NUTRITION

Most important aspect of all

Body is in constant state of breaking down and repairing

How well and efficiently your body rebuilds itself is influenced by the nutrients in our food

Provides energy and fuel to go about our lives
NUTRITION

Especially important as we age

The body is less forgiving

Better health and quality of life vs reduced physical and mental performance with an increased risk of disease

Inadequate or poor intake can accelerate aging and disease processes
SCOPE

General Fundamental Knowledge

Medical Nutrition Therapy
MEET THE MAC’S

Protein -- > Broken down to amino acids

Fat -- > Broken down to fatty acids

Carbohydrates -- > Broken down to glucose

Macronutrients (Abundant) Once broken down they can now be used by our bodies

In this state our body doesn’t recognize the difference in sources
PROTEIN- THE BUILDING BLOCKS

Protein and the amino acids that make it are literally the building blocks of life

Proteins repair or support growth of new body tissues.

Amino acids make up 75% of our dry body weight

95% of our muscle and heart

100% of hormones, neurotransmitters and neuropeptides are made of amino acids
COMPLETE PROTEINS

20 amino acids that combine to make up proteins

Out of 20 amino acids 8/9 cannot be made by the body -> essential
Must be provided by food we eat

Examples: Dairy, eggs, meat, seafood, poultry

Soybeans and seeds

Dairy and Grains
NON ANIMAL COMPLETE PROTEINS

Rice and Legumes
Grains and Legumes
Corn and Legumes
Nuts and Legumes
Soybeans and seeds
Dairy and Grains
Carbohydrates are the body’s main and preferred source of energy. The brain and CNS functions almost exclusively on glucose from carbohydrate and requires a continuous supply. It is muscle sparing and protects protein stores.

Two varieties: Simple (mostly from fruits, honey, syrup, and cane sugar).

Complex (mostly found in vegetables and grains contain fiber).
FATS

Fats also provide the body with energy and they aid in satiety.

Saturated Fat- mostly in red meat, milk products, palm and coconut oil.

Trans Fats- stick margarine, shortening and store baked goods.

Monounsaturated- canola, peanut, olive, safflower oil, avocados, PB, some nuts and seeds.

Polyunsaturated- corn, soybean, flax seed oil, fatty fish, walnuts.
FATS

Most Americans take in 40% of the calories from fat

Recommendation is older adults take in no more than 30%

Saturated Fat even lower no more than 8% of total or 18g per day

Saturated Fat intake increases cholesterol and can clog arteries
Avoid Trans fats entirely
MICRONUTRIENTS

Vitamins

Organic compound needed in small amounts

Helps the body work as it should, each has different roles from resisting infection, helping blood to clot, nerve health, etc.

13 in all: C, A, D, E, K, B vitamins (thiamine, niacin, riboflavin, pantothenic acid, biotin, B6, B12 and folate)

Body cannot make them and relies on dietary intake
Vitamins

Don’t have to meet RDA every day

Risk of nutrient deficiency once you consume less than 67% of RDA for extended period.

MICRONUTRIENTS

Minerals

Inorganic elements, 25 of 92 known elements in periodic table in the human body

Serve as building blocks for some structures. i.e. foundation of teeth and bones

Aim to get from food sources
SUPPLEMENTS

Want from food as much as possible

Don’t eat as much variety as we think

Ok to cover bases. Cover 100% of most minerals
Look for USP label

Benefit comes from filling deficient More isn’t always better
## ENERGY/CALORIES

### How to find your energy needs

<table>
<thead>
<tr>
<th>Activity Level</th>
<th>Weight Loss</th>
<th>Maintenance</th>
<th>Weight Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedentary minimal exercise</td>
<td>10-12</td>
<td>12-14</td>
<td>16-18</td>
</tr>
<tr>
<td>Moderately active (3-4 days wk)</td>
<td>12-14</td>
<td>14-16</td>
<td>18-20</td>
</tr>
<tr>
<td>Very Active (5-7 days wk)</td>
<td>14-16</td>
<td>16-18</td>
<td>20-22</td>
</tr>
</tbody>
</table>

Activity level and Goal to find multiplier. Then multiply by weight.
## DAILY CALORIE COUNT EXAMPLES

