

## **COELIAC DISEASE & REFLEXOLOGY**

“No bread, you must be joking”! “What am I going to eat”? That was my initial reaction to being diagnosed with coeliac disease. Later when my daughter was also diagnosed with coeliac disease I became interested in finding out how reflexology could be used to help coeliacs by examining what coeliac disease is and its affects on the body, outlining the current treatments and the role of diet in the treatment of celiac disease and by determining what benefits reflexology could have to offer in the life-long management of the disease. This will be achieved through research and the treatment of my clients with coeliac disease.

### **COELIAC DISEASE DEFINED**

#### **History**

Attempts to define coeliac disease date back as far as the 2<sup>nd</sup> century AD, when Aretaeus the Cappadocean gave the first acceptable description, focusing on the characteristic stool, containing large amounts of fat due to malabsorption.

Vincent Ketelaer a Dutch physician in 1669 gave an account in his book of a diarrhoeal illness, and John Bricknell in his book in 1737 mentioned patients suffering from “white flux”. Both of these authors may well have been describing coeliac disease.

Samuel Gee is credited for his research into coeliac disease, published in his classical paper, “On the Coeliac Affection” in 1888. He described the features with remarkable accuracy and was the first to suggest that if patients could be cured, it would be by diet.

In 1924 Haas recommended his famous banana diet which was used for many years until the introduction of the gluten free diet. It was not until the late 1940’s that Willem Dicke made the link between bread and the causation of coeliac disease. A significant breakthrough came in 1956 when Margo Shine developed a method whereby biopsies of the jejunum could be safely obtained by the oral route, enabling the effective diagnosis of coeliac disease.

#### **What is Coeliac Disease**

Coeliac disease is an autoimmune disorder of the small bowel that occurs in genetically-predisposed individuals. It is a life long condition that is caused by a substance called gluten that is found in wheat and other grains. Upon exposure to gluten, the body’s immune system cross-reacts with the enzyme tissue causing flattening of the villi lining the small intestine, which interferes with the absorption of nutrients. The only effective treatment is a diet free of gluten.

#### **Causes**

While the exact cause is unknown, there is clear evidence of a genetic factor. It is thought that while people may have the genes to get coeliac disease, they may not necessarily develop the disease. This is because the gene needs to be “switched on” before the disease develops, i.e. stress on the body, pregnancy or viruses.

#### **Statistics**

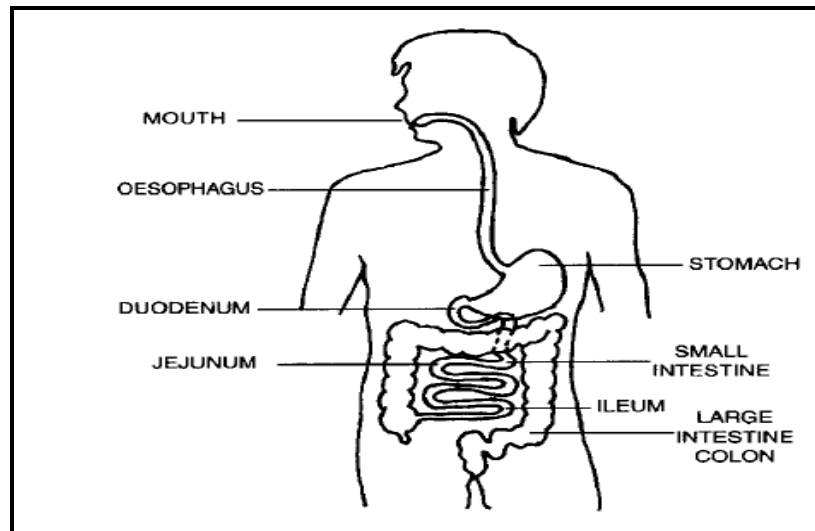
Coeliac disease is more common than people think. Lack of awareness of the conditions means that many people are never diagnosed. Ireland has one of the highest prevalence of coeliac disease in the world. The latest figures which are the results of tests carried out by AOECS, the European umbrella group for coeliac throughout Europe, show the incidences of gluten intolerance in Ireland is estimated to be 7 per 1000 of the population.

## ANATOMY OF THE DIGESTIVE SYSTEM RELATED TO COELIAC DISEASE

### **The Small Intestine**

The small intestine is the part of the digestive system just below the stomach that consist of the DUODENUM , the JEJUNUM and the ILEUM, as outlined in the first diagram in Figure 1. The cavity of the gut is called the LUMEN.

