CONNECTING THE PIECES

HEALTHY COUNTY BOOT CAMP

Jan. 31-Feb. 2, 2018 • Horseshoe Bay Resort, Horseshoe Bay
SEVEN INVESTMENTS THAT YIELD THE GREATEST RETURN

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SEVEN INVESTMENTS

Get Well, Be Happy!
- Rest
- Proper Food Intake
- Spiritual and Emotional Renewal
- Sunlight
- Deep Breathing
- Water
- Body Movement

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Scientists have discovered a revolutionary new treatment that makes you live longer. It enhances your memory and makes you more creative. It makes you look more attractive. It keeps you slim and lowers food cravings. It protects you from cancer and dementia. It wards off colds and the flu. It lowers your risk of heart attacks, stroke, and diabetes. You’ll even feel happier and less anxious. Supporting evidence for all of these results have been published in more than 17,000 scientific reports.
Investment #1: Rest
“[Sleep is] a pillar of healthy living, just like diet and exercise.”

M. Safwan Badr, immediate past president of American Academy of Sleep Medicine, and professor at Wayne State Medical School
Why We Sleep
UNLOCKING THE POWER OF SLEEP AND DREAMS
Matthew Walker, PhD
Are You Getting Enough Sleep?

- After waking up in the morning, could you fall back asleep at 10:00 or 11:00 a.m.?
- Can you function optimally without caffeine before noon?
- Do you find yourself reading and re-reading the last few sentences of the material you’re looking at?
- Do you sometimes forget the color of the last few traffic lights?
Latest recommendations

Amount of sleep needed: 7 – 9 hours on average
Sleep Systems

Sleep and wakefulness are governed by 2 separate systems within the human body

- Circadian Rhythm
- The hormone adenosine
Sleep System 1: Circadian rhythm

- Makes you feel tired at certain times and alert at other times
- Originates in the brain
- Can run as long as 26 to 28 hours, but norm is 24 hours, 15 minutes
- Resets to exactly 24 hours each day, primarily by sunlight, but also by food patterns, exercise, and regularly timed social interactions (like work).
Every person’s rhythm is different.

The other 30% fall somewhere in between, lean toward eveningness.

Morning larks 30%

Night owls 40%
Circadian rhythms change over time.

Generally:

9 year olds: sleepy at 9 pm, awake at 6 am

Teenagers: sleepy at midnight, awake at 9 am

Young adulthood to midlife: sleepy at 10 pm, awake at 7 am

Older adulthood: sleepy at 9 pm, awake at 6 am (hence restaurant ‘early bird’ specials)
Secreted by the pineal gland in the brain

Builds up during the day so that after 12 - 16 hours awake, most people feel the deep urge to go to sleep

Can be masked by caffeine, which blocks the brain’s receptors to adenosine so that you don’t feel sleepy
“Caffeine is not a food supplement. Rather, caffeine is the most widely used (and abused) psychoactive stimulant in the world. It is the second most traded commodity on the planet, after oil”.
5-7 hours after a cup of coffee, only 50% has left your body. Because of this long half-life, many people do not connect a bad night of sleep to the coffee they had with dinner the night before.

The ‘coffee crash’ happens because adenosine continues to build up while the caffeine is in your system, so when it wears off you have the overwhelming urge to sleep.

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Contrary to some product advertising, melatonin helps to regulate the timing of sleep, but not the generation of sleep itself. As it gets dark, the body produces melatonin, which tells the brain and body to get ready to go to sleep.

Sunlight hits the eye in the morning, which signals the body to stop producing melatonin.
There are 2 types of sleep – both are critical to mental and physical health:

- Rapid Eye Movement (REM) – Primarily occurs 1-3 hours before waking
- Non-rapid Eye Movement (NREM) – 4 stages

We cycle between these sleep types every 90 minutes during the night.
During REM sleep, brainwaves are very active. This stage is where most dreaming occurs.

Complex memory knowledge is assimilated during REM, in preparation for ‘permanent storage’ during NREM sleep.
During NREM sleep, brainwaves are calm. This stage is critical – and lasts longer – during adolescence, as it is the driving force of brain maturation.
Athletic Performance and Sleep

More than 750 scientific studies demonstrate a link between quality of sleep and human performance.

Athletes perform better based on the quality of their sleep.

Sleep after physical exertion is necessary for physical recovery, muscle repair and restocking cellular energy.
Napping is for Champions

Usain Bolt, the World’s Fastest Man and nine-time gold medalist from Jamaica, took naps in the hours before winning his Olympic gold medals.
Exploring Sleep Patterns – A Case Study of Greece

Near 2000, there was immense pressure to abandon siesta-like practices in Greece.

