“Food is about pleasure, about community, about family and spirituality, about our relationship to the natural world and about expressing our identity.”

Michael Pollan

So where does the UCD diet fit?
Why are foods excluded from the diet? (purpose of the diet)

Reduction of nitrogen waste

Where do we get this waste?

Protein

Where do we get this protein?

Major Fuel Sources for the body

Sugar, Fat, Protein, Alcohol
Keeping things in balance

Calories “In”
Formula & Food

Work done by body

Calories “Out”

Which foods are excluded from the diet?
All high protein foods!

What is left?

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Common Questions – 1st asked

Where is the protein in the diet?

Couldn’t I just follow a vegetarian diet?

Don’t we need meat?

My UCD Plate

Vegetables

Low Protein Starch

Protein

Fruit

My UCD Plate

Vegetables

Low Protein Starch

Special Formula

Fruit
**UCD Formulas - How are formulas chosen?**

- What is the age of the child or adult? (feeding skills)
- What are the calorie needs?
- What are the protein needs?
- How good is the appetite?

**UCD Formulas - How are formulas chosen?**

- Formulas for Infants
- Few "non-formula" foods are used
- Many "non-formula" foods are used

**Questions We All Have**

*But we are afraid to ask?*

Must we use formula?

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4 year old female carrier OTC

**Breakfast**
- ½ cup corn flakes
- ½ banana
- 4 oz orange juice

**Lunch**
- ¼ cup white rice
- ½ cup carrots
- 4 oz orange juice

**Dinner**
- ½ cup broccoli
- ½ cup mashed potatoes
- 4 oz apple juice

1712 calories
22.6 grams protein

Snacks
- 20 Gold Fish Cracker
- 1 small orange
- 15 cheetos

**Typical Diet**

- 1712 calories
- 22.6 grams protein

Analysis of Amino Acid Content

<table>
<thead>
<tr>
<th>Amino Acid</th>
<th>mg</th>
<th>% Requirement</th>
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<tbody>
<tr>
<td>Tryptophan</td>
<td>11.79</td>
<td>10%</td>
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<tr>
<td>Threonine</td>
<td>19.65</td>
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<tr>
<td>Isoleucine</td>
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<td>Leucine</td>
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<tr>
<td>Lysine</td>
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<tr>
<td>Methionine</td>
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<tr>
<td>Phenylalanine</td>
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<tr>
<td>Histidine</td>
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<tr>
<td>Valine</td>
<td>52.4</td>
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</table>

**Poor Protein Quality**

Analysis of Amino Acid Content

<table>
<thead>
<tr>
<th>Amino Acid</th>
<th>mg</th>
<th>% Requirement</th>
</tr>
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<tbody>
<tr>
<td>Tryptophan</td>
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<tr>
<td>Threonine</td>
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<tr>
<td>Lysine</td>
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<tr>
<td>Methionine</td>
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<tr>
<td>Phenylalanine</td>
<td>1540.6</td>
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<tr>
<td>Histidine</td>
<td>379.26</td>
<td>119%</td>
</tr>
<tr>
<td>Valine</td>
<td>1030.3</td>
<td>184%</td>
</tr>
</tbody>
</table>

Adding 2 grams protein from formula
Must I have medical foods?

Medical Foods can Make A HUGE Difference in Your Health

Breakfast

413 calories
13 grams protein

506 calories
3.6 grams protein
High Protein
- 8 ounces whole milk (8 grams protein)
- 1 cup cheerios (3 grams protein)
- 1 medium banana (1.2 grams protein)
  Total: 12.2 grams protein

Moderate-High Protein
- 8 ounces whole milk (8 grams protein)
- 1 cup cheerios (3 grams protein)
- 1 medium banana (1.2 grams protein)
  Total: 5 grams protein

Moderate Protein
- 8 ounces mocha mix (0.8 grams protein)
- 1 cup cheerios (3 grams protein)
- 1 medium banana (1.2 grams protein)
  Total: 5 grams protein