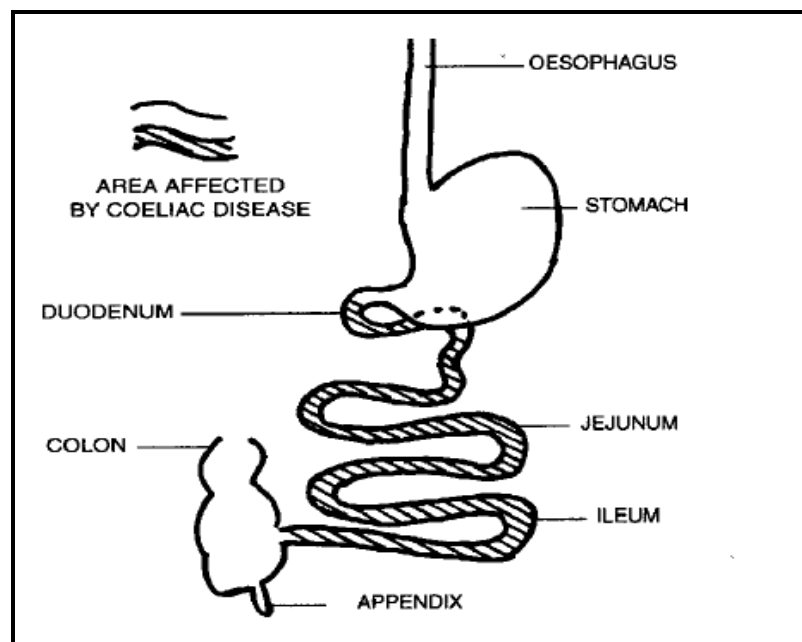
### **THE DIGESTIVE SYSTEM**



**Figure 1.**

Source: Coeliac Society of Ireland

The areas of the small intestine affected by coeliac disease are outlined in Figure 2. This region is where most of the food eaten is broken down into tiny particles which are then absorbed into the blood to provide the energy and nutrients for a healthy body.



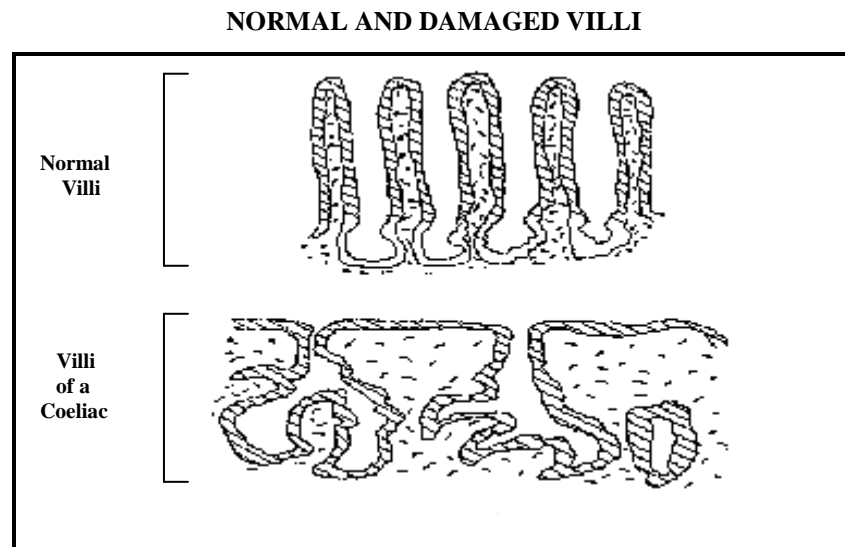
**Figure 2 .**

Source: Coeliac Society of Ireland

**The Villi**

The layers of cells which line the small intestine are known as the MUCOSA. The mucosa consists of thousands of finger-like projections called VILLI through which absorption takes place.

In the non-coeliac intestine the villi are healthy and in close contact with the food. In the untreated coeliac the villi are damaged and disappear, leaving a flattened surface to the mucosa, as outlined in Figure 3.



**Figure 3.** Source: Coeliac Society of Ireland

When the villi are severely damaged or absent the condition is known as VILLOUS ATROPHY. When a strict gluten free diet is begun the villi begin to grow. In children the villi regrow in a few months, whereas in adults they may take many years to recover, although symptoms begin to improve within days or weeks.

