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PRACTICAL HEALTH

Achieving your best health, each and every day.

Dr. Gregory Brennan

Introduction

Throughout history, achieving good health has been a challenge. Humans have endured famine, infections, parasites, cold, heat, strenuous labor, lack of certain nutrients (scurvy) mental and emotional stressors, and war.

Considering what our ancestors endured, we, living today, are blessed/fortunate.

Industrialized manufacturing and farming combined with lawful governments has produced abundant quantities of food, housing, clean water, and conveniences such as affordable furniture, transportation and technology.

There has been a cost of our relatively comfortable lives. Families are spread out over distances which makes seeing other relatives difficult. Our lack of required physical activity has contributed to loss of muscle mass, obesity, and depression. When the vast majority of us were farmers, we would see and experience the fruit of our labor on a daily basis. Now, many of us contribute a small part of a product or service, and therefore lack the satisfaction or sense of accomplishment that farmers experienced when they harvested or saw their flocks or herds multiply.

The processing of our food has produced longer shelf lives and incredible flavors but, at the cost of processing out or eliminating many vitamins and minerals.

Technology has provided affordable lighting and entertainment, however many of us are sacrificing our quality and quantity of sleep to enjoy/indulge in these conveniences.

The result is that our current age/society has health challenges like every age/society before us.

The first challenge we face is to recognize what is impeding our health. The second challenge is to change our lifestyles and habits to facilitate improved health. The third challenge is to be consistent to maintain good health as our situations change (children come and go, career changes, etc.) as we age.

The purpose of this book is to help guide you through the above challenges. My goal is that you and I have the best health possible each and every day of our lives.

Poliquin: To reach your goal, it's not what you're willing to do, it's what you willing to give up.

The myth of discipline: If you're having trouble achieving a goal, it's not because you lack discipline. It's because you have to redirect what you love. If you want to be healthier, but love having a donut more, you won't achieve your goal. If you want to be stronger but you love staying up late instead of getting 8 hours of sleep and getting to the gym, you will not achieve your goal.

Summary page:

We need adequate sleep and rest to be healthy now and in the future.

Quality sleep occurs when we go to bed and wake up at similar times each day.

Each week, take one day to rest from your weekly work activities.

Our bodies are designed to use nutrients for short-term and then long-term health. If we are lacking nutrients such as vitamins and minerals in our diet, short-term health is possible, but at the expense of long-term health.

We need to consume nutrient dense, unprocessed foods now so that we can enjoy less disease ,and suffering and pain in the future.

Like many things, insulin is vital for survival, however too much appears to be causing many of the diseases we experience today.

To decrease your insulin levels, eat foods as they appear in nature, unprocessed and full of the natural fibers and fats.

Eat 2 to 3 whole food meals per day and don't snack. You will suffer over a few months as you move toward this healthy eating style, however you will be rewarded with lower weight, and lower chronic disease risk.

Regular exercise is vital to our health today and in the future.

You can save time by exercising more intensely: Tabata/interval exercise and performing resistance training on machines at very slow speeds

Practice the ideal standing and sitting postures. Anticipate a year of practice before the new postures are automatic.

Be patient and don't become discouraged.

Blood work value goals:

Hs CRP	< 0.9 mg/dl
Homocysteine	<7 micromolar
Albumin/globulin ratio	>1.8
Interleukin-6 (IL-6)	<3 pg/ml
Vitamin D3 (25-hydroxycholecalciferol)	50-80 ng/ml
Cholesterol	>150
HDL	>50
Triglycerides	<150
Glucose (fasting)	70-90 mg/dl
HbA1c	<5.6
Insulin (fasting)	<4.5 micro IU/ml

The above values were recommended in <u>The End of Alzheimer's</u>, By Dr. Dale Bredeson

Total cholesterol/HDL ratio	<4
Triglyceride/HDL ratio	<2

The above ratios were recommended in Eat Rich, Live Long by Ivor Cummings.

The Framington Health Study risk calculator: <u>https://www.framinghamheartstudy.org/</u>

Chapter 1: Sleep

Today we enjoy relatively expensive lighting which allows us to improve our productivity, but also makes it tempting to postpone going to bed, This results in decreased amount of sleep.

In his book, "At Day's Close: Night In Times Past," Roger Ekirch used a large volume of historical documents to argue that, prior to the industrial revolution, most people practiced 'segmented sleep.' This involved having two shorter sleeps in a night instead of the now normal single sleep. People would go to bed earlier, sleep for a few hours, then wake. They'd spend several hours awake in the night resting, reading, praying, or otherwise getting busy, then have another sleep before morning. Ekirch does say that the move to a single sleep, which he attributes to electric lighting, has meant we get less hours of sleep and are less well rested overall.