<table>
<thead>
<tr>
<th></th>
<th>1600 Calories</th>
<th>2000 Calories</th>
<th>2600 Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grains</strong></td>
<td>5 ounces of equivalent</td>
<td>5 ounces of equivalent</td>
<td>5 ounces of equivalent</td>
</tr>
<tr>
<td><strong>Vegetables</strong></td>
<td>2 Cups</td>
<td>2 ½ Cups</td>
<td>3 ½ Cups</td>
</tr>
<tr>
<td><strong>Fruits</strong></td>
<td>1 ½ Cups</td>
<td>2 Cups</td>
<td>2 Cups</td>
</tr>
<tr>
<td><strong>Proteins</strong></td>
<td>5 ounces of equivalent</td>
<td>5 ½ ounces of equivalent</td>
<td>6 ½ ounces of equivalent</td>
</tr>
<tr>
<td><strong>Seafood</strong></td>
<td>8 ounces/week</td>
<td>8 ounces/week</td>
<td>10 ounces/week</td>
</tr>
<tr>
<td><strong>Meat, Poultry, eggs</strong></td>
<td>24 ounces/week</td>
<td>26 ounces/week</td>
<td>31 ounces/week</td>
</tr>
<tr>
<td><strong>Nuts, Seeds, Soy</strong></td>
<td>4 ounces/week</td>
<td>4 ounces/week</td>
<td>5 ounces/week</td>
</tr>
<tr>
<td><strong>Dairy Products</strong></td>
<td>3 Cups</td>
<td>3 Cups</td>
<td>3 Cups</td>
</tr>
<tr>
<td><strong>Oils</strong></td>
<td>22 grams</td>
<td>27 grams</td>
<td>34 grams</td>
</tr>
<tr>
<td><strong>Solid fats, added sugar</strong></td>
<td>121 calories</td>
<td>258 calories</td>
<td>362 calories</td>
</tr>
</tbody>
</table>
ONE OUNCE OR AN OUNCE-EQUIVALENT:

- Mini bagel
- Half cup cooked rice, pasta, or cooked cereal
- Two 3-inch pancakes
- Three cups popcorn
- 6-inch corn or flour tortilla
ONE HALF CUP OF VEGETABLES EQUALS:

Cup uncooked leafy vegetables

Six baby carrots or one medium carrot

Half a large baked sweet potato

Small (6-inch) ear of corn

Small baked potato

Five broccoli florets

Large stalk celery

Half large (3 x 4-inch) red pepper

Half cup cooked green beans
ONE HALF CUP OF FRUIT EQUALS:

- Small piece of fruit, such as a 2-inch peach or large plum
- Half an 8-inch banana or half an orange
- Quarter cup dried fruit
- Four ounces of 100% fruit juice
- Half a medium grapefruit
- One-eighth of a medium cantaloupe
- Half inch wedge of watermelon
- Sixteen grapes
- Four strawberries
ONE OUNCE SERVING EQUALS:

- 12 almonds, 23 pistachios, or 7 walnut halves
- Half ounce seeds such as hulled and roasted pumpkin, sunflower, or squash seeds
- Tablespoon peanut butter
- Half cup split pea, lentil, or bean soup
- Quarter cup cooked beans
- Quarter cup tofu
- One egg
- Falafel patty (2 1/4 inches, 4 ounces)
- Two tablespoons hummus
ONE CUP OF MILK IS THE SAME AS:

- Cup or 8 ounces yogurt
- 1 1/2 ounces hard cheese, such as cheddar, mozzarella, Swiss, or Parmesan
- Third cup shredded cheese
- Cup calcium-fortified soy beverage
- Two cups cottage cheese
- Cup pudding made with milk
HOW MUCH OIL IS IN:

- Half a medium avocado has 3 teaspoons of oil
- Four large ripe olives have 1/3 teaspoon of oil
- Tablespoon of peanut butter has 2 teaspoons of oil
- Ounce of dry-roasted nuts has 3 teaspoons of oil
- Ounce of sunflower seeds has 3 teaspoons of oil
- Tablespoon of mayonnaise (not mayonnaise-type salad dressing) has 2 1/2 teaspoons of oil
Brain needs fuel constantly as it cannot store

With severe energy imbalance, can affect the brain metabolism leading to:

  Impaired memory and recall, creative thinking and problem solving

  Also can affect mood, increased stress, depression, anxiety and fatigue
The energy we need today is taken from nutrients we ate and stored 1-3 days ago.

Comes from nutrients stored in our liver, muscle and fat cells.
Mixed Messages
TWO DIFFERENT GOALS

Protein ——> Fat ——> Carb

Once bro,
In this sta...
WHY YOUR BODY WANTS TO KEEP FAT

Carbohydrates are the most readily available fuel source. However, their storage in the body is really low.

Example: 150lb person with 15% body fat.
Eratates to 22.5lbs (10,206g) of stored fatty acids.
Compare to store capacity of glucose 1.1lbs (500g).
DIFFERENT SOURCES OF ENERGY
WHY YOUR BODY WANTS TO KEEP FAT

In terms of Energy/Calories,

2,000 calories from carbohydrate

Almost 92,000 fat calories
## Label Distortion

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ME EAT CHEMICALS? NEVER!