At the time, common business practice was to open from 9am – 1pm, close from 1-5pm and open from 5-9pm following afternoon siesta.

Study tracked the group over a six year period.

Harvard University’s School of Public Health conducted a study: measure the cardiovascular consequences of significant cultural change in more than 23,000 Greek adults with men and women from 20-83 years old.
A Case Study of Greece

Study Findings:

- Siestas abandoned.
- 37% Increased risk of death from heart disease
- 60% Increased risk of death from heart disease for working men
Interestingly, **Ikaria, Greece** maintained daily siesta practices and men were four times as likely to reach the age of 90 as American males.

*Ikaria, Greece* is a designated **Blue Zone location**.

**Blue Zones** – An anthropological concept popularized by Dan Buettner to describe characteristic lifestyles and the environments of the longest-lived people.
Accidents caused by drowsy driving exceed those caused by alcohol and drugs combined.

Each week, more than 2 million people in the US fall asleep while driving. As a result, more than 1.2 million auto accidents are caused by sleepiness each year.

Operating on 5 hours of sleep, your risk of a car crash increases 3-fold. With 4 hours or less of sleep, you are over 11 times more likely to be involved in a car accident.
The Costs of Lost Sleep: Weakened Immune System

- In a study of healthy young adults, participants who slept 4 hours per night for 6 nights prior to receiving a flu shot generated less than 50% of the immune response of those participants who had slept 7.5-8 hours per night.

- Similar consequences of too little sleep have been reported for Hepatitis A and B vaccines.
The Costs of Lost Sleep: Weight Gain

- Inadequate sleep affects the body’s production of 2 hormones responsible for controlling appetite
- Cravings for sweets, carbohydrate-rich foods, and salty snacks increase by 30-40% when sleep is reduced by several hours each night over a short period of time
- Less sleep leads to lower energy, which decreases motivation to exercise
The disruption of circadian rhythms has been shown to increase the odds of developing cancer.

Studies on mice revealed a 200% increase in the size and speed of cancer growth in mice whose sleep had been disrupted over a 4-week period.
A study across 4 large US companies found that insufficient sleep cost almost $2000 per employee per year in lost productivity. This adds up to over $411 billion each year.

Well-rested employees (and supervisors) get along better with co-workers, make less mistakes, and have fewer on-the-job accidents.
Methods for Improving Sleep

- Establish a regular bedtime and wake-up time, even on weekends.
- Avoid heavy foods late in the evening and caffeine past mid-day.
- Go to bed only when sleepy; avoid dozing on the couch during the evening.
- Sleep in a cool room.
- Don’t lie awake in bed for a significant length of time – get up and do something quiet and relaxing until you are sleepy again.
Methods for Improving Sleep, cont.

Avoid daytime napping if you are having trouble sleeping at night.

Reduce anxiety-provoking thoughts by learning to mentally decelerate before bed.

Remove visible clock-faces from view in the bedroom to prevent clock-watching anxiety.

Avoid use of alcohol and/or sleep aid medications (disruption of natural sleep cycle, health risks, dependence).

Avoid blue light (screens)
Investment #2: Proper Food Intake
• How we feel, physically and emotionally
• Energy level
• How we look
• Ability to focus
• Performance of job tasks
• Long term health
• Longevity
Essential Nourishment in Fruits and Vegetables

- **Phytochemicals**
- Vitamins
- **Minerals**
- Fiber
- **Antioxidants**
- **Enzymes**
- Probiotics (found in fermented foods)
- **Chlorophyll** (found in leafy greens)
Proteins & Meats
Source is Important

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Limited Carbohydrates and Grains

- Ideally, primary sources of carbohydrates are vegetables and fruits.
- Root vegetables other than potatoes.
- Breads – home baked or village bakery, mostly whole grain, not bleached and processed.
- Limit processed foods with added grains and starches.
Drinking alcohol is a widely accepted part of our culture – Americans consume alcohol to connect, celebrate and cope with everyday life.

Alcohol affects each person differently based on a variety of factors like genes, the environment, lifestyle and diet.

Learn the facts about alcohol and understand how it impacts you – Choose to drink less or not at all.

The Lowdown on Libations
The Scary Thing About Smoking...

Smoking damages every part of the body and can also cause:

Many types of Cancers

Chronic Disease

Cigarette smoking is the leading preventable cause of death in the United States.
“Can I keep using alcohol and tobacco if I blend them into my morning health shake?”
Investment # 3: Body Movement
“Combined together, a lack of activity and a high BMI were associated with 7.2 years of life lost relative to meeting recommended activity levels and being normal weight.”