The Nurses Health Study found a positive correlation between decreased sleep and increased weight. Women who slept less than five hours per night were 15% more likely to become obese during the study.

A sleep curtailment study in 2004 found that decreased sleep causes increased levels of fasting glucose and can increase hunger. Ghrelin, the hormone secreted by the stomach to let you know that you are hungry, increased by 20%, and leptin, the hormone secreted by your fat cells to tell you you are full, decreased by 18%.

The study published in an internal medicine journal in 2010 found that decreased sleep causes decreased lean muscle mass.

Poliquin states that the most powerful natural thing you can do to increase testosterone levels is to get adequate sleep. For most of us that means 7-8 hours.

Proper sleep hygiene is developing habits and creating an environment that facilitates healthy sleep. This can involve:

1. Turning some lights off and not watching TV, or using a computer, or your cell phone for half hour before you go to bed. This helps decrease the exposure of your eyes to the blue component of light. The blue component of light stimulates waking.

2. Making sure your room is dark. Not using LED alarm clocks, using blinds thick enough to darken any stray light from coming through your windows. Some people use a cloth mask to cover their eyes at night.

Some people can eat right before they go to bed and have good quality sleep, but many can't. In other parts of this book, I discourage snacking so most of us shouldn't be eating before we go to bed, however work schedules and social meals have us eating late. You will have two experiment to know how much time you need before your last meal and the beginning of a good quality sleep.
Regular exercise helps many people sleep more properly. I highly recommend regular exercise for many reasons, one of which is improved quality sleep.
Do not have a TV in the bedroom. It's just too tempting to watch ,which like stated above can expose your eyes to blue aspect of light which can stimulate

wakefulness. Having a TV in the bedrooms also too tempting to watch one show after another, which will end up costing you significant amounts of sleep.

Chapter 2: Whole Food Diet

Whole food Vs. Processed food

The processing of food allows for long shelf life and flavor enhancement: think Doritos.

But processed food, most breads and pastas, vegetable oils and lunch meats, lack many vital components such as vitamins and minerals. Many diseases that we experience in America are directly or indirectly related to chronic nutrient deficiencies.

Triage: the assignment of degrees of urgency to wounds or illnesses to decide the order of treatment of a large number of patients or casualties.

Bruce N Ames, PhD in 2006 published his theory of nutritional triage. Low micronutrient intake (think vitamins and minerals) may accelerate the degenerative diseases of aging through allocation of scarce micronutrients by triage.

For example, this means that if you're lacking a nutrient such as vitamin K, your body will allocate or use the available vitamin K for short-term use such as blood clotting. Long-term health benefits such as keeping calcium out of soft tissues and arterial walls will not occur because there is not enough vitamin K.

The National Health and Nutrition Examination Survey, NHANES, a health and nutrition survey, which is performed each 15 years, found that many Americans are not eating foods containing adequate levels of vitamins and minerals.

The data include nutrient intakes from food only and do not cover intakes from dietary supplements or over-the-counter medicines (1).

Examples of this are taken from the NHANES DATA FROM 2005, 2009, and 2010:

- 93% of Americans had inadequate dietary intakes of <u>vitamin E</u>.
- The number of individuals with inadequate intakes was also high for <u>vitamin</u> <u>A</u> (44%) and <u>vitamin C</u> (31%) and <u>magnesium</u> (56%).
- For some nutrients, intakes were inadequate only for certain segments of the population: <u>vitamin B6</u> for females over 50 years of age, and zinc for males and females over 70 years of age and females 14–18 years of age.
- <u>Vitamin K</u>, <u>calcium</u>, and <u>potassium</u> may also be of concern.
- Most Americans had adequate intakes from food for carbohydrate, selenium, vitamin B3 (niacin), and vitamin B2 (riboflavin).
- About 21 million Americans have serious vitamin C deficiency. 66 million may develop vitamin C deficiency depending upon their health habits and disease status, and less than 30 million Americans achieve optimal vitamin C levels (100 micromole per liter).

