

## Chapter Two -What is Irritable Bowel Syndrome (IBS)?

IBS is when your guts don't work. You go to the doctor everything is tested and checked.

"I cannot find anything wrong" he/she says, "you have IBS".

This is how doctors diagnose IBS. When they can find nothing amiss but something obviously is... then you have IBS.

"Here are some pills. Take as directed and they may give you some relief. Go and read all the advice on IBS and stop eating the foods that seem to cause problems".

Some of you may have steatorrhea (fat in the stool) and so the doctor will test for gall stones to see if there is a blockage in the bile duct. There are often no gall stones but the surgeon whips out your gall bladder. This stops the steatorrhea but you still have the other symptoms.

You go away and try to cope. The pills are not very good and you are often ill. Many days are miserable. You may have constipation, bloating & cramping or diarrhoea or all four, or even none of these and instead, a host of other nebulous ailments. Since your guts don't work, you are often afraid to eat, you lose weight and suffer from malnutrition. You try herb & fibre supplements and have laxatives and/or anti-diarrhoea medicines at hand. A host of secondary symptoms afflict you. You may have a selection from... depression, headache, guts ache, lack of energy, weight loss, skin infections, back pain, aching limbs, athlete's foot, ingrown nails, and a host of other minor ailments. You are not dying but some days you feel like you are!

Well now you will find out what causes your IBS symptoms, and how to feed yourself so that they largely disappear. You will feel great eating one of the diets, you will be able to throw the medicines away, and stop visiting the doctor. Your performance will be better than you have ever experienced before. Occasionally you will slip up and eat something you should not. The symptoms will reappear. After doing this a few times you will soon learn that your IBS healing diet is much better than 'normal' food, and you will start to really enjoy meals again. Bon appetite.

## *The Commonly Accepted Definitions of IBS...*

You may know that there are (apparently) three types of IBS. The symptoms can vary from mild & intermittent to severe, continuous and life threatening. Everyone has a different collection of maladies, but the symptoms of constipation, diarrhoea, borborygmi (gurgling), bloating and cramping are all frequently experienced. We have a brief look at each one of the three types...

### *1. Irritable Bowel Syndrome - Constipation predominant (IBS-C)*

Here you get constipation and there are many variations on this theme from slight to severe. Bloating, borborygmi (gurgling) & cramping may tag along for the ride, together with stress, depression and lots of other symptoms. When it is bad, you stay at home.

### *2. Irritable Bowel Syndrome - Diarrhoea predominant (IBS-D)*

In the morning you get up and everything comes out fast (the morning rush), and I mean everything. It is like food poisoning but you have it often, sometimes everyday. Your BMs are loose, may contain undigested food, and sometimes raw enzymes & yellow bile salts. Your anus becomes irritated from the enzymes attacking the skin around it. Borborygmi and cramping may afflict you, together with stress, depression and a host of other symptoms. In the middle of an important meeting, suddenly your bowels want to go and they are insistent. You have to go! When everything is gone, you become very hungry and eat like a horse but oh dear... it can all come out again the next morning (or even sooner).

### *3. Irritable Bowel Syndrome - Alternating (IBS-A)*

I call this variety 'double-trouble'. You have both constipation and diarrhoea. They alternate, first one then the other. It is as if both IBS-C and IBS-D have combined to afflict you (and they have!). Bloating, borborygmi, cramping and all the rest may be your daily fare. It is very unpleasant. Just add the first and the second types together and presto, IBS-A.

### *The ROME III Definitions of IBS...*

Every few years a series of committees made up of medical professionals (Gastroenterologists - or gut specialists) gets together to look at some of the myriad diseases that afflict the human gut. They call themselves ROME and their latest publication is called ROME III.

ROME III - the Functional Gastrointestinal Disorders... is a large book that defines some disorders of the human gut and the symptoms that go with them. You may find out more at [www.degnon.org](http://www.degnon.org)

They consider that there are four types of IBS. Here (briefly) are their definitions...

Irritable Bowel Syndrome is recurrent pain or discomfort for at least 3 days per month in the last 3 months associated with two or more of the following:

1. Improvement following a bowel movement (BM).
  2. Onset associated with a change in frequency of stool.
  3. Onset associated with a change in appearance of the stool.
- IBS-C is hard or lumpy stools forming a minimum of 25%, and loose or watery stools a maximum of 25%, of BMs.
  - IBS-D is loose or watery stools forming a minimum of 25% and hard or lumpy stools a maximum of 25%, of BMs.
  - IBS-M (mixed) is hard or lumpy stools forming a minimum of 25% and loose or watery stools a minimum of 25%, of BMs.
  - IBS-U (unspecified) is an abnormal stool and something is wrong but they cannot fit the symptoms into any of the first three.

The author finds that these definitions are not of much use and advises that purchasing the ROME III book will not tell you much. This is because the medical profession does not know what causes IBS and the above definition reflects this. Because those who suffer from IBS have abnormal stools, many think that the problem is in the large intestine (spastic colon is one name for IBS). But the colon is not involved in causing IBS. Read on...

### *My Definitions of IBS...*

My investigations have identified four types of IBS. Unlike ROME III however, these definitions are precise. I know what causes IBS and can define the four types correctly. I will be brief here as full explanations are provided in the rest of the book.

*IBS-C...* occurs when you have *constipation and NO diarrhoea*. Yes, the presence of one and the absence of the other define this type. You may have many other symptoms as well, but these are the two that matter.

*IBS-D...* occurs when you have *diarrhoea and NO bloating*. You go much too fast but never have a swollen belly. Again, a myriad of other symptoms may occur but these two are the ones that matter.

*IBS-A...* occurs when you have *diarrhoea AND bloating*. Diarrhoea and constipation alternate, and a myriad of other symptoms may occur as well, but the first two are the ones that matter.

*IBS-B... Irritable Bowel Syndrome - bile deficient.*

My research has identified a fourth type of IBS that no-one else realizes exists. This may be occurring when you get steatorrhea (fat in the stool). Standard treatment for this type of IBS is removal of the gall bladder, as insufficient bile is being released from it. IBS-B occurs (most of the time), together with one of the first three types, and makes the symptoms more severe. BUT steatorrhea can occur for other reasons, and this makes IBS-B difficult to spot. If you have steatorrhea, severe IBS and/or have lost your gall bladder to the surgeon, you may have IBS-B. A full explanation follows.

Yes, it gets complicated. You are going to see how a series of simple faults combine to create a vast range of symptoms and four types of IBS. You may not understand my careful explanations at first. You may need to read the book several times and ponder what it says. But even if you cannot grasp what I am attempting to convey, all you need to do is select one of the diets and eat it.

