

*Live the Anti-Inflammatory Lifestyle.™*

**FUNDAMENTALS**



LIVE  
Ottawa Spring 2017

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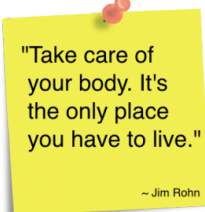
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"Take care of  
your body. It's  
the only place  
you have to live."  
~ Jim Rohn

Source: Relatably.com




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**Welcome To Class 4**

- Protein In Your Body
- Protein In Your Diet
- Relationships & Community






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## Review Week 3

- Dairy
  - Lactose vs. Casein
  - Allergenic and link to Immune Response
  - Beware of hidden dairy
  - Goodbye to Dairy
- Bone Broth
  - Healing and Nurturing
- Movement & Nature
  - Benefit of moving, sunshine, nature




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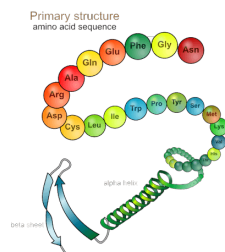
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## Protein in the Body




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## Non-Essential Amino Acids

- Amino Acids the **Body Can Make**:

- |              |             |
|--------------|-------------|
| – Alanine    | – Glutamine |
| – Asparagine | – Glycine   |
| – Aspartate  | – Proline   |
| – Cysteine   | – Serine    |
| – Glutamate  | – Tyrosine  |




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## Semi-Essential Amino Acids

- Amino Acids that are Conditional – **essential during time of illness and stress**

- |             |             |
|-------------|-------------|
| – Arginine  | – Ornithine |
| – Cysteine  | – Proline   |
| – Glycine   | – Serine    |
| – Glutamine | – Tyrosine  |




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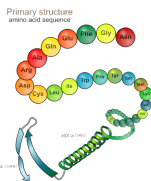
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## Role of Amino Acids

- Gives Structure and Shape
- Neurotransmitters
- Hormones
- Immune System
- Enzymes
  - Internal bio-chemistry
  - Involved in digestion and metabolism




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## Role of Amino Acids

- DNA – our genetic code
  - Made from protein
  - Contains blueprint how to build proteins for tissues and functions
- Transport Oxygen and Nutrients
- Healing and Repair
  - Illness
  - Injury
  - Surgery




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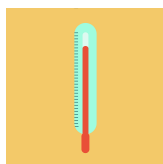
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## Protein Fact

- Proteins denature at high temperatures above 48 C/118 F
  - Why very high fever can be fatal




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## Protein Digestion

- From Other To Self
  - “Protein Digestion is about how “other” (a.k.a food) is taken apart in to anonymous *single amino acids* that are transported to your interior (via your gut lining) where they becomes part of you or “self”.




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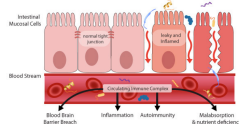
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## Protein Digestion

- If Not Properly Broken Down
  - Lack Amino Acids (a.k.a. building blocks)
    - Poor healing and performance
  - Damage Gut Lining and Trigger Immune Response
    - Allergy
    - Autoimmunity
    - Inflammation




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## Protein Digestion

- Chew in the mouth
- Churn in the Stomach + Digestive Secretions
  - Hydrochloric Acid (HCl) pH 1.5 – 3.5
  - HCl Triggers Pancreatic Enzymes and Bile
  - HCl Converts Pepsinogen to Pepsin
  - Pepsin Breaks Proteins in to Peptides