By comparison, long term cigarette smoking reduces life expectancy by approximately 10 years.
Costs and Utilization

- **Musculoskeletal claims** is #2 of top 3 conditions, costing $25 million, right behind cancer (HEBP Pool)

- **16% increase** in outpatient surgeries, mostly joint reconstructions/replacements
Everyone in America should walk the dog every day, even if they don’t have one!
The Prescription

Do **moderately** intense **cardio** 2.5 hours a week (30 minutes/day, 5 days/week)

Or

Do **vigorously** intense **cardio** 1.25 hours a week (25 minutes per day, 3 times/week)

And

Do 8 to 10 **strength-training exercises**, 8 to 12 repetitions of each exercise twice a week.

www.cdc.gov
Ignite Your Fat Burning Furnace

Strength Training At Home Using Standard Household Items

By Mark Zollitsch,
Texas Association of Counties
Home-Based, Body-Weight, Single Workout Strength Training Routine

**Easier** - (sitting wall squat – ease yourself into a position where your knees are close to 90 degrees and hold for as long as possible; work up the time you hold the position):

**Harder** - (use a piece of luggage, or computer bag or something else around the house to add weight to your goblet squat):
Investment # 4: Water (Hydration)
Water is involved in every type of cellular process in your body, and when you’re dehydrated, they all run less efficiently -- and that includes your metabolism.

Think of it like your car: if you have enough oil and gas, it will run more efficiently. It’s the same with your body.

http://www.webmd.com/diet/features/water-for-weight-loss-diet#2
• Being even **1%** dehydrated can cause a significant drop in metabolism.
The Role of Water in Critical Functions

- Transports Nutrients and Oxygen to Cells
- Flushes Bacteria From Bladder
- Prevents Constipation
- Helps Normalize Blood Pressure
- Stabilizes Heartbeat
- Cushions Joints

The Harvard Medical School Special Health Report 6-Week Plan for Health Eating
The old adage of eight 8-ounce glasses of water per day is no longer relevant, experts say.

Generally, intake should be between half an ounce to an ounce of water for each pound you weigh, every day!

Depends on your size and weight and also regional climate.
Investment # 5: Deep Breathing (Fresh Air)
Body image has a negative impact on respiration in our culture. A flat stomach is considered attractive, so people tend to hold in their stomach muscles.

This interferes with deep breathing and gradually makes shallow "chest breathing" seem normal, which increases tension and anxiety.
The Benefits of Deep Breathing

• For many of us, deep breathing seems unnatural.

• When you breathe deeply, the air coming in through your nose fully fills your lungs, and the lower belly rises.
• Deep breathing releases endorphins, feel-good, natural painkillers.

• The upward and downward movement of the diaphragm helps remove toxins from the organs, promoting better blood flow.

• Oxygen provides energy, which means that we are creating an increase in our energy level by breathing deeply.
Investment # 6: Sunshine
Did you know that **vitamin D** is critical for **bone health**?

Maintaining ideal levels of vitamin D significantly reduces your risk of developing certain bone diseases such as osteoporosis.

Spending 15-30 minutes (depending on skin type) in the sun can provide you with nearly a day’s supply of **vitamin D** through skin absorption.
The Value of Vitamin D

Ideal vitamin D levels may also reduce your risk of other diseases:

- Multiple Sclerosis
- Type 1 Diabetes
- Metabolic Syndrome
- Heart Disease
- Works to manage autoimmune conditions
Investment #7: Spiritual and Emotional Renewal
“The Daily Private Victory – time spent each day in a routine way renewing body, mind, heart and spirit – is the key to developing all of the 7 Habits.”
“Be patient with yourself. Self growth is tender, it’s holy ground. There’s no greater investment.”

Stephen R. Covey
The Blue Zones book is about discovering the world’s best practices in health and longevity and putting them to work in our lives. Most of us have more control over how long we live than we think.
In fact, experts say that if we adopted the right lifestyle, we could add at least ten good years and suffer a fraction of the diseases that kill us prematurely. This could mean an extra quality decade of life!
“Stop smoking, quit drinking, eat less, exercise more! Are you some kind of health nut?”
General Investing Rules

• Check with doctor
• Use common sense
• Start slowly and ramp up gradually
• You are not in competition with anyone; every person’s body is different
• Monitor performance daily
• Schedule the activities that will lead to healthy outcomes
• Join every health-related program your county/district or TAC HEBP offers
• Feel good
• Look good
• Reduce effects of aging
• Extend lifespan – quality and quantity
• Spend less on health care
• Set a good example for your children / grandchildren
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