Presto! your symptoms will vanish.

### *First-aid for IBS...*

You need to stabilize your IBS immediately. Below is a temporary regime to get you on your feet and able to read and shop. If you have constipation then read the section about it later on in the book. Here is what to do...

#### *What not to eat...*

- Stop eating plant fibre. Yes, no cereals, legumes, vegetables or fruit. These foods are the cause of IBS symptoms. You may have sieved fruit & vegetable juices, nut and soy milks.
- No dairy foods as these may cause constipation.
- No cooked animal foods as these will also cause constipation.
- No processed foods, tea, coffee or alcohol.

#### *What you may eat...*

- Water, nut & soy milks, and sieved juices.
- Sugar and honey, but in moderation so they do not spin you out. Have a supply of barley sugars (sweets) in your pocket.
- Fresh raw fish... obtain some fresh fish and eat 30-50g at a time, sliced up and tossed with a little citrus juice just before eating. Do not marinate. Have this once or twice a day. It contains minerals and excellent protein. These will make you feel good and stop any hunger pangs.
- Fresh raw shellfish... as for fish above but even better.
- If you cannot get fresh fish then you may eat raw meat. Slice up 30-50g of raw free range, grass fed red meat and eat. Do not add citrus to this.
- Do not eat sugars with the fish/meat snacks.
- Vitamin B supplement... get a vitamin B complex and take half a tablet with every fish/shellfish/meat meal. Do not use the MEGA ones just the low dose ones.
- Vitamin C supplement... 100-250mg per day. This is only necessary when fresh fruit juices are not available.

Eat this for a few days and all IBS symptoms will subside. You will feel much better and be able to sit down with this book and change your life forever. YES!!! No IBS.

## *Ankylosing Spondylitis (AS)...*

This is an autoimmune disorder that causes IBS-like symptoms. If you have pain (lower back pain) or arthritis in the spine (behind the digestive system), and possibly other large joints AND you apparently have IBS, then you may have AS instead. Your medical professional should be able to arrange tests.

This is the disorder that eventually makes some people shrunken and bent over, with a curved spine that they cannot straighten. They may even need a mirror to be able to see ahead of them.

It may be caused by the following mechanism...

When you eat a high fibre, high starch diet (cereals, beans and vegetables), most of the starch cannot be digested in the stomach and it travels through the small intestine to the large intestine (colon). Here it is digested by special bacteria. The fibre associated with the starch damages and perforates the colon wall, enabling the enzymes from these bacteria to leak into the body. The immune system recognizes these enzymes and destroys them. Unfortunately some people have a protein in the colon wall and the joints that resembles a bacterial enzyme. Now the immune system also attacks the colon and the joints, causing IBS, pain in the lower back and arthritis. The spine is directly behind the colon and suffers first, but other large joints may also be affected.

Carol Sinclair has developed a low starch diet that may help this type of IBS. Carol has IBS caused by AS and has done heaps of research. You can buy her book...

It is called 'The IBS Low Starch Diet' [www.lowstarchdiet.net](http://www.lowstarchdiet.net)

The IBS Eskimo Diet described later in this book, is excellent for treating AS too. The Easy IBS Diet described later, is based on Carol's work but it has been modified considerably, and may now not be suitable for treating AS.

Go here [www.kickas.org](http://www.kickas.org) if you would like more information about Ankylosing Spondylitis.

### *Asthma...*

The guts (pardon the pun) of the IBS research project that the author has been working on for more than a decade, have been completed. Of course there is always more to do AND it may be that some or all of the IBS theory is wrong. We shall see! Meanwhile a new project is underway. It is investigating Asthma.

An interesting theory of how Asthma is caused has emerged as a spin-off of the IBS research. Basically it seems that Asthma may be an autoimmune disorder triggered by eating damaging plant fibre, cooked animal proteins and insufficient fat. The fibre comes from some cereals, legumes and vegetables. Whether this holds water is subject to further investigation.

The good news (if you have Asthma) is that the diets designed to treat IBS also seem to cure Asthma. Low fibre, high fat diets such as the IBS Fruit Diet and the IBS Eskimo Diet banish Asthma symptoms. I have a scientific paper in my head.

Let me know if you have any success.

### *Crohns Disease, Ulcerative Colitis and other IBDs...*

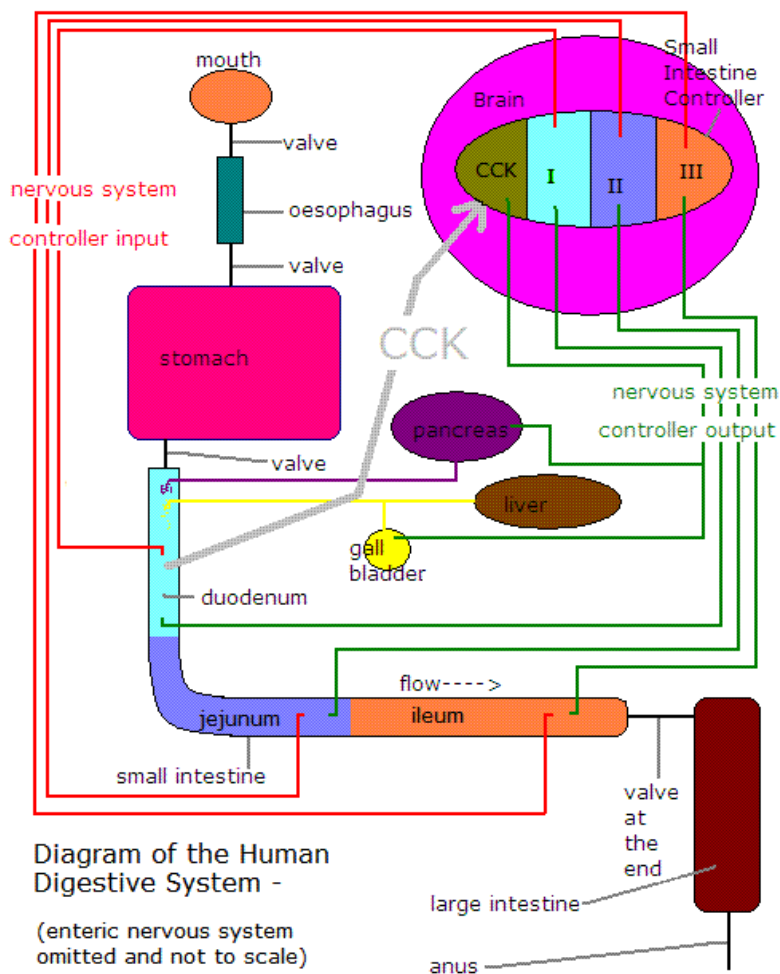
The author does not know what causes these disorders but has an educated suspicion that it is plant fibre.