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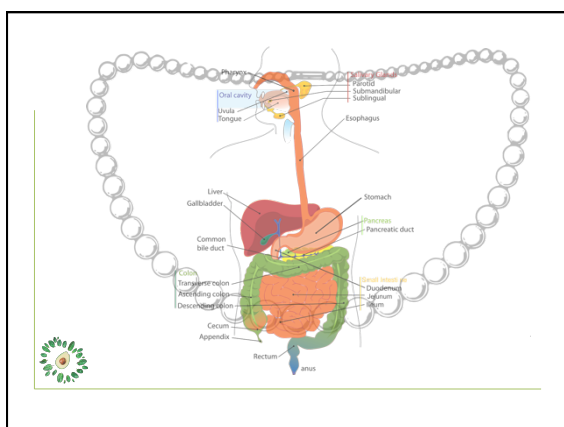
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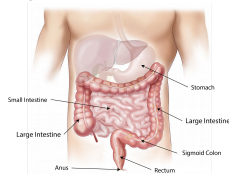
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## Protein Digestion

- Small Intestine
  - Break Peptides in to Single Amino Acids and ready to get absorbed




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## Protein Digestion

- Caution with Acid Blockers/Protein Pump Inhibitors (PPI)
  - Long term use may lead to deficiency of B12, Iron, Calcium, Magnesium, Zinc, Folate and Probiotics
- Don't stop, talk to your prescribing doctor




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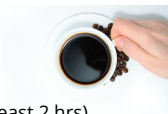
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## Protein Digestion

- May *not* be *too much* acid behind Heartburn
- A Relaxed LES (Lower Esophageal Sphincter) -> Heartburn or GERD (GastroEsophageal Reflux Disorder)
- Avoid foods that Relaxes or Irritates the LES
  - Coffee, Alcohol, Chocolate etc.
- With GERD or Heartburn avoid
  - Overeating
  - Lying down after eating (wait at least 2 hrs)




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## Protein Digestion

- Protein Digestion is **FUNDAMENTAL** for **Digestive** and **General Health**
- Ability to Produce Sufficient HCl is Essential and Declines after age 40
- Consider taking Digestive Enzymes with meals that contain HCl (and Bile)




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## How Much Protein?

- Controversial Topic
- Depends On
  - Activity Level
  - State of health
    - Recovery from injury or surgery
    - illness
  - Pregnancy and Nursing
  - Age
  - and more




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## How Much Protein?

- Signs You Need More Protein
  - Cravings and Need for Snacks
  - Muscle and Joint Pain
  - Slow Injury Recovery
  - Getting Sick Often
  - Fluid Retention
  - Hair, Skin & Nail Issues
  - Brain Fog




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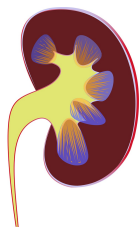
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## How Much Protein?

- Caution Getting Too Much Protein, especially if
  - Liver disease
  - Kidney disease
  - Gout
- Be Aware
  - “Silent” Liver Disease
    - Non-alcoholic fatty liver
    - Hep-C




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## How Much Protein?

- GOAL: **General Health & Longevity**
    - Not looking to change body composition
    - Sedentary
- 35-50% of body weight in lbs in grams**
- Ex. 160 lbs 56-80 grams of protein/day
  - Approx. 20-25 grams 3x/day




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## How Much Protein?

- GOAL: **Athlete OR Highly Active OR Burn Fat**
- 50-75% of body weight in lbs in grams**
- Ex. 160 lbs 80 - 120 grams of protein/day
  - Approx 25-30 grams per meal 4x/day




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## How Much Protein?

- GOAL: **Athlete OR Highly Active OR Build/Preserve Muscle and Burn Fat**

### 75-100% of body weight in lbs in grams

- Ex. 160 lbs 120 - 160 grams of protein/day
- Approx 30-40 grams per meal 4x/day




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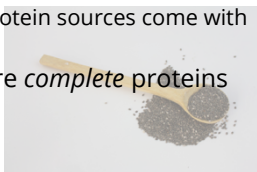
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## Complete Protein

- Contains all 9 essential amino acids
- Incomplete proteins combined
  - Ex. Beans and Rice
  - Vegetable based protein sources come with more carbs
- Quinoa and Chia are *complete* proteins




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## Arguments Against Too Much Protein

- Longevity
  - Caloric restriction linked to longevity
  - Excess protein may feed "bad" gut bacteria
- Requires a lot of energy to digest proteins
  - How strong is your digestive fire?