Very Low Protein
- 8 ounces mocha mix (0.8 grams protein)
- 1 cup Froot loops (1.4 grams protein)
- 1 medium banana (1.2 grams protein)
  Total: 3.4 grams protein

Let's place them in order:

High Protein
- 8 ounces whole milk (8 grams protein)
- 1 cup cheerios (3 grams protein)
- 1 medium banana (1.2 grams protein)
  Total: 12.2 grams protein

Moderate-High Protein
- 8 ounces whole milk (8 grams protein)
- 1 cup cheerios (3 grams protein)
- 1 medium banana (1.2 grams protein)
  Total: 5 grams protein

Moderate Protein
- 8 ounces mocha mix (0.8 grams protein)
- 1 cup cheerios (3 grams protein)
- 1 medium banana (1.2 grams protein)
  Total: 5 grams protein

Very Low Protein
- 8 ounces mocha mix (0.8 grams protein)
- 1 cup Froot loops (1.4 grams protein)
- 1 medium banana (1.2 grams protein)
  Total: 3.4 grams protein
Let's place them in order.

Which is higher in protein?

- 1 cup = 44 grams
- 2 oz = 17 grams
- 3 cup = 52 grams
- 1 ear = 4.4 grams
- ½ cup = .5 grams
- 1 = 1.2 grams
- ½ cup = .4 grams

Find a formula.

Remove high protein food items.

Increase fruits and vegetables.

Replace starches with low protein items.

Develop food menus with meat alternatives.

Starting the Diet as an Adult

Infant to Toddler Diet

Fruits and Vegetables

Low Protein Foods and Starches

Rice Cereal

Formula
How do we improve the UCD diet?

- Excellent Vitamin D Source
- Smart Fats
- Deep Color Fruits & Veggies
- Probiotics

Omega 3 Fatty Acids

- Numerous products on the market
- Numerous products on the market

Eicosanoids Have Different Effects

- A group of hormone-like compounds
- Regulates:
  - blood pressure, childbirth, clotting, immune responses, inflammatory responses, & stomach secretions
- Omega-6 eicosanoids; Arachidonic acid
  - increase blood clotting
  - increase inflammatory responses
- Omega-3 eicosanoids; DHA, EPA
  - decrease blood clotting
  - reduce heart attack
  - excess may cause hemorrhagic stroke
- Eicosanoids have different effect on different tissues
**Power Food**

*(keeping a healthy gut track)*

- Prebiotic food sources:
  - artichokes
  - bananas
  - garlic
  - onions
  - asparagus
  - leeks
  - asparagus

- Probiotic food sources:
  - fermented milk products
  - yogurts with added probiotics
  - fermented soy products
  - supplements

**Power Nutrient**

*(vitamin D – the sunshine vitamin)*

- Strong bones
- Supports immune system

Infants
  - 0 - 12 months: 400 IU (10 mcg/day)

Children
  - 1 - 3 years: 600 IU (15 mcg/day)
  - 4 - 8 years: 600 IU (15 mcg/day)

Older children and adults
  - 9 - 70 years: 600 IU (15 mcg/day)
  - > 70 years: 800 IU (20 mcg/day)

**USDA Super Foods**

- Wild blueberries
- Blueberries
- Cranberries
- Artichoke hearts
- Blackberry
- Pluots
- Blackberries
- Strawberries
- Red Delicious Apple
- Granny Smith Apple
- Sweet Cherry
- Black Pears
- Basset Pears
- Pears
- Gala Apple

**New Super Foods**

- Chia seeds
- Hemp protein powder
- Seaweed
- Dates
- Chili Peppers

**Super UCD Foods**

- colorful
- Hot
- Bitter
UCD Diets
Part of our Global Community

What are people eating around the world?

UCD Diet Project
What are you eating?
Send a picture or two which shows “what you are eating.”
Send to UCDdiet@nucdf.org
Thanks
Thank you for inviting me into your community.