If you have one of these illnesses, and want to be free of symptoms, then the IBS Eskimo Diet gets rid of most plant fibre.

The Eskimo people have none of these disorders. They were completely unknown to them prior to high fibre plant based foods being introduced by Europeans in the 18<sup>th</sup> century.

If you get results from eating this diet the author would love to hear from you. Contact details at the end of the book.

## 8 - IBS Explained



This basic diagram of the digestive system has all the necessary bits and pieces on it for the purposes of this book.

Read the text opposite for a full explanation.



### *Chapter Three - How your digestive system works...*

In order to understand IBS, it is first necessary to get to grips with the workings of your guts. I am going to keep it simple and not too technical. Here goes...

#### *Overview of the Digestive System of a Human...*

(This explanation refers to the diagram opposite)

We start at the small orange blob near the top labelled *mouth*. Here you put food & drink in, taste it and chew it. Saliva is secreted and mixed with the food. Saliva contains enzymes which start the digestive process. Soon you have a semi-liquid mixture that you can swallow. This is the only part of the digestive process where you have voluntary control.

Control of the digestive process is largely automated. There are five automated controllers that do this. They are...

1. Four brain controllers that oversee the functions of the small intestine, the gall bladder and the pancreas.
2. The enteric nervous system (not shown on the diagram). This is the network of nerves in your guts and it operates largely independently of the brain. It controls the oesophagus, stomach, all the valves, and the large intestine. It has a backup role for the small intestine. That is; it maintains this part when the brain controllers switch off.

When swallowed, food goes through the valve at the back of the throat and the whole process from now on is automated. It travels down the tube in your throat called the oesophagus, and then through another valve into the stomach. This valve prevents food from going back up the oesophagus.

In the stomach food is turned into a soup that contains 10% hydrochloric acid. The acid splits complex sugars into simple sugars that can be absorbed. More enzymes are added. The soup is churned for a short time to break up any lumps and then it is

## *10 - IBS Explained*

pumped into the first part of the small intestine in spurts, through another valve. It is important to grasp that the stomach operates like a pump. It squirts food soup into the small intestine under pressure.

I will now deal briefly with the functions of the small intestine. These are covered in more detail in the next section...

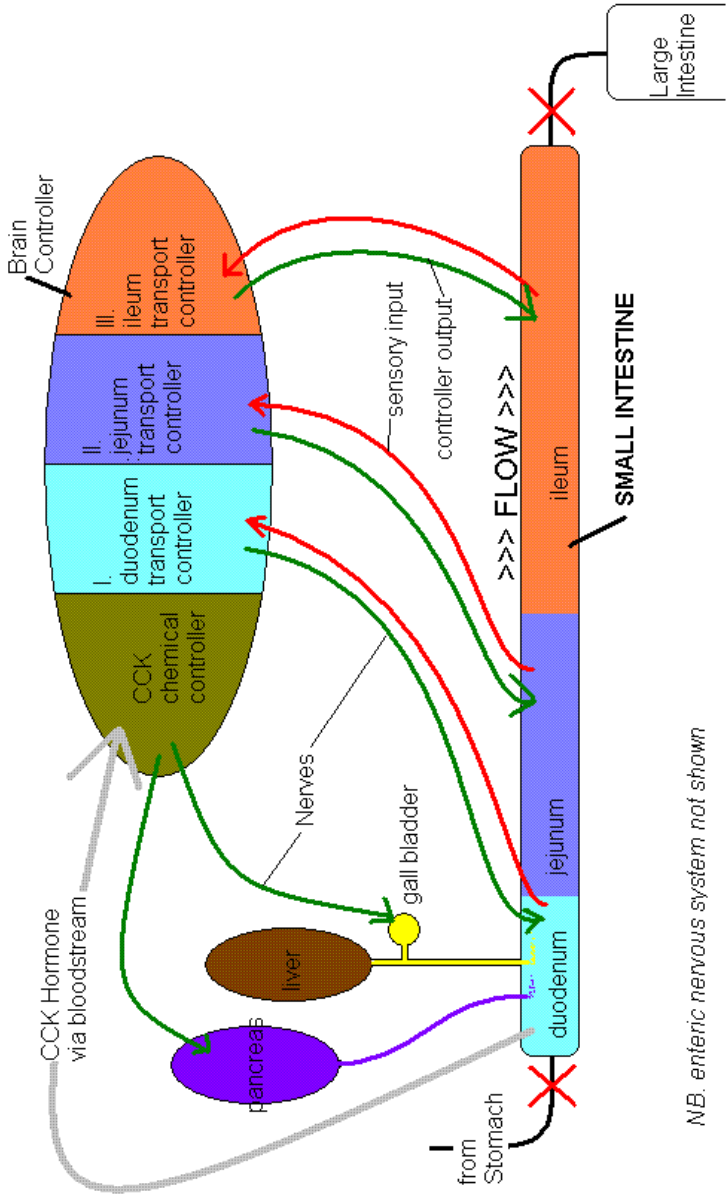
In the small intestine the acidified food soup from the stomach has chemicals added to it that neutralize acids (bicarbonate), emulsify fats (bile salts) and digest your food (enzymes). These are mixed in and food is transported along the intestine. Nutrients are absorbed and then the chemicals are removed and recycled to be used again for your next meal. Yes, we are environmentally tuned! All this is controlled by the four brain controllers.

We will meet these controllers intimately in the next section.

The food soup (now digested) reaches the end of the small intestine after about 36 hours or so. The 'valve at the end' is closed. In the morning, soon after you arise, this valve opens. It opens when adrenal hormones are released each morning and then closes as levels of these hormones decrease during the day. It becomes tightly shut overnight. When the valve opens the food soup moves into the large intestine (brown). Here over the next 1-2 days it is dehydrated and prepared for release (with the assistance of bacteria), via the anus.

Phew, was that too hard? If there was anything you did not understand, please read it again until you do. The next section is more challenging!

### BATCH PROCESS MODEL of the Small Intestine



NB. enteric nervous system not shown

## *The Small Intestine...*

Welcome back. We have a different, and more detailed diagram of the small intestine to refer to this time...

Let us go back to the stomach. It is pumping spurts of food soup through the valve into the small intestine. Now the small intestine processes food in BATCHES. It is not a continuous process but separate discrete batches. There are three parts to this batch process...