**CONVENTIONAL TREATMENT FOR COELIAC DISEASE**

**Symptoms of Coeliac Disease**

Coeliac disease is very difficult to diagnose, virtually no two coeliacs have the same case history. The spectrum of symptoms for coeliac disease are wide-ranging as outlined in Table 1, and poses a challenge for doctors as they can point to hundreds of different conditions, some not very serious and others life-threatening.

**SPECTRUM OF CLINICAL SYMPTOMS**

Age Groups	Symptoms
INFANCY < 2 Years	Diarrhoea Vomiting Anaemia Cranky Bloated Belly Wasted Buttocks
CHILDHOOD 2-16 Years	Poor Growth (small for age) Delayed Puberty Anaemia Osteomalacia

	Diarrhoea Lethargy Mouth Ulcers
ADULTS	Short Stature Anaemia (esp. in pregnancy) Osteoporosis Dyspepsia Weight Loss Mouth Ulcers Diarrhoea Infertility Dermatitis Herpetiformis Tetany Hypoproteinaemia

**Table 1.** Source: Coeliac Society of Ireland

### **Diagnosis**

Screening tests for coeliac disease include a simple blood test that the G.P. can do. If positive, a referral to a consultant will be made, and an endoscopy will be arranged, this is where a small section of the lining of the bowel is taken and examined under the microscope.

### **Treatment**

Once a person is diagnosed they will usually follow a gluten-free diet for the rest of their lives. They will see a dietician and gastroenterologist initially and are then released into the care of their G.P.

Yearly blood tests will be carried out for:

- Gluten antibodies
- Haemoglobin
- Folic Acid
- Vitamin B12

A dexta test is also advisable to determine if osteoporosis is present due to the malabsorption of calcium and advice is given depending on the outcome.

In children of a coeliac family it is advisable not to introduce gluten before 1 year old as this will lead to later development of symptoms, the delay won't prevent the disease in an at risk child, but will allow the rapid growth of the brain and maturation of the defense system in the intestine which occurs in the first year of life.

### **Research**

To date only one of the genes which is important in causing susceptibility to coeliac disease has been identified "HLA-DQOZ." The discovery of this gene is of the utmost importance. In the last number of years it has been demonstrated that chromosome 5 definitely contains such a gene. Other genes on chromosomes 2, 11 and 19 are also suspected. Recent results have also pinpointed the offending material in wheat, it may be possible in future to alter these materials resulting in wheat that is safe to eat.

## **LIVING WITH COELIAC DISEASE**

### **Dietary Information**

Healthy eating is essential for coeliacs particularly when starting the gluten free diet, getting enough of the right foods can help them get better, especially calcium, fibre, iron and B vitamins which are importance treatments for osteoporosis, anaemia and vitamin deficiency. Dieticians can provide information and advice on following a well balanced diet.

Gluten free foods are often higher in fat and sugar and low in the type of fibre that comes from grains so high-fibre foods such as brown rice, jacket potatoes, pulses and nuts should be eaten.

Cross contamination with gluten can occur in the production of many foods and the smallest amount of gluten will produce symptoms in sufferers. The best advice is if foods are not labeled as gluten free not to eat them.

### **Dietary Management**

The advent of the internet has widely increased the access coeliacs have to sources of information. Like most countries Ireland has its own coeliac society which maintains a website [www.coeliac.ie](http://www.coeliac.ie) which is a valuable source of information. The societies all provide information on the latest research, all produce books with details of gluten free products and produce gluten free cook books which all aid the coeliac ability to manage their condition.

### **Awareness is Key**

Awareness of a few simple facts is the key to a coeliac living a full and health life:

- A minute amount of gluten from a crumb or drop of sauce is enough to damage the intestine even without any reaction.
- Be vigilant in checking ingredients as manufactures can change them at any time. If you are in doubt contact the coeliac society rather than the company.
- Be careful of cross contamination of gluten-free food when eating out, (from serving spoons to cooking oil). Catering staff may believe it is simply a problem with flour.
- Hidden gluten is the biggest problem for coeliac so always refer to the up-to-date food list to ensure a product is gluten free

## **THE SOCIAL IMPACT**

### **Lifelong Diet**

The lifelong diet can be difficult and socially troublesome, especially in young patients, but it is crucial in order to avoid serious health consequences. Teenagers in particular occasionally rebel against the dietary strictures and suffer relapses or complications as a result.