**Bowl of cereal**

Ingredients: Enriched flour (wheat flour, niacin, reduced iron, thiamin mononitrate (vitamin B1), riboflavin (vitamin B2), folic acid), corn syrup, sugar, soybean and palm oil (with TSO for freshness), corn syrup solids, dextrose, high fructose corn syrup, fructose, glycerin, contains 2% or less of cocoa (processed with alkali), polydextrose, modified corn starch, salt, dried cream, calcium carbonate, corn starch, leavening (baking soda, sodium acid pyrophosphate, monocalcium phosphate, calcium sulfate, distilled monoglycerides, hydrogenated palm kernel oil, sodium stearoyl lactylate, gelatin, color added, soy lecithin, date姆, natural and artificial flavor, vanilla extract, carnauba wax, xanthan gum, vitamin A palmitate, yellow #5 lake, red #40 lake, caramel color, niacinamide, blue #2 lake, reduced iron, yellow #5 lake, pyridoxine hydrochloride (vitamin B6), riboflavin (vitamin B2), thiamin hydrochloride (vitamin B1), citric acid, fol C acid, red #40, yellow #5, yellow #6, blue #2, blue #1).

**Organic**

**Apple and Grapefruit**

Ingredients: Apple, Grapefruit.

**Any Questions?**

-gfnl
ME EAT CHEMICALS? NEVER!

We are organic beings

Everything is made up of chemical compounds
ME EAT CHEMICALS? NEVER!

Bananas contain Potassium-40, which is a radioactive isotope of potassium.

Yes you could die from radiation poisoning if you were able to eat 10,000,000 bananas at once.

Don’t make me use my Banana stand Back!
ME EAT CHEMICALS? NEVER!

Other foods that are naturally radioactive are potatoes, sunflower seeds, many nuts, and kidney beans.

Among these, Brazil nuts are the most radioactive by far at 6600 picocuries per kg or about 1.875 BED (banana equivalent dose, a radiation unit)
Freedom!!!

Don’t be afraid to eat or fall for scare tactics

There will always be a hot new fad it’s the way of marketing. Do not succumb.
Just this week

Sitting might not be so bad for you after all

By Emmanuel Stamatakis, The Conversation

Updated 6:59 AM ET, Tue February 21, 2017

Photos: Revamp your space for weight loss success

Public health advocates know our environment, filled with processed foods and sedentary lifestyles, is largely to blame for America's obesity epidemic. That's why there's a big push to make the healthy choice the easy choice.

"We have a physiological drive for high-sugar, high-calorie foods," says Stephanie Rost, a registered dietitian with the Weight Watchers 360 program. "These are the foods that we're surrounded by, in an environment where it's OK to eat wherever and whenever you like."
“Once we took into account obesity, physical activity, and other factors contributing to type 2 diabetes, neither total sitting time, sitting at work or sitting at home but not watching tv were linked with developing diabetes.”
“The mineral content of plants is determined primarily by heredity. Mineral content may be affected by the mineral content of the soil, but this has no significance in the overall diet. If essential nutrients are missing from the soil, the plant will not grow. If plants grow, that means the essential nutrients are present.

Experiments for many years have found no difference in nutrient content of organically grown crops and those grown under standard agricultural conditions.”
Mellisa Williamson, 35, a Bullitt Avenue resident, worries about the effect on her unborn child from the sound of jackhammers.
MORE HEALTH FOOD THAN EVER BEFORE

Organic Everything
THE MCDONALDS DIET??
### Portion Distortion

<table>
<thead>
<tr>
<th>Activity</th>
<th>Calories 20 Years Ago</th>
<th>Calories Today</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting weights for 1 HOUR AND 30 MINUTES</td>
<td>332 Calories</td>
<td>590 Calories</td>
<td>257 MORE CALORIES</td>
</tr>
<tr>
<td>Coffee, 4 oz whole milk and sugar</td>
<td>45 Calories</td>
<td>350 Calories</td>
<td>305 MORE CALORIES</td>
</tr>
<tr>
<td>Walking 1 HOUR AND 20 MINUTES</td>
<td>500 Calories</td>
<td>850 Calories</td>
<td>350 MORE CALORIES</td>
</tr>
<tr>
<td>Playing golf (while walking and carrying your clubs) for 1 HOUR</td>
<td>350 Calories</td>
<td>525 Calories</td>
<td>525 MORE CALORIES</td>
</tr>
<tr>
<td>Vacuuming for 1 HOUR AND 30 MINUTES</td>
<td>210 Calories</td>
<td>500 Calories</td>
<td>290 MORE CALORIES</td>
</tr>
<tr>
<td>Housecleaning for 2 HOURS AND 30 MINUTES</td>
<td>55 Calories</td>
<td>275 Calories</td>
<td>220 MORE CALORIES</td>
</tr>
<tr>
<td>Washing a car for 1 HOUR AND 15 MINUTES</td>
<td>1,025 Calories</td>
<td>1,070 Calories</td>
<td>45 MORE CALORIES</td>
</tr>
</tbody>
</table>