### *The duodenum...*

This is the first part of the small intestine. It is a short tube about 25cm long that receives acidified food soup from the stomach. The duodenum processes food in small batches as it receives them from the stomach...

It has two ducts opening into it, one from the gall bladder for bile salts and one from the pancreas for enzymes and bicarbonate. A valve, covering the opening of these two ducts, prevents backflow of food soup into them. This is called the 'Sphincter of Oddi'.

When a batch of acidified food soup is pumped into the duodenum, special cells in its walls detect how much fat is in the soup. These cells then release hormones called Cholecystokinins (CCK) into the blood stream. One of these hormones travels to the brain where it is detected by a small intestine brain controller (CCK chemical controller). This controller then sends a nerve signal to the muscles that empty the gall bladder and pancreas. These muscles contract and add the correct amounts of bile salts and pancreatic enzymes to the food soup through the 'Sphincter of Oddi'. I call this the CCK Loop. Bile salts emulsify fats. That is; fats become tiny droplets that are suspended in the soup just like in egg yolk or mayonnaise. If this is not done then you cannot digest them.

The food soup needs to become neutral to alkaline in order for the pancreatic enzymes to function. Sensors detect how acid it is and then enough bicarbonate is added (by the enteric nervous system),

to neutralize the acid. The bicarbonate comes from the pancreas and duodenum walls.

The duodenum transport controller (I) mixes food soup, bile salts and enzymes, by moving them backwards and forwards in the duodenum. It churns them all together. It does this by receiving nerve signals from sensory cells in the duodenum wall, that tell it food is present. It then outputs nerve signals to the muscles that line the walls. If no input is received then the controller remains switched off.

Within a few minutes you have a neutral to slightly alkaline well mixed soup, with all fats emulsified and sufficient enzymes present to digest it. Now the duodenum brain controller moves the soup slowly into the next part of the small intestine and the duodenum is then ready to receive another batch of food soup from the stomach pump.

The number of batches needed to process one meal will of course depend on the size of the meal.

### *The jejunum...*

This is the second section of the small intestine and it is about two to three metres long. It has its own brain controller (II) and it processes each meal as a single batch. It adds together all the small batches it receives from the duodenum into one meal sized batch. In the jejunum food is digested and nutrients are absorbed into the body. What is left over is then moved to the third section of the intestine.

The jejunum brain controller accepts food soup from the duodenum. It will only do this if the soup is moving slowly at the correct speed. If the duodenum tries to do things too fast for some reason, then the controller refuses to accept the soup.

Once the soup is in the jejunum, sensory cells in its wall (stimulated by food), send input nerve signals to the jejunum brain controller. The controller then outputs nerve signals, to the muscles in the jejunum wall. These control mixing and transport in

the jejunum. If no input is received then the controller remains switched off.

The controller varies the rate of nutrient uptake by mixing the soup and moving it backwards and forwards. It receives instructions from other parts of the brain on how fast to do this. This ensures that when it is cold or your body needs energy for hard work, the jejunum can provide it quickly. When it is hot and/or you are resting, the controller slows down nutrient absorption.

The nutrients absorbed in the jejunum are...

- Fats... these are emulsified by bile salts into tiny droplets. Fat digesting enzymes (lipases) from the pancreas then split them up and move them into the lymphatic system. This system distributes them around the body.
- Proteins... these are split up by proteases from the pancreas into short chains of amino acids (peptides), and individual amino acids. These are moved into the blood stream and go to the liver for further processing.
- Sugars... complex sugars have been split up in the stomach by acids into simple sugars. These are absorbed into the blood stream and go to the liver where they can be stored or sent out to the body.
- Vitamins & Minerals... those that can be absorbed go into the blood stream and then to the liver.

When nutrient absorption is complete the soup is at the end of the jejunum. The jejunum brain controller now moves it slowly into the third section. The time to process one batch is about the time between meals. That is about 2-4 hours.

### *The ileum...*

This is the third and last section of the small intestine and it is about four to six metres long. It has its own brain controller (III). Its job is to recycle bile salts & enzymes, dehydrate the soup a little and then move it into the large intestine.

The ileum brain controller accepts food soup from the jejunum. It will only do this if the soup is moving slowly. If the jejunum tries to do things too fast for some reason, then the ileum controller refuses to accept the soup. The ileum is able to process the food from a whole day, in one batch.

Once the soup is in the ileum, special cells in its wall (stimulated by food) send nerve signals to the ileum brain controller. The controller then outputs a nerve signal, to the muscles in the ileum wall. These control mixing and transport in the ileum.

The controller governs recycling of bile salts and enzymes by mixing the soup and moving it backwards and forwards. The recovered bile salts are sent back to the liver which stores them in the gall bladder. The recovered enzymes are sent back to the pancreas. We need to recycle these chemicals as they take a lot of resources to manufacture, and the body cannot make them quickly enough to replace the loss of more than a small amount each day.

Food can stay in the ileum for 24 hours or more, if necessary. When the recycling and dehydration process is complete, the food soup is at the end of the ileum ready for release into the large intestine (colon).

The ileum cannot move it into the colon until the 'valve at the end' opens. The controller is not able to open this valve itself. The valve opens when the enteric nervous system, under the influence of adrenal hormones, tightens the muscles that control it. Yes, it opens when the muscles tighten. Sort of opposite to what you would expect!

Levels of adrenal hormones are high just after rising in the morning and the valve opens. This is why we often have a BM first thing in the morning. Hormone levels are also high when we are subject to stress. This is why we sometimes lose control of our bowels when given an awful fright. The valve is tightly closed when adrenal hormones are low. Hormone levels are lowest at night when you are asleep.

Once the soup is moved into the colon, the small intestine controllers have nothing more to do with it. The enteric nervous system now takes over and does the rest.

### *Summary...*

You have just read my description of the batch processes that the small intestine carries out. Briefly... the duodenum process food soup from the stomach in small batches and then passes them to the jejunum. The jejunum processes a whole meal in one batch and then passes it to the ileum. The ileum processes a whole days meals in one batch and then passes them to the large intestine.

We can see why the sizes of each division of the intestine are so different. The duodenum processes small batches so is only 25cm long. The jejunum processes a whole meal and so is 2-3m long. The ileum holds a whole days food and is 4-6m long. The intestine is flexible and can stretch lengthways and sideways to accommodate more food when necessary. I have simplified the whole process somewhat to keep the description short. In fact the batch processes can be longer if necessary, especially when you cram in food too often, eat too much, or eat bad food.

Understanding of the control systems is vital. Each of the three sections of the intestine has a brain controller to manage its functions. The jejunum and ileum transport controllers will only accept food when it is travelling slowly. If it goes too fast then they refuse to accept it. There is a fourth controller to manage chemicals. The controllers operate only when they receive input. When there is no input they stay switched off. Then the enteric nervous system takes over.