### **Difficulties Associated with the Diet**

It is easy for coeliacs to think they have removed all gluten from their diets, but to continue to consume one product they do not associate with gluten, cheese is an example of a product many would not associate with gluten and it can undo all the good work achieved through the diet.

## **Social Isolation**

While the diet is strict and the effects of the disease are serious, the problem can be social isolation, with coeliacs afraid to become involved in normal life. Parties can be difficult, weddings hard, holidays awkward, meals eaten out a nightmare and travel made more stressful. It is too easy for the coeliac to withdraw from these normal activities. It is important for newly diagnosed coeliacs to ensure they do get involved in social activities and are not afraid to “make a fuss”.

## **The Eucharist**

The Christian Sacrament of the Eucharist presents a unique challenge for Christians, many churches permit the use of gluten free wafers, while others do not allow them. Most coeliacs will just partake of the wine which is acceptable in the Catholic Church.

## **Coeliac Disease and Reflexology**

Reflexology in conjunction with a gluten free diet is an effective way of treating coeliac disease. A course of treatment is advisable to start with, then, the occasional treatment as the person feels the need to maintain good health. Reflexology is effective in reducing stress and balancing the body enabling it to heal itself.

## **Research**

During my research into reflexology and coeliac disease I visited such sites as:

- [www.reflexology.org](http://www.reflexology.org)
- [www.reflexology.ie](http://www.reflexology.ie)
- [www.reflexology-research.com](http://www.reflexology-research.com)
- [www.wikipedia.org](http://www.wikipedia.org)

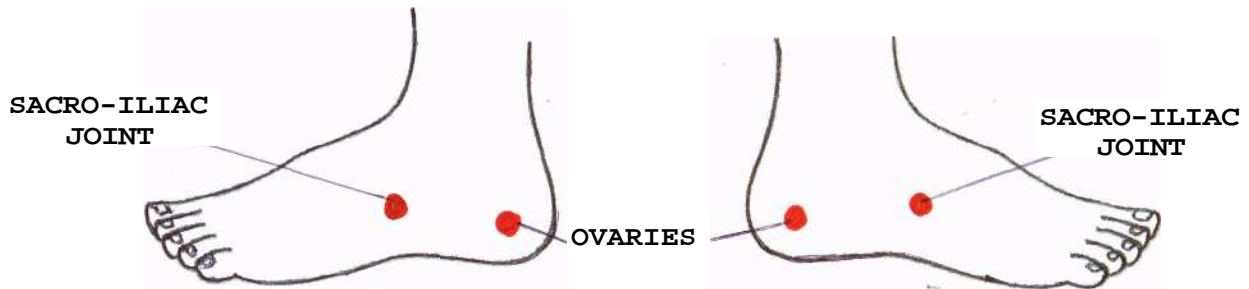
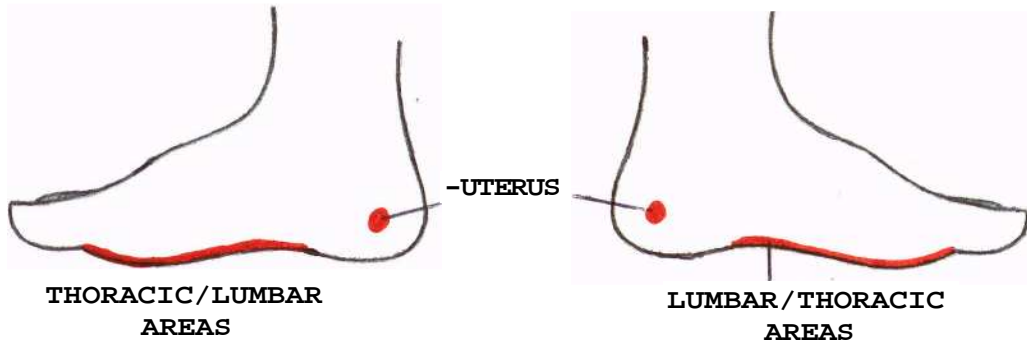
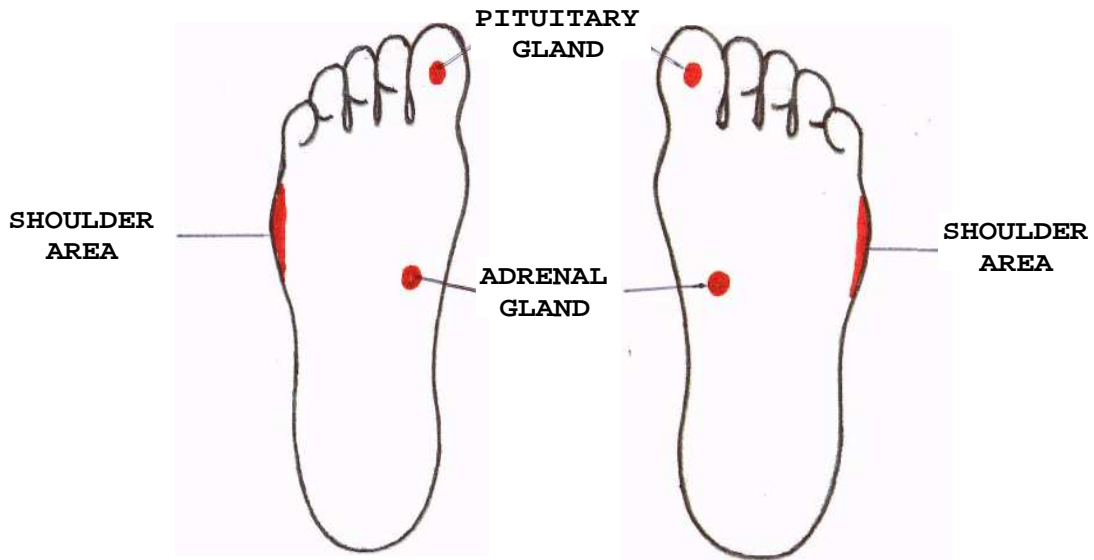
I found no reference on any site to coeliac disease and reflexology which proves that further research is needed in the future.