- Smokers and low-income groups who typically exhibit low blood serum concentrations of vitamin C also have the highest rates of disease and mortality.
- The current <u>Recommended Daily Allowance</u> (RDA) for vitamin C is too low as it was established for healthy Americans and does not apply to 35% of the population, including smokers (50 million), estrogen or birth control pill users (13 million and 18 million), diabetics (16 million), pregnant women (4 million) and people taking aspirin (inestimable millions) or other drugs, and those with chronic infection (viral hepatitis, herpes, HIV), who have an increased need for vitamin C.

In 2009, the NHANES, 2005–2006, provided an update on nutrient intake distributions from food and water for vitamin D, calcium, phosphorus, and magnesium.

- For both <u>vitamin D</u> and <u>calcium</u>, only about one-third of individuals aged one year and over showed an adequate intake. Females aged 14–50 years were even less likely than their male counterparts to exceed their recommended intake.
- For vitamin D, most individuals aged over 50 years regardless of gender did not meet their adequate intake.
- Nearly one-half of all individuals aged one year and over had inadequate intakes of <u>magnesium</u>.

In 2010, an analysis of NHANES 2003-2006 showed nutrition disparities in U.S. sub-populations with differing household income.

- Inadequate nutrient intakes from foods are prevalent in children and adults, especially for <u>vitamin E</u>.
- Groups with lower household income have a higher prevalence of inadequate intake for <u>vitamin A</u>, <u>vitamin C</u>, <u>vitamin B6</u>, and <u>vitamin B9</u> (folate).

Dr. Ames feels that low vitamin and mineral intake causes more damage to our DNA than radiation.

The triage nutrition theory means that you'll feel good today, but at the expense of being disease-free in the future. You and I have to be disciplined so that we don't eat processed food, and we do eat nutritious whole food (vegetables, nuts and seeds, fruit, and beef, chicken, turkey, fish, and eggs).

We need to be kind to our future self. While I was discussing health with a local medical specialist, he defined discipline as delayed gratification. You and I need to eat healthy foods now, skipping the candy, cookies, breads, desserts, so that we can experience optimal health in the future.

An important part of whole food diets which have been consumed for thousands of years, is fermented foods. Fermented foods part of each culture. Central Europe has sauerkraut and borscht. In Asia it's kimchi and fermented fish. In northern Europe there is fermented cod liver.

Each of these fermented foods provides probiotics (health promoting bacteria and yeasts) in nutrients, produced by probiotics, that are an essential component of a healthy whole food diet.

Practical points:

Our bodies are designed to use nutrients for short-term and then long-term health. If we are lacking nutrients such as vitamins and minerals in our diet, short-term health is possible, but at the expense of long-term health.

We need to consume nutrient dense, unprocessed foods now so that we can enjoy less disease and suffering and pain in the future.

Chapter 3: Insulin

Hyperinsulinemia (above normal levels of insulin in your blood) is one of the foundational problems caused by a processed food diet. Many experts state that hyperinsulinemia is a root cause of what we call metabolic syndrome: obesity, high blood pressure, elevated "bad" cholesterol and diabetes.

This chapter I will discuss the most important hormone that controls our weight: insulin. Insulin can determine weight set points, like a thermostat. Our goal is to keep our insulin levels at levels which facilitate maintenance of a healthy weight. While these concepts applied everybody, if you are an insulin-dependent diabetic, you need to work with your physician and nutritionist to achieve an ideal insulin level.

I was born in 1963. When I was a child snacking was discouraged because it was said that we would ruin our appetite for dinner. Back then most mothers down the street prepared home-cooked meals. It would've been rude not to be excited about something into which they had invested so much time and effort.

In the 1970s, high fructose corn syrup was introduced into the market. This relatively cheap source of sugar was used to make many foods tastier. There was also an increase in the amount of snack foods available.

Before the introduction of many snack foods, most people eat 2-3 meals per day. Fast-forward 40 years, now most people eat 5 to 6 times per day. When we eat 2-3 meals per day without snacking, our insulin levels would spike after each meal and then fall to a lower level until we eat again. With 5-6 meals, insulin levels tend to stay elevated. Increased eating/snacking results in higher overall insulin levels.

With snacking, we stay in the fed state more than the fasting state. With 2-3 meals per day, it's about a 50-50 split between being in the fed state and the fasting state. With 5-6 meals per day, the split is more like 80, 20: 80% in the fed state and 20% in the fasting state.

Refined carbohydrate/grains and snacking, even healthy snacks causes increased blood sugar levels. This causes increased insulin which causes increased fat storage which causes weight gain, and insulin resistance.

This creates a vicious cycle which worsens with time.