Congratulations! You have made it this far and understood (I hope). But if anything is not clear please revise Chapter 3 as many times as you need to before continuing. It is essential to fully understand how your small intestine works before proceeding any further. You need this understanding for Chapter 4.

Next I expose IBS for what it really is. Yes, naked IBS!  
You get decades of research in one chapter. Phew.



## Chapter Four - Irritable Bowel Syndrome Explained...

Well here we are, about to strip away the clothing from the body of the King (IBS). Yes, let's have a strip show. We want to see the King naked, in all his glory and his misery.

### *How IBS is caused...*

\*\*\* IBS is a disorder of the small intestine \*\*\*

Let's look at a couple of pieces of evidence that will help explain this statement...

- When someone suffers from IBS-C they have bloating. Some get very severe swelling of the upper abdomen commencing a few minutes after eating a breakfast containing cereal fibre. The problem is at the beginning of the digestive system and further, it is probably at the beginning of the small intestine. That is the most distance that the food could have travelled in such a short time.
- When someone suffers from IBS-D or IBS-A their diarrhoea often contains raw enzymes, yellow-orange bile salts or even undigested fat. Now the small intestine should have removed all the enzymes, all the bile salts and digested all fats. So it is not working correctly and has moved food soup into the colon too soon. The enteric nervous system does not like these raw chemicals and undigested fats in the colon. It automatically evacuates it.

Now the doctor has possibly pushed a video camera into your small intestine & colon, and had a look. He could not find anything wrong. It all looks normal. So logically...

\*\*IBS is a disorder of the control systems of the small intestine\*\*

Wow! that was easy. Those clothes came off fast.

### *Nervous System Control of the Small Intestine...*

In Chapters 2 & 3, the parts of the nervous system that control the digestive system were described. I briefly repeat a description for you (just in case you have forgotten)...

*Control of the digestive process is largely automated. There are five automated controllers to do it. They are...*

- 1. Four brain controllers that oversee the functions of the small intestine, the gall bladder and the pancreas.*
- 2. The enteric nervous system. This is the network of nerves in your guts and it operates independently of the brain (most of the time). It controls the oesophagus, stomach, all the valves and the large intestine. It has a backup role for the small intestine. That is; it operates when the brain controllers switch off.*

Now we look at the control process in detail...

The four brain controllers are closely associated in the same region of the brain. However they all operate independently and each one has a unique neuro-transmitter. This is a chemical that nerve cells use to 'talk' to one another. This ensures that each one can carry out its programmed tasks without interference from the others.

The nervous system has lots of these neuro-transmitters. Many of them are unknown to science. One that has been well studied is dopamine. Absence of dopamine causes Parkinson's disease. Others are the many varieties of the peptide CCK that we have encountered in Chapters 2 & 3. Many neuro-transmitters are heterocyclic amines (HCAs). We will learn more about HCAs later on in the book.

When no food soup is in the intestine then no input signals go to the brain controllers. They stay switched off. When they are off the enteric nervous system controls the intestine instead. It has a maintenance role and sweeps the intestine clean with a special program that starts at the front end and finishes at the back end! This maintenance program only goes in one direction (forward).

When sensory cells in the walls of the small intestine, detect food soup, they send signals to the three transport brain controllers, which switch on and produce an output signal that goes to the muscles (in the walls) that control the speed of the small intestine. Each brain controller knows the correct speed for your digestive system and can mix food soup and move it in both directions. The enteric nervous system takes a back seat and shuts up. Easy!

BUT if there is a fault somewhere and no input gets to the brain or no output gets to the muscles, then the enteric nervous system controls the intestine. It uses the maintenance program and now the direction is forward only, with no mixing or timing, at a speed set by the type of food you are eating...

Here is a table showing the effect of foods on the speed of the intestine when under the control of the enteric nervous system...

<i>Fibre Type</i>	<i>Speed</i>
Wholemeal cereal flours	Supersonic
Whole brown rice	Much too Fast
Whole white rice	Too Fast
Whole legumes	Supersonic
Split legumes	Much too Fast
Root Vegetables	Too Fast
Above ground vegetables	Medium OK
Fruits	Medium OK
Raw animal foods	Slow -Ideal
Nuts	Slowest

*Summary...* When a section of the small intestine is no longer controlled by the brain and food is present, then the enteric nervous system takes over. The speed set by this part of the nervous system is 'too fast' when cereals, legumes and root vegetables are eaten.

\*\*\* This 'too fast' speed causes Irritable Bowel Syndrome \*\*\*

*?So how are the brain controllers prevented from doing their job?*

I have discovered at least three ways in which this can happen...  
(and there may be more)

1. Each section of the brain controller has a unique neuro-transmitter that enables its nerve cells to communicate with each other. If a neuro-transmitter is missing then no output is produced by that section of the controller. Here IBS develops gradually over time as the patient ages. It can start at any time of life and symptoms are usually intermittent at first. Later on symptoms become continuous and then severe. This is probably the most common cause of IBS.
2. You may eat something bad which contains toxins and these toxins destroy sensory cells in the walls of parts of the intestine. Now no input goes to some or all of the brain controllers and they stay switched off. Here IBS develops immediately after a digestive insult such as food poisoning or infection with a harmful micro-organism.
3. When a baby is born, it has not yet developed nervous system connections from the small intestine to the brain controllers. These develop sometime in the first two years of life. If something prevents development of these connections then the small intestine brain controller cannot control some or all of the intestine when food is present. Here IBS occurs when a baby is first fed cereals, legumes & root vegetables.

