SEVEN INVESTMENTS THAT YIELD THE GREATEST RETURN

Texas Association of County Auditors Institute

May 5, 2017

Quincy Quinlan
Director, Health and Benefits Services Department
Texas Association of Counties
1210 San Antonio
Austin, TX 78701
(512) 478-8753 (office)
(512) 615-8966 (direct)
(800) 456-5974 (Texas toll-free)
(512) 481-8481 (fax)
QuincyQ@county.org

http://www.county.org/pool-and-risk-services/group-health
Investment #1: 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

**Metabolism** is the organic and chemical processes inside of organisms that are necessary to maintain life, and affects how quickly you burn calories or fat.
The Role of Water in Critical Functions

Water needs vary based on exercise intensity, exertion in extreme weather conditions and people taking medications for certain health conditions.

**General rule of thumb:**
For healthy people, drink two to three cups of water per hour, or more if sweating heavily.

The Harvard Medical School Special Health Report 6-Week Plan for Health Eating
The Role of Water in Critical Functions

- Transports Nutrients and Oxygen to Cells
- Flushes Bacteria From Bladder
- Prevents Constipation
- Normalizes Blood Pressure
- Stabilizes Heartbeat
- Cushions Joints
- Protects Organs and Tissues
- Regulates Body Temperature
- Maintains Electrolyte (Sodium) Balance
- Prevents Constipation
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Water Intake – One Size Fits All?

The old adage of eight 8-ounce glasses of water per day is no longer relevant, experts say.

- Depends on your size and weight and also regional climate
- Generally, intake should be between half an ounce to an ounce of water for each pound you weigh, every day!
- Staying hydrated must be a daily practice as we age and grow regardless of the weather
Investment #2: Proper Food Intake

Consequences of What We Eat

• 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 Produce

- **Phytochemicals**
  - Vitamins
- **Minerals**
  - Fiber
- **Antioxidants**
  - Chlorophyll
- **Enzymes**
  - Probiotic bacteria and HSO’s

Proteins & Meats
Source is Important

- Choose fish options high in omega 3’s, preferably wild-caught rather than farm-raised
- Consider paying a little more for chicken and eggs not sourced from big chicken barns – higher Vitamin A & E content, less cholesterol
- Livestock raised locally, grazed on grass locally, resulting in healthier fats content
- Dairy – be careful
Limited Carbohydrates and Grains

- Primary source of carbohydrates are vegetables and fruits
- Root vegetables other than potatoes
- Breads – home baked or village bakery, mostly whole grain, not bleached and processed
- No processed foods with added grains and starches

Slow, Social Eating

- Family Time
- Leisurably, non-rushed
- Smaller portion sizes

natural)(yslim
Slow, Social Eating

• Time to digest

• Time to feel full (time for brain to receive leptin signal from stomach) so people actually eat less

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U.S. Ctr Disease Control & Prevention; Aug 13, 2014
The Lancet Diabetes & Endocrinology
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The Problem: America’s Diabetes Escalator

4,658

DIABETES 12.3%

HEALTHY 50.7%

40% of adults born after 2000 will develop diabetes

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Texas Association of Counties Health and Employee Benefits Pool
Feet vs. Mouth

No matter what...your feet cannot outrun your mouth!!

Investment #3: Body Movement
Exercise (at least a little)

“Exercise leads to an increase in natural killer cells, neutrophils and monocytes, which ultimately increases immune function,”

Ather Ali, ND, MPH, assistant director of Complementary/Alternative Medicine Research at the Yale-Griffin Prevention Research Center.
Leisure Time - Physical Activity of Moderate to Vigorous Intensity and Mortality
*A Large Pooled Cohort Analysis*

“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.

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“Sitting can be as bad for your health as smoking.”
Spending hours sitting at a desk each day can lead to cancer, heart disease, and type 2 diabetes, and, much like smoking, the effects are not reversible through exercise or other healthy habits.”

*American Heart Association, Sept. 2016*
Costs and Utilization

- **Musculoskeletal claims** is #2 of top 3 conditions, costing $20.0M, right behind cancer (HEBP Pool)

- **16% increase** in outpatient surgeries, mostly joint reconstructions/replacements

Quality of Life Variable by Fitness States
(10,331 Men and Women)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Low (n = 1077) %</th>
<th>Moderate (n = 3555) %</th>
<th>High (n = 5679) %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unexplained Fatigue</td>
<td>25.8</td>
<td>16.3</td>
<td>11.2</td>
</tr>
<tr>
<td>Problematic Snoring</td>
<td>49.9</td>
<td>34.8</td>
<td>21.9</td>
</tr>
<tr>
<td>Frequent Heartburn</td>
<td>30.9</td>
<td>22.1</td>
<td>12.1</td>
</tr>
<tr>
<td>Sexual Problems</td>
<td>11.0</td>
<td>7.4</td>
<td>5.0</td>
</tr>
<tr>
<td>Decreased Sex Drive</td>
<td>29.8</td>
<td>22.2</td>
<td>19.6</td>
</tr>
<tr>
<td>Impotence (men only)</td>
<td>9.7</td>
<td>7.2</td>
<td>4.6</td>
</tr>
<tr>
<td>Chronic Joint or Muscle Pain</td>
<td>34.0</td>
<td>29.3</td>
<td>23.5</td>
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(10,331 Men and Women)