The longer that this continues, the worse it gets. That's why weight slowly increases as we age. Have you noticed this with yourself or loved ones?

Insulin, even at high normal levels, if chronically sustained, causes weight gain even if less calories are consumed. This will make your attempts to lose weight very difficult.

So what should we do? Eat 2 to 3 meals per day over 8-10 hours. And don't snack. What's nice about this is that you and I end up doing less cooking and less meal preparation and saving money by not having snack foods in the house.

We have to break the cycle of our current poor eating habits by eating unrefined/whole foods over an 8-10 hour period with no snacking.

Whole food examples: sweet potatoes, beef, chicken, pork, fish, eggs, spinach, cucumbers, tomatoes, pickles, sauerkraut, carrots, avocados, apples, grapefruit, oranges, broccoli, cauliflower, kale. You get the picture.

But what about whole grains? Most of the whole grains on the market are composed of refined flour with some whole-grain flour mixed in. The problem with freshly ground whole grains is that they don't last more than a few days on the shelf before looking like a penicillin experiment. That's primarily why grains are processed: they have a long shelf life which allows them to go from production facility to store to home without spoiling.

The weight gain we see and experience is driven by hormones and not just calories. Infant obesity is up 300% recently. Why? The mother had elevated insulin levels while she was pregnant, and the baby was born with elevated insulin levels which caused quick and abnormal weight gain. Heavy infants tend to be heavy children which tend to be heavy adults.

How do sumo wrestlers gain weight? They eat large meals and sleep afterwards, they drink lots of beer, and they eat a low fat/high carbohydrate diet.

Sounds a lot like typical American, we eat our largest meal at night, we drink beer and wine, and we have been told by the government that a low fat/high carbohydrate diet is good for us.

55% of US dogs are obese. The primary ingredient in most dog foods is refined grains.

Cattle are fattened by feeding them a grain diet. Ask farmers how to get cattle to market weight quickly: 12-13 months with grains, 18-24 months with grass feeding.

Studies have shown that there's no weight loss when people use artificial sweeteners. It's unclear why this is, but there is a concept that could be at play called cephalic insulin stimulation. This means that when you taste something sweet, your brain prepares your body to process sugar by releasing insulin.

So what is driving our insulin levels up? Primarily it's processed grains: processing removes fiber. Fiber blunts or decreases insulin spiking by slowing the digestive process. Think of fiber as an antidote to carbohydrates. In nature, sugars are accompanied by fiber: fruits and vegetables. Or in the case of honey, it's guarded by bees. In either case, getting large amounts of sugar quickly has been difficult historically. Processing of the grains makes it easy for us to consume large amounts of sugar without fiber.

So why don't we just add supplemental fiber to our diet, like taking a tablespoon of Metamucil with each meal? One study demonstrated that heart patients died at a quicker level when fiber was added to the diet as a supplement.

Much of the information above was taken from the Nurses Health Study, numbers one and two, and from the Health Professional Follow-Up Study.

Decreased food quality and decreased nutrient value result from refining food products.

Refraining grains results in a loss of fiber and vitamins and minerals. Refining fats such as oils from seeds and vegetables, like canola oil, have been found to increase inflammation because of the high omega six content. Refined meats, such as lunch meats, have been found to increase all causes of death.

So what do we do?

First shop the edges of the grocery store. Avoiding the more processed foods in the middle of the store.

So what do we eat?

Eat whole foods. Avoid processed grain/fat/meat products.

Avoid artificial sweeteners.

Eat carbohydrates with fiber: vegetables and small amounts of fruit.

So when do we eat?

Eat 2 to 3 meals per day, according to your preference, and eat all meals within an 8-10 hour window: this allows substantial periods of fasting which will decrease your insulin levels which will allow your body to start to burn your stored fat, and will help you achieve your desired weight and maintain that weight.

Why do we want to eat like this?

Another reason to eat in a way that keeps your insulin levels more normal/lower is because high/high normal insulin levels can interfere with the levels of other hormones such as growth hormone, testosterone, estrogen, and progesterone.

Cortisol, a stress hormone, if levels are too high, can cause truncal weight gain (weight gain around your midsection/waist). To keep cortisol levels normal, avoid stressful situations or change the way you react to these situations. Get the sleep you need to feel well rested upon waking: usually 8-9 hours of sleep.

In conclusion, weight gain is a hormonal problem. The most important weight gain hormone is insulin. Your eating habits can cause chronic/persistently elevated insulin levels which will cause insulin resistance and over time insulin resistance will cause weight gain even when you try to decrease your calorie intake. Cortisol is also important to maintain proper weight. Normal cortisol levels result from proper stress responses and proper sleep patterns.