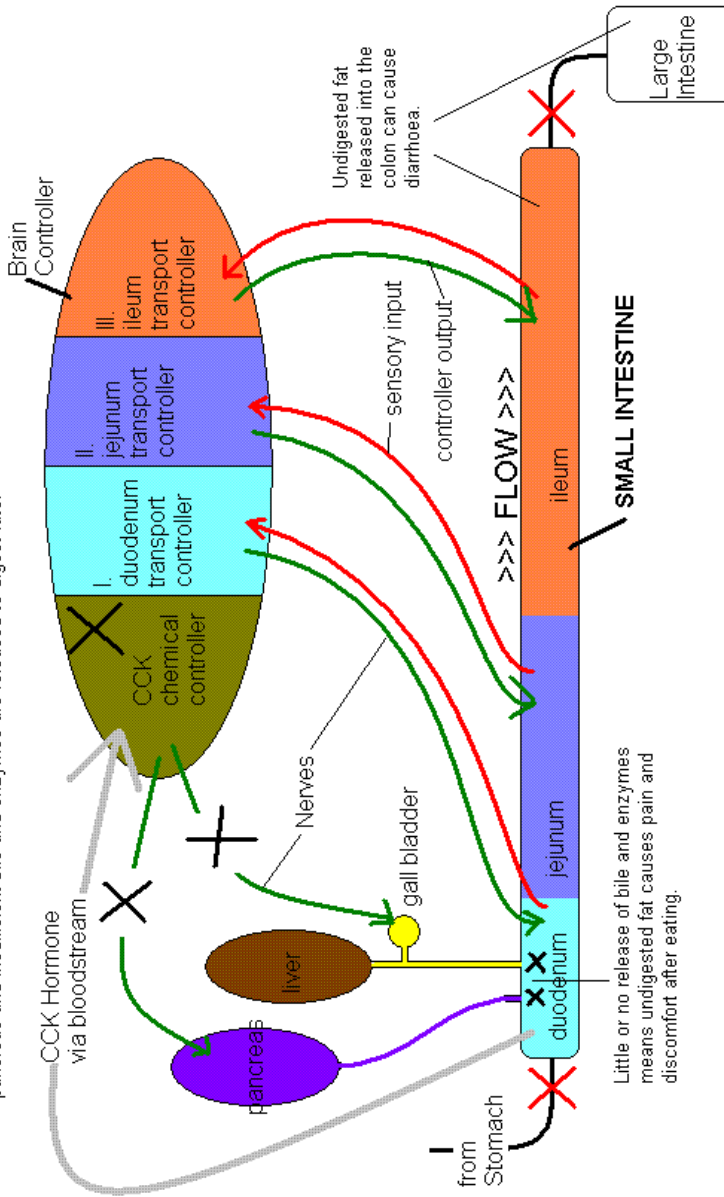
*But (you ask), why are there so many symptoms, and types of IBS?  
AND why does a 'too fast' speed cause constipation,  
bloating and cramping?*

Very good questions, I could have thought of these myself!

OK, now we are going to look at each type of IBS in turn and see how they are created by one or more brain controllers not doing their job. The key is that there are FOUR controllers and only one has to go stop working to cause IBS. We can actually get fifteen flavours of IBS just by combining four faults together. These explanations are for the commonest type of IBS (caused by a missing neuro-transmitter), but they will be much the same for the other causes... Are you ready?

**IBS-B**

A fault in the CCK chemical controller means that there is no response to the CCK hormone released from the duodenum in response to fats. No signal is sent to the gall bladder and pancreas and insufficient bile and enzymes are released to digest fats.



## *Irritable Bowel Syndrome - Bile deficient (IBS-B)*

We are going to look at this type first, because it dramatically affects all the other types when present...

Now when the CCK chemical controller is prevented from doing its job the following happens...

When food soup is pumped into the duodenum from the stomach, and CCK hormone is released into the blood stream by the special cells in its wall, The controller no longer outputs a signal to the gall bladder and pancreas.

A small amount of bile salts and enzymes are released by the enteric nervous system responding to the following stimuli...

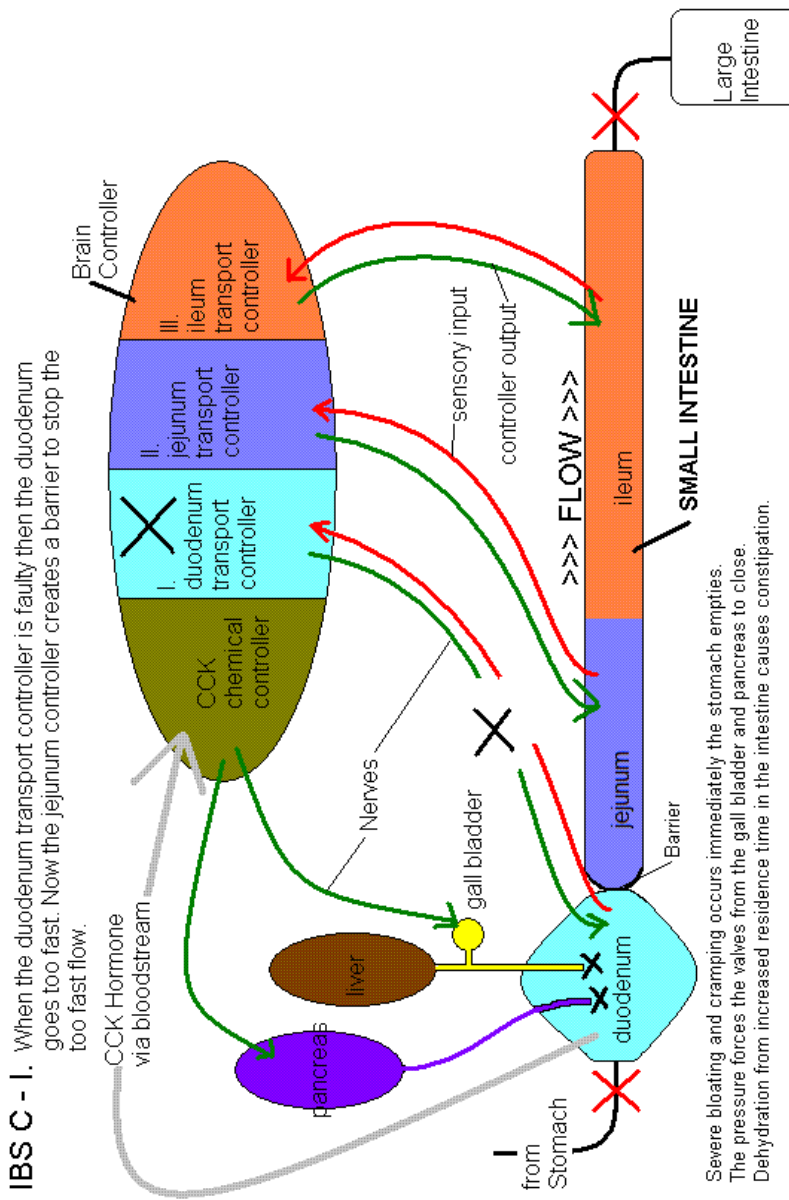
- Plant fibre
- Milk proteins
- Cooked animal proteins
- Acids

BUT this is not sufficient to digest your food, especially the fats. Most fats are not emulsified and cannot be digested. They coat the inside of the small intestine, hinder nutrient absorption, and hinder bile and enzyme recycling. This makes you feel very bad with severe indigestion. When the undigested fats get to the colon later on then the enteric nervous system immediately evacuates it and you get a loose, grey BM that floats. Yuck.