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## Protein in the Diet




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## Choosing Protein In Diet

- Animal Based Protein
  - Beef, Chicken, Lamb etc.
- Fish & Seafood
- Eggs & Dairy
- Nuts & Seeds
- Legumes incl. Soy




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## Protein Content

- 1 oz Meat/Chicken 7 grams protein
- 1 oz Fish 6 grams protein
- 1 Egg (large 50 gr.) 6 grams protein
- Legumes – Lentils 1 cup/198 gr. 18 grams protein
- Nuts & Seeds
  - 1 cup/143 gr. Almonds 30 grams protein
  - 1 cup/140 gr. Sunflower Seeds 29 grams protein




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## Protein Quality Matters

- Organic, Grassfed, Pastured and Wild vs. Feedlot, Caged and Conventionally Raised
- Diet and Environment of Animal Protein Matters
  - Ex. Grassfed Beef vs. Feedlot Beef very different fat profiles.
    - Anti-Inflammatory (omega-3) vs. Inflammatory (omega-6)
    - Not reflected in most media reports




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## Protein Facts

- Do not overcook to avoid denaturing the protein
- BBQ Meat -> HCA (heterocyclic amines) a carcinogen
  - Reduce HCA by marinating with herbs in mint family; rosemary, basil, oregano, mint, thyme etc.
- Protein Converts to Sugar on Low Carb Diet "glucogenesis"/Ketosis




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## Supplementing Protein

- Protein Powders
  - Whey
  - Soy
  - Pea
  - Rice
  - Hemp
  - Beef
- And more...




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## Supplementing Protein

- Careful with Protein Bars, often high in Sugar and Additives.
- Caution with Protein Powders you have Allergy or Sensitivity to.

For Quick & Portable Protein on the go eat nuts, nut butters, seeds, seed butters, cold meat, sardines etc.




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## Supplementing Protein

- Free Form Amino Acids
  - Pre-digested for easy absorption
- Branched Chain Amino Acids
  - Leucine, Isoleucine and Valine
  - Targets muscles




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## Supplementing Protein

- Targeted Amino Acid Therapy
  - Neurotransmitter imbalances
  - Caution: work with a practitioner




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## Protein Intake

- If you decide to Increase Protein intake do so Slowly over several weeks
  - Give body time to produce more enzymes needed to break down and excrete excess protein
  - Increase water intake to excrete waste




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## Protein Common Sense

- *"Eat the Protein you need to support your level of activity, state of health, weight and health goals, but no more since your body must work hard to digest and excrete excess protein."*




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## Relationships & Community




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## Inner Circle

- Life Partner
- Children



- Siblings
- Parents
- Close Friends

- Our most potentially challenging and rewarding relationships
- Opportunity for personal growth and presence




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## Social Circles

- Friends
- Work
- Sports
- Hobbies and Interests
- Religious/Spiritual Community
- Community Engagement/Activism




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## Your Social Type

- There is no "one-size" fits all
- Are You Extrovert?
  - Recharges with others
- Are You Introvert?
  - Recharges alone
- Prefer Large or Small Groups?




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## Single Serve Society

- Trend towards “single serve/self serve society” – less opportunity for interaction
- More people live alone than ever before




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## Single Serve Society

- Social Media Connections vs. Real World Connections
  - Let Social Media -> Real World
- Social connections through Life Stages
- Alone vs. Lonely




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## Community

- We have evolved within a community and it has been essential to our wellbeing, safety and survival
- Lack of a supportive network is more damaging than smoking 15 cigarettes per day




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## Community

- Get engaged and find your tribe
  - Honour your style of interacting
  - BUT don't lose yourself in the tribe
- Focus on Positive Communities/ Sisterhoods
- Rewarding Relationships & Community Involvement are essential for vital health and wellbeing




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## Community

"A community is a group of people bound together by gifts and stories."  
~ Charles Eisenstein




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## Next Class

- Fat in Your Body
- Fat in Your Diet
  - The Good, the Bad, the Ugly
- [Home] Environment




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