



Series of Publications

Perfect Protein¹

Carbohydrates, Proteins and Fats are the three main sources of nutrients in our diet. *All three are essential in their correct proportion and need to be consumed daily.* The following is a general guide, please speak to a [Nutrition specialist](#) for more information.

Protein gives you:

- Healthy and strong muscle, bones, skin and blood
- Balances hormones, nervous system and immune system
- Key components for chemical reactions in the body
- Energy – eating protein with every meal gives longer lasting and more even energy (see Glycaemic Index)

Benefits of Protein

Weight Balance - Including a small portion of protein food with every meal helps you feel satisfied so you eat less and gives you longer lasting energy and takes away the need for sweet cravings and gives you more strength and energy to exercise.

Remember: *the first step to healthy weight is a balance of fresh, whole foods and exercise. Seek professional guidance to find your correct balance.*

Glycaemic Index - Protein foods are low GI which means better health for you through a better balance of blood sugar levels.

Strength and Endurance – muscle and bone tissue use protein for growth and repair. When you exercise the requirements for protein are greater. As protein slows digestion, the body utilises the energy from foods slower and allows for a better and more efficient use of energy stores.

This handout focuses on protein foods. Your body needs carbohydrate foods such as fruit and vegetables, lots of water and a small amount of oils with protein foods every day. Too much protein can cause illness and a balance of fresh whole foods is important.

A cautionary note: with any change of diet it is important that you seek Professional Advice.

Long term high protein diets can lead to:

- Liver and kidney stress
- Constipation (animal protein excess)
- Overweight and Obesity
- Dehydration and Water and electrolyte imbalance

Long term low protein intake can lead to:

- Loss of strength and bulk of muscle
- Poor or retarded growth in children
- Anaemia, lower immune function and poor wound healing
- Lower energy, mood changes, depression
- Fluid retention, bone and teeth problems

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How much Protein?

If you eat more protein than your body can digest, the excess turns to fat. A general rule of eating protein is to eat as much in one meal that fits into the palm of your hand.

In a day (as a guide) you should consume 1g of protein per kg of body weight. For example a 55kg woman should consume around 55g of protein – check the labels and see how much you are consuming.

If you are training the range goes up to 1.2g per kg of body weight. ***As the protein intake rises so should the water levels.***

Sources of Protein

Animal sources are any part of the animal that is consumed including the flesh, marrow, organs and any part that is produced by the animal such as eggs and milk products.

Plant sources of protein range in protein quality and include Legumes, Grains, Nuts, Seeds and Spouts:

Legumes include beans, peas and lentils. Grains (should be wholegrain as processing destroys the quality) are wheat, rice, barley, oats, amaranth, quinoa, etc.

Nuts include almonds, brazil nuts, cashews, walnuts and should be purchased raw and unsalted. Nuts contain good oils that can easily go rancid – the fresher the better.

Seeds include sesame seeds, sunflower seeds, pumpkin seeds (pepitas), flaxseeds/linseeds

Sprouts include alfalfa, mung bean, soybean, bean shoots – any seed can sprout

A note on Dairy foods

Cow or dairy milk and cheese are good sources of protein and calcium providing that it can be absorbed correctly. If you have any reactions or concerns with dairy milk, **seek medical advice for proper diagnosis.**

Yoghurt has added benefits of beneficial bacteria. The beneficial bacteria results from the process of fermenting the milk and is needed for proper gut function.

Dairy Milk Alternatives: Soy, rice and oat milks ARE NOT dairy milk nutritional alternatives. They are white, creamy drinks that can be used in cooking or cereals but do not provide the same protein, calcium and B vitamins as milk. Soy milk should not be given to infants under 18 months.

Digesting Proteins

Protein foods need to be denatured (broken down) before humans can consume and digest them. An example of this in food preparation is in marinating and cooking.

Animal sources of proteins are easier to absorb. However, humans need to limit animal protein foods because too much of these foods can damage the kidneys and liver, cause heart disease and put the body out of balance. Plant sources of protein are harder to digest because they are encased in a strong shell and require more preparation such as soaking and boiling.



Mixing Plant Proteins

Animal sources of protein have the complete essential amino acids that we need to consume daily. Plant sources do not. A way to get around this is by mixing the plant sources.

As an example, grains (such as oats, wheat, rice) are higher in some proteins and legumes (such as soybeans, chickpeas, lentils) are higher in other proteins. Therefore mixing grains and legumes in a meal will increase the amino acid availability. Mostly vegetarian cultures such as the Middle Eastern, Indian and Asian cultures do this effectively. Studies have shown that these traditional diets of mostly plant foods and including beneficial oils increase health, energy and lifespan over the western diet.

Examples of mixing plant proteins are

- hommos (chickpeas and sesame seeds) dip with bread or crackers
- dahl (lentils) and rice and/or pappadams
- tofu (soy beans) and rice
- split pea and lentil soup with croutons
- felafel and Lebanese bread

The table below shows the availability of essential amino acids in certain foods

Amino Acids in Protein Foods

Essential Amino Acids (required daily)	Animal products e.g. red meat, white meat, fish eggs, animal milk	Legumes e.g. Lentils, beans and chickpeas	Wholegrains e.g. brown rice, whole wheat, rye, oats	Nuts, seeds, soybeans
Methionine	✓✓	✓	✓✓	✓
Isoleucine	✓✓			
Leucine	✓✓			
Lysine	✓✓	✓✓	✓✓	✓✓
Phenylalanine				
Threonine	✓✓	✓✓	✓	✓✓
Tryptophan		✓		
Valine	✓✓			

✓✓ indicates a good source ✓ indicates a small quantity

Sourced from Krause's Food, Nutrition & Diet Therapy 10th Edition. L. K Mahan & S Escott-Stump. WB Saunders Company. 2000.

For More Information

The information from this fact sheet has been summarised from the Protein booklet, **How to maintain A Good Mood and Healthy Weight with Perfect Protein**. To obtain a copy of the booklet that includes recipes and more information, donate at least \$2 to a registered charity, send a copy of the receipt (the receipt needs to be dated within 2 weeks of posting) and a C5 size self addressed envelope to:

A Guide to Health
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Further Reading

- How to maintain a Good Mood & Health Weight with Perfect Protein. Tania Smith, A Guide to Health. 2004
- Allergy information: <http://www.allergy.org.au>
- Diet for a Small Planet. Frances Moore Lappé. Ballantine Books. 1991. Website: <http://www.smallplanetinstitute.org>
- Healing with Whole Foods. Paul Pitchford. North Atlantic Books. 2002.
- www.ianrpubs.unl.edu. This is the website of the University of Nebraska Lincoln. This site contains excellent nutrition information papers written in easy to understand text.
- The Low GI Diet and The GI Factor and The Glucose Revolution. J Brand-Miller. Hodder Headline Aust.

ⁱ This handout is written and collated to offer you general nutritional guidelines and encourage you to seek advice and knowledge to obtain balance, health and wellbeing. Copyright © 2004 by Tania Smith. All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means without written permission from the author, Tania Smith of A Guide to Health (I want to know where my work is going).

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