Now this type of IBS can occur on its own. But usually, it happens together with one of the other types. It makes the symptoms of these others more severe.

This is one of the reasons why the same type of IBS can be just annoying in one person, and life-threatening in another. The severely ill person will have IBS-B as well. Often your doctor will recommend gall bladder removal. This makes bile flow directly into the intestine, instead of into the gall bladder, and stops your IBS-B symptoms.

Next IBS-C stripped naked...



## *Irritable Bowel Syndrome - Constipation (IBS-C)*

This type of IBS is caused by three combinations of brain controller faults, and each one can have IBS-B occurring with it.

This creates a total of six subtypes...

*IBS-C subtype 1...* (illustrated on the diagram opposite)

When the duodenum brain controller is prevented from doing its job then the enteric nervous system takes over control of the duodenum. When a person with this problem sits down to a cereal breakfast, then the stomach starts pumping food soup containing cereal fibre into the duodenum a few minutes after the meal starts. The enteric nervous system now tries to move the food soup at supersonic speed into the jejunum.

The jejunum controller says to itself... 'Hot diggitty dawg, things are going way too fast here, I had better put up a road-block'. So it contracts the beginning of the jejunum and blocks the intestine. It's just doing its job.

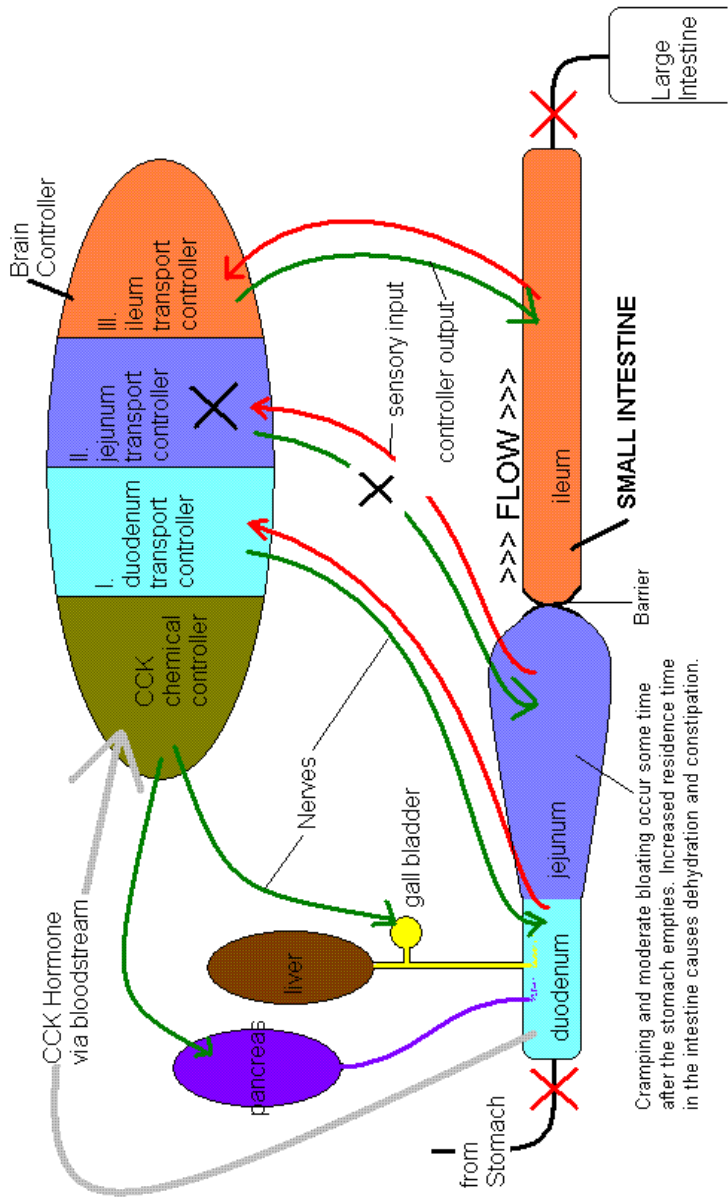
Wow! look what happens. The stomach does not know about the road-block and keeps pumping breakfast in. The duodenum blows up like a football and the upper abdomen bulges out (severe bloating). The enteric nervous system tries very hard to move the soup along (severe cramping). Because of the back pressure in the duodenum, the valve (Sphincter of Oddi) covering the outlets from the gall bladder and pancreas is kept closed and no chemicals can get out (problems digesting fats). If IBS-B occurs too... well heck, no wonder you are crook.

The only way to relieve this mess is for the roadblock to be removed. This can only happen if the jejunum controller can be relaxed, or the duodenum & jejunum walls can be anaesthetized (paralysed). We learn to do these two things later.

*Symptom Summary for IBS-C subtype 1...* severe bloating and cramping in the upper abdomen when a breakfast is eaten that contains cereal fibre. Constipation and difficulty digesting fats. No diarrhoea. Gall bladder removal does not fix the fat digestion problems regardless of whether IBS-B occurs.



**IBS-C II.** A fault in the jejunum transport controller causes the jejunum to go too fast.  
 The ileum transport controller erects a barrier to stop the too fast flow.



*IBS-C subtype II...* (illustrated on the diagram opposite)

When the jejunum brain controller is prevented from doing its job then the enteric nervous system takes over control of the jejunum.

When a person with this problem sits down to breakfast and eats cereal, the stomach starts pumping food soup containing cereal fibre into the duodenum, soon after. The duodenum works fine and when it is finished processing the first batch of soup it moves it into the jejunum. The enteric nervous system now tries to move the food soup at supersonic speeds into the ileum.

The ileum controller says to itself... 'Gee whizz, things are going mega fast here, I had better put up a road-block'. So it contracts the start of the ileum and blocks the intestine. It's just doing its job.

Look what happens. The stomach and duodenum do not know about the road-block and keep processing breakfast. The enteric nervous system moves the soup at express speed to the end of the jejunum and tries to move it further. This causes borborygmi (gurgling) in the 2-3 metre jejunum and possibly cramping. The jejunum blows up a bit but since it is bigger than the duodenum. this is not as noticeable as in IBS-C subtype I. Also it occurs further down the abdomen. If IBS-B occurs as well then you get aggravated symptoms and steatorrhea.

