**COOKING FROM *BLUE MOON VEGETARIAN***

**Feb. 3, 2014 Session 2**

**HEMP SEED AND HEMP PROTEIN**

* **One of the things we all have to be concerned about, whether we are vegan, vegetarian, or omnivore, is how to get enough *complete* protein which is normally derived from meat sources or a mix of grains and legumes.**
* **As long as all 9 essential amino acids (those that the body cannot produce on its own) are consumed at some point in the day, the body can do what it needs to.**
* **Hemp seed contains all the essential amino acids and fatty acids. No other single plant source contains these major construction blocks of the human anatomy in such an easily digestible form.**
* **Hemp seed is also a strong source for linoleic acid (LA) and linolenic acid (LNA), which are essential fatty acids (EFAs).**
* **EFAs govern growth, vitality, and state of mind. LA and LNA are involved in transferring oxygen from the air in the lungs to every cell in the body.**
* **They play a part in holding oxygen in the cell membrane where it acts as a barrier to invading viruses and bacteria, neither of which can thrive in the presence of oxygen.**
* **The bent shape of the essential fatty acids keeps them from dissolving into each other.**
* **They are slippery and will not clog arteries like the sticky straight-shaped saturated fats and the trans-fatty acids in cooking oils and shortenings that are made by super-heating polyunsaturated oils during the refining. (This is why cold-pressed oils are superior and preferable.)**
* **LA and LNA possess a slightly negative charge and have a tendency to form very thin surface layers. This property is called surface activity, and it provides the power necessary to carry substances such as toxins to the surface of the skin, intestinal tract, kidneys, and lungs where they can be removed.**
* **Although they are important and necessary to human health, the body does not produce them, so we have to ingest them.**
* **Gamma-linolenic acid (GLA) is an EFA in the omega-6 family and is found naturally in only a few food sources: hemp seed, black currant oil, borage oil, and evening primrose oil.**
* **The average North American diet tends to have too much omega-6 fatty acids compared to omega-3 fatty acids, because the body also converts GLA from LA, which is plentiful in cooking oil and processed foods.**
* **For optimum health, the ratio of omega-6 to omega-3 fatty acids should be between 1:1 and 4:1.**
* **The typical North American diet is usually in the range of 11:1 to 30:1.**
* **This imbalance contributes to the development of long-term diseases such as heart disease, cancer, asthma, arthritis, and depression as well as increased risk of infection.**
* **Hemp seed oil is 55% LA and 25% LNA, or a ratio of 2.2:1; however, not all omega-6 fatty acids have the same effect on the body.**
* **Linoleic acid (not to be confused with alpha-linolenic acid, which is in the omega-3 family) and arachidonic acid (AA) promote inflammation, thereby also increasing the risk of disease, especially when consumed in excess.**
* **In contrast, GLA actually reduces inflammation. GLA from the oils mentioned above or taken in supplement form is not converted to AA, but rather to dihomo-*gamma-*linolenic acid or DGLA.**
* **DGLA competes with AA and prevents the negative inflammatory effects that AA would otherwise cause.**
* **Having adequate amounts of certain nutrients in the body (including magnesium, zinc, and vitamins C, B3, and B6) helps promote the conversion of GLA to DGLA rather than AA, all of which hemp seed contains in significant quantities.**
* **One of the other unique things about hemp seed protein is that 65% of it is globulin edestin (from the Greek edestos or ʺedibleʺ).**
* **Globulins are proteins which perform many enzymatic processes including protein synthesis and fat burning.**
* **Globulin edestin is the most readily digestible form of protein.**

**Phil's Daily Hemp Shake (Vegetarian Version)**

**2 bananas or other fruit to equal 2 cups**

**2 heaping tablespoons hemp powder**

**3 heaping teaspoons plain yogurt**

**1/2 cup (or so) fruited kefir**

**1/2 cup (or so) orange or other juice**

**1/2 cup (or so) sparkling water (we like San Pellegrino)**

**In a blender, chop bananas or other fruit. Add hemp powder, plain yogurt, fruited kefir, orange or other juice, and sparkling water. Adjust the ingredients to suit individual taste. Makes approximately two 16-ounce servings.**

**Phil's Daily Hemp Shake (Vegan Version)**

**2 bananas**

**½ cup frozen blueberries**

**½ cup frozen cherries**

**3 heaping tablespoons hemp powder**

**½ cup plain coconut milk yogurt**

**½-1 cup coconut milk**

**1 cup (or so) sparkling water (we like San Pellegrino)**

**2 medium-sized leaves of kale, washed and massaged\***

**In a blender, process fruit, coconut milk, and kale. Add hemp powder and plain yogurt. Blend until smooth. Add enough sparkling water to make 32 ounces. Adjust the ingredients to suit individual taste. Makes approximately two 16-ounce servings.**

**\*To massage kale, simply twist and bend for a few moments. This softens the texture.**