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**Work**  **Entertainment**  **Family**  **Dynamic**  **Portion Sizes**
Restaurant industry food and drink sales in the United States from 1970 to 2016 (in billion U.S. dollars)
1970 US population 205 million
shy of 50% increase in population
2004 US population 292 million

Yet the industry didn’t grow by
50% or even 100%

It exploded by more than
1,000%
2004 RESTAURANT INDUSTRY FORECAST

EXECUTIVE SUMMARY

2004 Sales to Reach $440.1 Billion

The National Restaurant Association forecasts that restaurant-industry sales will continue to rise in 2004, reaching a record $440.1 billion and marking the 13th consecutive year of real sales growth for the industry.

The Association’s 2004 Restaurant Industry Forecast projects that rising industry sales—and Chief Executive Officer Steven C. Anderson.

On a typical day in 2004, the industry is expected to post average sales of more than $1.2 billion. The nation’s 878,000 restaurant locations provide employment for approximately 12 million people, almost 9 percent of the U.S. workforce. More than four out of 10 American adults report that they
THE IMPACT?

1970 obesity rate was 14.5%  
2004 obesity rate was 32.9%  
1970 Morbid Obesity rate was 1.3%  
2004 Morbid Obesity rate was 5.1%
WHY BOTHER?
EXERCISE, NUTRITION AND SLEEP

DO WHAT YOU WANT TO DO
WHEN YOU WANT TO DO IT
Independence for as long as possible, freedom, power, vitality, strength, stamina, better sleep, better s

Instead of just trying to Look younger, why not BE younger.

American spent $12.9 Billion in 2015 on plastic surgery
HAVE TO OVERCOME YEARS OF THINKING THAT EXERCISE, AND EATING HEALTHY WAS FOR LOOKING GOOD.

MANY PEOPLE THEN GROW OLDER AND DON’T SEE A NEED TO CARE FOR THE BODY PURPOSEFULLY.

A REBOOT OF THE MINDSET IS REQUIRED.

THE QUALITY OF THE REST OF YOUR LIFE WILL BE DICTATED BY THE CHOICES YOU MAKE NOW.
Regular Consistent activity and exercise substantially impact chronic degenerative conditions. Statistically significant decrease in relative risk of CVD and all cause mortality among highly fit and active. Good news! Largest benefit was from sedentary to next level of fitness.
One of the largest impacts on mortality is physical activity [4]. Those who are active ~7 hours per week have 40% lower risk of dying early death than those with <30 min a week.
HOW TO TAKE ALL YOU’VE LEARNED AND PUT IT TO WORK
Inside out approach
First

Proper relationship

Appreciation

CDC

Protective not punitive
A FEW THINGS TO AVOID…
A few things to avoid…

The Pursuit of Instant Gratification

All or Nothing Mentality
Letting slip ups turn

A few things...
Motivation

Methods - Balanced approach with purpose, multiple modalities

Models - Olga, Sonny, ???

Expectations
Freedom

Must work for you over a lifetime.

There will always be a hot new fad it’s the way of marketing. Do not succumb.
Don’t fight the battle alone.
NEVER TOO OLD TO PLAY
Challenge yourself and do something different

Get in THE GAMES!
Website Updates for 2017 will begin in January and continue into the spring. District dates and web pages will be updated as dates are confirmed. This will most likely occur in the spring. Thank you.

Welcome to the 37th annual Tennessee Senior Olympics State Finals, a sports competition for athletes 50 and older that combines a wide range of competitive activities. Residents from 10 District/Metropolitan areas across the state will be competing.

The dates for the 2017 State Finals are June 23 - 29, 2017 to be held in Williamson County, TN. Our golf tournament will be held on June 19 & 20, 2017 at Crag Course at Heatherhurst in Fairfield Glade, TN.

Our mission is to promote healthy lifestyles for seniors aged 50 and up, through fitness, sports, and an active involvement in life. Our programs contribute to the vision of healthy, active, and vital senior adults.

New & Events

TSO Calendar

TSO Calendar of Open Play and Practice Opportunities
National Senior Games Association
http://nsga.com

http://www.tnseniorolympics.com
“You are never too old to set another goal or to dream a new dream.”
C.S. Lewis
Find what activity you enjoy and just Move!
THANK YOU!!
STAY IN TOUCH

Dino@RenuHealthandFitness.com

www.facebook.com/RenuHealthandFitness
REFERENCES