My own research was through case studies on my clients, while the sample was very small it was interesting to observe that both had very similar problem areas as outlined in foot charts 1 and 2.

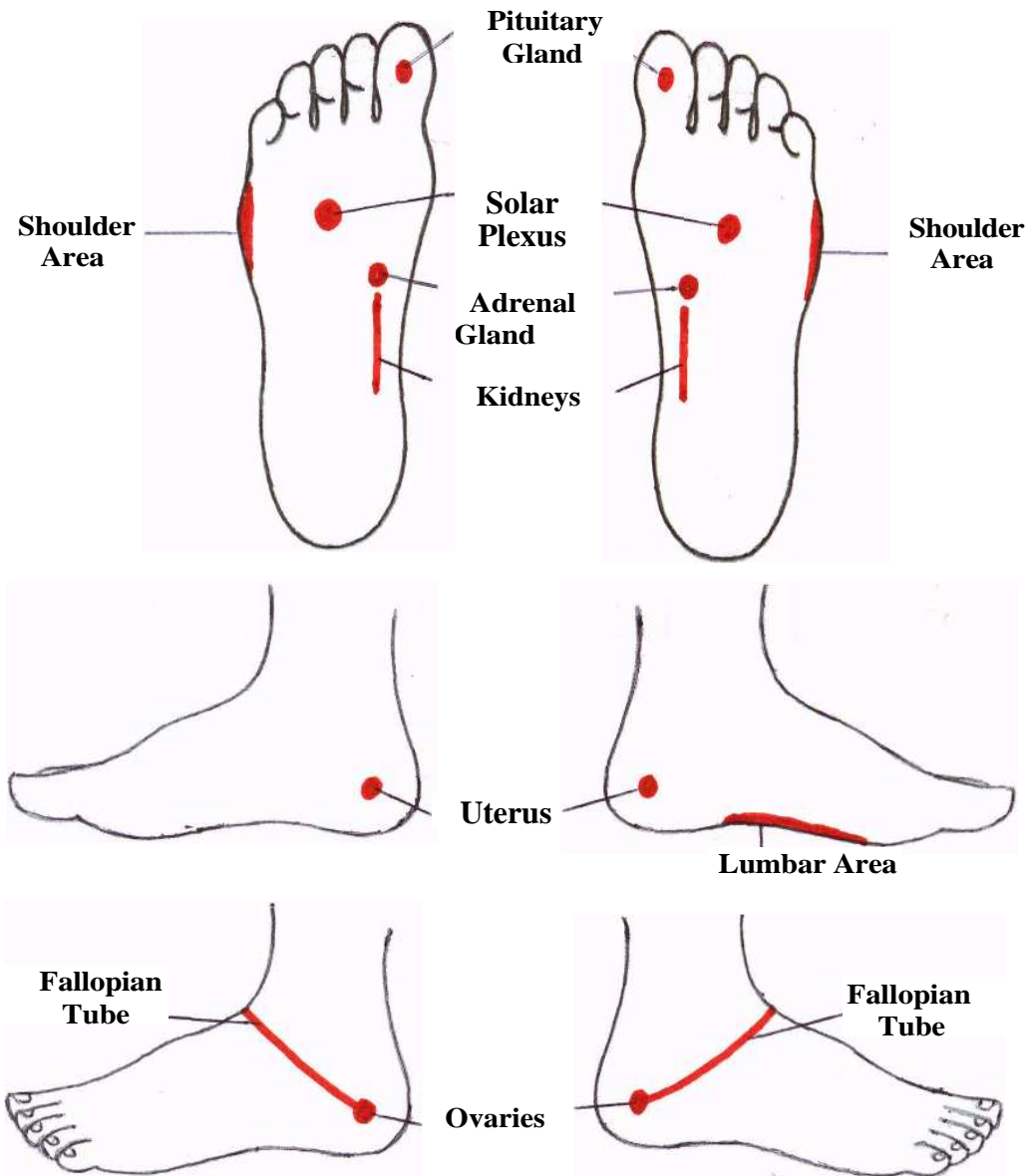
These are the main problem areas that my clients presented with.