Practical points:

Like many things, insulin is vital for survival, but too much appears to be causing many of the diseases we experience today.

To decrease your insulin levels, eat foods as they appear in nature, unprocessed and full of the natural fibers and fats.

Eat 2 to 3 whole food meals per day and don't snack. You will suffer over a few months as you move toward this healthy eating style. But you will be rewarded with lower weight, and lower chronic disease risk.

Chapter 4: Exercise and activity

Imagine your day if you were alive when the clear majority of people were farmers raising livestock and crops, or both.

You awoke when the rooster crowed, the sun was about to rise when you got out of bed. Then you went to the barn to do your morning chores: watering the animals, cleaning the stalls (shoveling manure) and getting animals out to pasture, etc. Then you ate breakfast, which consisted of whole foods such as eggs or biscuits from wheat or other grains that you ground yourself the day before, and maybe some leftovers from last night supper. Then out to the fields or back to the kitchen where you worked for the next few hours. You either worked hard in the field or in the kitchen preparing to feed the field workers. Then lunch, then more work, and then some supper. After supper, you either read or discussed the news which trickled through your village or town that day and then you went to bed not too long after sunset. There was no need for a Worlds Gym or Planet Fitness.

Today we call it exercise, but 200 years ago, they called it living. We live in an industrialized nation where many of the things that used to require labor and work are now automatically performed for us. Think about what products and services are delivery to your home: natural gas or propane for the heating of your apartment or home, and the electricity and water that you use to cook with and to wash your clothes.

So how do we emulate or at least partially simulate our ancestor's activity level?

Strength training is beneficial to the men and women of all ages. The building up and maintenance of healthy muscle tissue is one most important things you can do to prevent many of the negative effects of aging. Example in point is modern Ireland. Today Ireland is spending more money on people 65 who have fallen and have been injured than they are spending treating obesity. The finding is that many of their older people have lost so much muscle that once they have fallen and have become injured, they enter a downward spiral of disease and illness. Properly performed strength training can help avoid and sometimes reverse what we consider age-related disorders.

The good news is that recent research has shown that short bursts of intense activity stimulate our metabolism as well as long periods of lower level activity.

So what does this look like? Interval training.

Dr. Tabata demonstrated that four minutes of interval training was effective as 40 minutes of lower intensity training. And there is evidence that resistance training such as weightlifting or bodyweight exercises, if done with adequate intensity, can be done very quickly and as little as once per week.

Using these strategies I have been able to reduce my exercise to under one hour per week and I am in as good condition as I was when I used to work out four hours per week.

Consider Tabata type exercises and strength training. Strength training using either using machines or body weight exercises such as push-ups and pull-ups, that are done slowly, and because of the intensity, only have to be done once or twice per week.

Practical points:

Regular exercise is vital to our health today and in the future.

You can save time by exercising more intensely: Tabata/interval exercise and performing resistance training on machines or barbells or bands.

Chapter 5: Rest and Relaxation

Did you ever have a vacation that was so busy that you needed a vacation after your vacation to relax?

Have you ever had such a busy weekend that you wished Monday was a day off so you could recover?

Our lives are quite busy and sometimes we don't allow ourselves enough time for rest and recovery.

We all have different tolerances of activity level. We all have different rest and relaxation needs. Through trial and error, you can discover your actual rest and relaxation needs.

A very good strategy to keep from getting worn down is to allow for eight hours of sleep per night, and at least one day per week, during which you shift gears. The shifting gears means that if you have a physically demanding job, then you would physically rest. If you have a sedentary job, you might be more physically active one day per week.

How you feel in the middle and the end of your work week is a good indication of whether you were able to shift gears adequately during your day off from your work activity level.

There are times during our lives when there is very little time to rest. I do not know how we got through having four children under the age of six. Many careers start out incredibly busy with 50-80 hour work weeks for years. Thankfully, most of us are young when we start families or busy careers.

If your friends/family/coworkers tell you you're looking worn, or if you're making too many mistakes, or if you're having trouble staying awake mid day, then you're probably not allowing enough time for rest and relaxation.

If you are allowing enough time for rest and relaxation, and you're still looking/feeling worn and exhausted, then you have to suspect conditions such as nutrient deficiencies or thyroid/adrenal dysfunctions.

Practical points:

We need adequate sleep and rest to be healthy now and in the future.

