was acuity and sharpness of edge.

Unfortunately, just like with binoculars, my field of vision was significantly reduced. Also, I had to wear separate glasses for reading.

After about six months, I decided that overall this approach did not make me more “functional” in the world.

## **Recognizing Things for What They Are**

One of my key insights is that if I can recognize something for what it is and respond appropriately, people will think I see it.

For example, if I am walking down a shopping street I can see the objects in the store windows on my side of the street, but definitely not across the street. However, if I see a red rectangular sign with yellow letters of a certain size, I can guess the sign says Wells Fargo. The same for Coca Cola.

And in familiar environments my “functionality” can go up to 100%. People don’t even realize that I am so nearsighted unless I go to read something.

## **Staying Organized**

Everything has its place and making sure it stays that way makes it easier to find things. At home I don't usually wear my glasses except to watch TV. 99% of the time I just know where things are.

# **Problem Areas**

## **Nighttime**

Once the sun goes down, my night vision outdoors goes to zero unless there are streetlights.

When I look up at the dark night sky I see the moon and that's about it. Thousands of stars ... you've got to be kidding.

## **Mind Your Step**

When I go out walking in nature, I must focus on what is immediately ahead of me. So, I prefer paved paths rather than forest trails with roots and holes. And I love benches where I can sit down in safety and just feel the breeze, hear the wind, smell the flowers and be with nature.

## **Eye Contact**

I now know that most people with normal vision are acutely aware of making eye contact with other people. But unless I am standing 12" away from your face, your eyes generally look like blobs in your face.

## **Recognizing People**

It is really hard for me to recognize people at any significant distance. It helps if I know the context. But often I won't know who they are until we get up close and personal.

## **Operating in the Office**

Of all the hassles at work, one of the most challenging was walking into someone's office and not recognizing that they were on the phone or were listening to music on their headphones.

## **Appliances Controls**

Some products are just not well designed for nearsighted people. Many stoves have their control set back behind the burners. This makes them impossible for me to read. The same is true for some



washers and dryers. How much easier it is for me when these controls are on the front of the appliance.

### **Street Signs and House Numbers**

Reading street signs can be a challenge, but house numbers are way more difficult. I know where street signs are supposed to be. House numbers can be anywhere and in any color.

### **Getting Around on Public Transport**

Reading the signs on the side and front of busses and light rail trains can be a challenge. Even the signs posted on poles in the sidewalk can be too small for me to read.

### **Virtual Reality**

My godson designs virtual reality user interfaces. He gave me a chance to experience a full six degree VR environment which meant that I could walk around up to a certain border.

Guess what. The virtual screen was at the border and, must like in real life, I had to walk up to it to see it. I suggested that the UI should allow me to point at the screen and have it come closer to me so I could read and use it without having to move physically.

# New Tools

When people think of new tools for the blind they think of amazing technology breakthroughs. The reality is that some of the recent changes are mundane.

## Cellphone Camera

In recent years one of the greatest tools has become the camera on my cell phone.

- If something is too small to see I can snap a picture and expand it.
- If I can't read a sign across the street or a menu at a fast-food restaurant I can zoom in on my camera.
- If I am at a play I can use my camera as mini-binoculars.

## Alexa, Siri and Google Assistant

I love my Amazon Echoes. I use them to turn on and off lights and tell me the weather.

## Smart Home Appliances

My husband does a fair amount of the housework. However, if I were on my own I would definitely have a Roomba vacuum cleaner.

## Cell Phone Apps

I never was very good at identifying flowers or birds. Now I use cell phone apps to identify trees and flowers, and seeing a picture of a bird based on the bird call I am hearing.

# Conclusion

Having limited vision is a unique experience for each person. How their vision is affected and what they can and can't see varies widely. Also, a person's response to their condition can change over time.

If you meet someone who you sense is visually impaired, it is OK to inquire. You might start by commenting on something specific, "I noticed that when you \_\_\_\_ you seem to \_\_\_\_". It is also OK to ask them to describe for you what they can and can't see.