- **Adrenal Gland** : Due to stress on the body..
- **Shoulders and Skeletal** : Due to reduced calcium absorption in the small intestine
- **Reproductive System** : Stress on the system due to reduced absorption of vitamins and nutrients especially vitamin B, Zinc, Potassium and Magnesium.
- **Solar Plexus** : Stress.
- **Pituitary Gland** : Poor nutrition affects the Endocrine System. The Pituitary being the Master Gland is affected if the correct nutrients are not being absorbed.
- **Kidneys** : Build up of toxins and waste in the body.
- **Sacro-Iliac Joint** : Due to reduced calcium absorption.

FOOT HART NO: (1)



**FOOT CHART NO: (2)**





## Recomendations

### **Diet**

A strict gluten free diet has to be adhered too for life to allow the villi to re-grow, thus allowing proper absorption of calcium, vitamins and nutrients.

### **Relaxation**

Stress is responsible for many illnesses today; it reduces the body's ability to heal. Taking time out to relax each day is important. Reflexology is very effective in treating stress in coeliac disease as it relaxes the whole body this enables the damaged villi to heal and re-grow.

### **Education**

The newly diagnosed coeliac has a need to understand the disease, information is most important. By joining local support groups and attending information days, details of which can be got from the Irish Coeliac Society, they are better able to understand and deal with their illness.

Coeliac disease is a genetic disorder in which a person's body reacts to gluten. The reaction damages the villi in the lining of the small intestine, this leads to malabsorption and poor nutrition. The villi will not heal until gluten has been completely removed from the diet, failure to do this will lead to more serious complications.

Due to the reduced absorption of nutrients, all the systems in the body are under extreme stress. Reflexology is a tried and trusted way of treating stress and bringing the body back into balance.

## **BIBLIOGRAPHY:**

- ✓ Abuzakouk, M. (2005). **Irish Coeliac Genetics Project**. *Coeliac New*. **Issue 7** Autumn.
- ✓ Tucker, Louise (2003). **An Introductory Guide to Reflexology**. Pg 7 and 8.
- ✓ Brody, K. (2003) *Coping with Coeliac Disease*. 3<sup>rd</sup> ed., pg 4. London: Sheldon Press.
- ✓ Coeliac Society of Ireland (2006). Coeliac Disease. Available from: <http://www.coeliac.ie>.
- ✓ Coeliac UK (2006). Coeliac Disease. Available from: [http://www.coeliac.co.uk/coeliac\\_disease/68.asp](http://www.coeliac.co.uk/coeliac_disease/68.asp).
- ✓ Reflexology Research (2006). Reflexology Research Project. Available from: <http://www.reflexology-research.com>.
- ✓ The Association of Reflexologists (2006). The Home of Reflexology. Available from: <http://www.reflexology.org>.
- ✓ The Irish Reflexologist's Institute (2006). Reflexology. Available from: <http://www.reflexology.ie>.
- ✓ Wikipedia (2006). Coeliac Disease. Available from: [http://en.wikipedia.org/wiki/Coeliac\\_disease#Signs\\_and\\_symptoms](http://en.wikipedia.org/wiki/Coeliac_disease#Signs_and_symptoms).