Quality sleep increases when we go to bed and wake up at similar times each day.

Each week take one day to rest from your weekly work activities.

Chapter 6: Posture

Posture: the position of your body in preparation for the next movement or activity.

We usually think of posture is either good or bad: standing up straight is good posture and slouching is bad posture.

And while it is true the slouching is bad posture, it's good to know why.

To understand good posture, we have to go back in time to see why our bodies were designed.. If you believe that the Bible is God's inspired word, then you believe that we were created by God. If you believe in evolution, then you believe that over a long period, we have adapted to our environment.

Both belief systems see humans as designed/adapted to live as hunter gatherers/farmers. These roles required much physical activity and endurance. Days would have been made up of intervals or times of inactivity, intense activity, and moderate activity.

In Chapter 4: Exercise and Activity, I asked you to imagine your day if you were alive when clear majority of people were farmers raising livestock and crops. We are very well designed/adapted to perform the walking, lifting, shoveling, climbing, and occasionally defending our property and family.

When we look around the world and see people who currently live as manual farmers or hunter gatherers, we see very good standing and squatting postures. They tend to not sit too much because there often isn't our "modern type" of furniture. I witnessed this in 1997 while volunteering at a medical clinic in rural Haiti. The clinic was full of people who did not slouch while standing and sitting. Their complaints consisted of recent and past injuries/trauma related pain. The good posture and the abundance of healthy (what we would call athletic body types) individuals struck me such that when I returned to Ohio I scheduled a visit with an anthropologist at Cleveland State University. I reported what I had experienced and he informed me that this is a common finding throughout the world in preindustrial/undeveloped countries. When people are standing, they stand tall, when sitting they sit without slouching, and universally can perform a deep squat. This is like a baseball catcher's squat but with their heels on the ground. They can maintain these healthy postures for hours at a time. Obesity is uncommon.

So what makes good posture good? Good posture consists of positions which maintain joint function in their proper ranges of motion, and which allow muscles to efficiently hold our bones, and joints, and non-destructive positions.

So what does this look like?

Standing: If you're standing and facing a full-length mirror, your head and torso are centered over your pelvis, which is centered over your two feet. Your thumbs are forward and the palms of your hands would face/or touch the outer parts of your thighs/hips. Your feet point forward and are parallel. Viewed from the side, your head is centered over your shoulders, your shoulders are centered over your pelvis, and your pelvis is centered over your midfoot.

Sitting: Viewed from the front and the side, your head and torso and pelvis have the same position as when you're standing, but your hip joint is flexed 90 or so degrees and your knees are flexed 90 or so degrees. If you're sitting on a couch, you're using pillows to keep your low back in the same position it was in while you were standing.

Sleeping: There are many healthy sleeping positions. Generally, if you do not have neck stiffness or pain or lower back stiffness or pain in the morning, your sleeping position is well-tolerated by your body. Most people either sleep on their side with their hips and knees flexed or flat on their back. Some people sleep obliquely: on their front/side. Sleeping on your stomach causes your neck to rotate too much for adults, but is usually well-tolerated by infants and children.

Posture tips:

1. While you're standing in the above described good standing posture, place the back of your hand behind your low back and feel the lordosis/hollowness that is present. Keep your hand there and sit. If you are able to maintain the standing low back lordosis/hollowness, you're sitting properly. If your low back has lost its curve/hollowness, your slouching. Slouching while sitting causes much stress on the low back discs and over time will cause disc damage which can lead to pain and increase the risk for more frequent back injuries.

2. Position yourself in your car so that you are sitting with the most proper posture possible, and then adjust your rear view mirror. If later in the day you would need to reposition the rear view mirror because of altered posture/slouching, correct your posture instead of adjusting the rear view mirror.

3. If your low back or neck hurt after you've been sitting, you did not sit properly.

4. If your low back or neck hurts upon waking, you did not sleep in a good posture. You need to use a more supportive pillow or the mattress may need to be replaced.

Note: if you're a side sleeper you need a fairly thick pillow to keep your neck aligned with the rest of your spine. If you're a back sleeper you can use a thinner pillow. If you alternate your sleep position from side to back sleeping, there are special pillows that have thicker and thinner aspects.

Example: Therapeutica Sleeping Pillow.

5. When you observe someone slouching while walking/standing/sitting evaluate your own posture and correct it.

Practical points:

Practice the above standing and sitting posture. Anticipate a year of practice before the new postures are automatic.

Be patient and don't become discouraged.