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</tr>
</thead>
<tbody>
<tr>
<td>Low Back Pain</td>
<td>44.8%</td>
<td>41.5%</td>
<td>35.4%</td>
</tr>
<tr>
<td>Frequent Headaches</td>
<td>16.7%</td>
<td>15.0%</td>
<td>12.0%</td>
</tr>
<tr>
<td>Difficulty Sleeping</td>
<td>28.7%</td>
<td>24.9%</td>
<td>21.9%</td>
</tr>
<tr>
<td>Depression</td>
<td>20.9%</td>
<td>15.9%</td>
<td>12.9%</td>
</tr>
<tr>
<td>Anxiety</td>
<td>20.2%</td>
<td>16.4%</td>
<td>13.6%</td>
</tr>
<tr>
<td>Awakening at Night to Urinate</td>
<td>46.0%</td>
<td>44.3%</td>
<td>42.5%</td>
</tr>
</tbody>
</table>

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### Cooper Institute...

**A second study**

- Moving from bottom 2 fitness categories will give **6 more years of life**!
- **Walk** 30 minutes during a day, 3 days per week
Everyone in America should walk the dog every day, even if they don’t have one!

The Prescription

Do moderately intense **cardio** 150 minutes a week

Or

Do vigorously intense **cardio** 75 minutes a week

And

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

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www.cdc.gov
Schedule It!

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

#### Easy
- Sitting wall squat - move 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, a computer bag or something else around the house to add weight to your goblet squat.

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**Good Posture:**

- Keeps bones and joints in the correct alignment so that muscles are being used properly.
- Helps decrease the abnormal wearing of joint surfaces.
- Decreases the stress on the ligaments holding the joints of the spine together.
- Prevents the spine from becoming fixed in abnormal positions.
- Prevents fatigue because muscles are being used more efficiently, allowing the body to use less energy.
- Prevents backache and muscular pain.

Contributes to a good appearance.
Did you know that vitamin D is critical for bone health? Maintaining ideal levels of vitamin D significantly reduces your risk of developing bone diseases such as osteoporosis or osteomalacia.

Spending 15 to 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

Sunlight Improves Sleep

Soaking in daylight for at least 15 minutes at the same time every day, particularly in the morning hours, helps your body shut off a snooze-inducing chemical called melatonin, according to an article in "Health" by the U.S. News & World Report.
Investment #5: Deep Breathing (Fresh Air)

The benefits of deep breathing

- When you breathe deeply, the air coming in through your nose fully fills your lungs, and the lower belly rises.
- For many of us, deep breathing seems unnatural.
The benefits of deep breathing

- 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.

- Shallow breathing limits the diaphragm's range of motion. The lowest part of the lungs doesn't get a full share of oxygenated air. That can make you feel short of breath and anxious.

- Deep abdominal breathing encourages full oxygen exchange — that is, the beneficial trade of incoming oxygen for outgoing carbon dioxide.
- May result in slowing the heartbeat and lowering or stabilizing blood pressure.
- Deep breathing releases endorphins.
- Endorphins are 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: Rest**
“[Sleep is] a pillar of healthy living, just like diet and exercise”

M. Safwan Badr, immediate past president, and professor at Wayne State Medical School

Researchers seeing links between lack of sleep and:
- Diabetes
- Obesity
- High blood pressure
- Early mortality

Effects of lack of sleep on the brain

- Kills neurons (especially the ones required for focused attention)
- No removal of waste (may lead to cognitive issues)
Latest recommendations:

**Amount of sleep needed is individual:**
7 – 9 hours on average

Evaluating Your Sleep: Quantity vs Quality

- Are you productive, healthy and happy on seven hours of sleep?  
  Or, does it take you nine hours of quality ZZZs to get you into gear?
- Do you have issues such as being overweight? Are you at risk for any disease?
- Are you experiencing sleep problems?
- Do you depend of caffeine to get you through the day?
- Do you feel sleepy when driving?
Investment #7: Spiritual and Emotional Renewal

“I set my alarm clock an hour and a half earlier in the morning. An hour of that time I used for reading and study.” — Frank Bettger

“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.”
if you watch how nature deals with adversity, continually renewing itself, you can't help but learn.

— Bernie Siegel MD

ROI FOR 7 Investments

- 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
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 program your employer or health plan offers

“There is a significant drop in the rate of acute myocardial infarction hospital admissions associated with the implementation of strong smoke-free legislation.”
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!
Exploring the Secrets of Longevity

To identify the secrets of longevity, our team of demographers, medical scientists, and journalists went straight to the best sources. We traveled to the Blue Zones—five of the healthiest corners of the globe—where a remarkably high rate of the longest-living people manage to avoid many of the diseases that kill Americans. These are the places where people enjoy up to a 3 times better chance of reaching 100 than we do.

Buettner found that the recipe for longevity is deeply intertwined with community, lifestyle, and spirituality. People live longer and healthier by embracing a few simple but powerful habits, and by creating the right community around themselves. In The Blue Zones, Second Edition, Buettner has blended his lifestyle formula with the latest longevity research to inspire lasting, behavioral change and add years to your life.
Region by region, Buettner reveals the "secrets" of longevity through stories of his travels and interviews with some of the most remarkable—and happily long-living people on the planet. *It's not coincidence that the way they eat, interact with each other, shed stress, heal themselves, avoid disease, and view their world yield them more good years of life.* Buettner’s easy to follow "best practices" and list of healthy lifestyle choices from the Blue Zones will empower readers to live longer, healthier, more fulfilling lives.