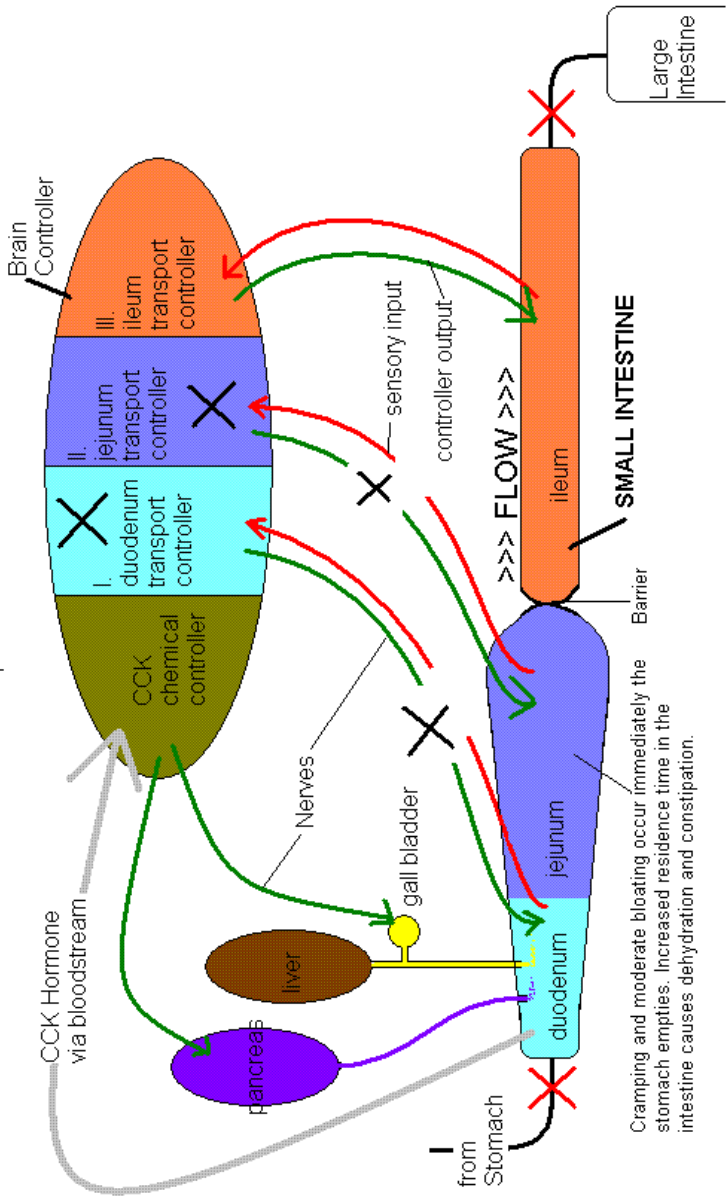
The only way to relieve this mess is for the roadblock to be removed. This can only happen if the ileum controller can be relaxed or the jejunum & ileum can be anaesthetized (paralysed). We learn to do these two things later.

*Symptom Summary for IBS-C subtype II...* delayed mild to medium bloating in the mid-abdomen, possibly with cramping, when a breakfast is eaten that contains cereal fibre. Delayed borborygmi. Constipation. No diarrhoea. Difficulty digesting fats when IBS-B occurs. Gall bladder removal fixes the fat problems.

Progress, we make progress!...

**IBS-C I+II**

Faults in the duodenum and jejunum controllers cause the duodenum and jejunum to go too fast.  
The ileum controller erects a barrier to stop the too fast flow.



*IBS-C subtype I+II...* (illustrated on the diagram opposite)

When both the duodenum and jejunum brain controllers are prevented from doing their jobs then the enteric nervous system takes over control of the duodenum and jejunum. This subtype is very similar to subtype II that we have just encountered. There are only a few differences in symptoms...

When a person with this problem sits down to breakfast and eats cereal, the stomach starts pumping food soup containing cereal fibre, into the duodenum soon after. The enteric nervous system now tries to immediately move the food soup, at supersonic speed through the duodenum and jejunum, and into the ileum.

The ileum controller says to itself... "Gee whizz, things are going way too fast here, I had better put up a road-block". So it contracts the start of the ileum and blocks the intestine. "Just doing my job".

Look what happens... The stomach does not know about the road-block and keeps pumping in breakfast. The enteric nervous system moves the soup at supersonic speeds to the end of the jejunum and tries to move it further. This causes immediate borborygmi in the 2-3 metre plus duodenum/jejunum.

The duodenum/jejunum blows up a bit but since it is quite big this is not as noticeable as IBS-C subtype I, and it occurs further down the abdomen (mild to medium bloating). Cramping may occur. Release of bile salts and enzymes is not impaired. If IBS-B occurs as well then you get aggravated symptoms and steatorrhea.

The only way to relieve this mess is for the roadblock to be removed. This can only happen if the ileum controller can be relaxed or the duodenum, jejunum & ileum can be anaesthetized (paralysed). We learn to do these two things later.

*Symptom Summary for IBS-C subtype I+II...* immediate mild to medium bloating in the mid-abdomen, possibly with cramping, when a breakfast is eaten that contains cereal fibre. Immediate borborygmi. Constipation. No diarrhoea. Difficulty digesting fats when IBS-B occurs. Gall bladder removal fixes the fat problems.

		Irritable Bowel Syndrome - Constipation (IBS-C) - Symptom and Fault Summary						
		Brain controller.....						
#	CCK Chemical	I Duodenum	II Jejunum	III Ileum	Subtype	Symptoms		
1	0	X	0	0	I	Immediate severe bloating & possibly cramping. Constipation. Difficulty digesting fats. No borborygmi.		
2	X	X	0	0	I + CCK	Immediate severe bloating & possibly cramping. Constipation. Difficulty digesting fats. No borborygmi.		
3	0	0	X	0	II	Delayed mild to moderate bloating, borborygmi & possibly cramping. Constipation.		
4	X	0	X	0	II + CCK	Delayed mild to moderate bloating, borborygmi & possibly cramping. Constipation. Difficulty digesting fats.		
5	0	X	X	0	I + II	Immediate mild to moderate bloating, borborygmi & possibly cramping. Constipation.		
6	X	X	X	0	I + II + CCK	Immediate mild to moderate bloating, borborygmi & possibly cramping. Constipation. Difficulty digesting fats.		
		X = defective and 0 = functioning						

### *IBS-C Summarized...*

Opposite is a table summarizing everything about IBS-C.

You can see that all six subtypes of IBS-C have two things in common. There is a fault in one or both of the duodenum and jejunum controllers and the ileum controller is OK.

Because of this you get a 'barrier' that causes constipation. It is impossible to have diarrhoea as a symptom, as the ileum controller works fine and controls the last section of the intestine.

So the diagnostic symptoms for IBS-C are...

### **Constipation and NO Diarrhoea.**

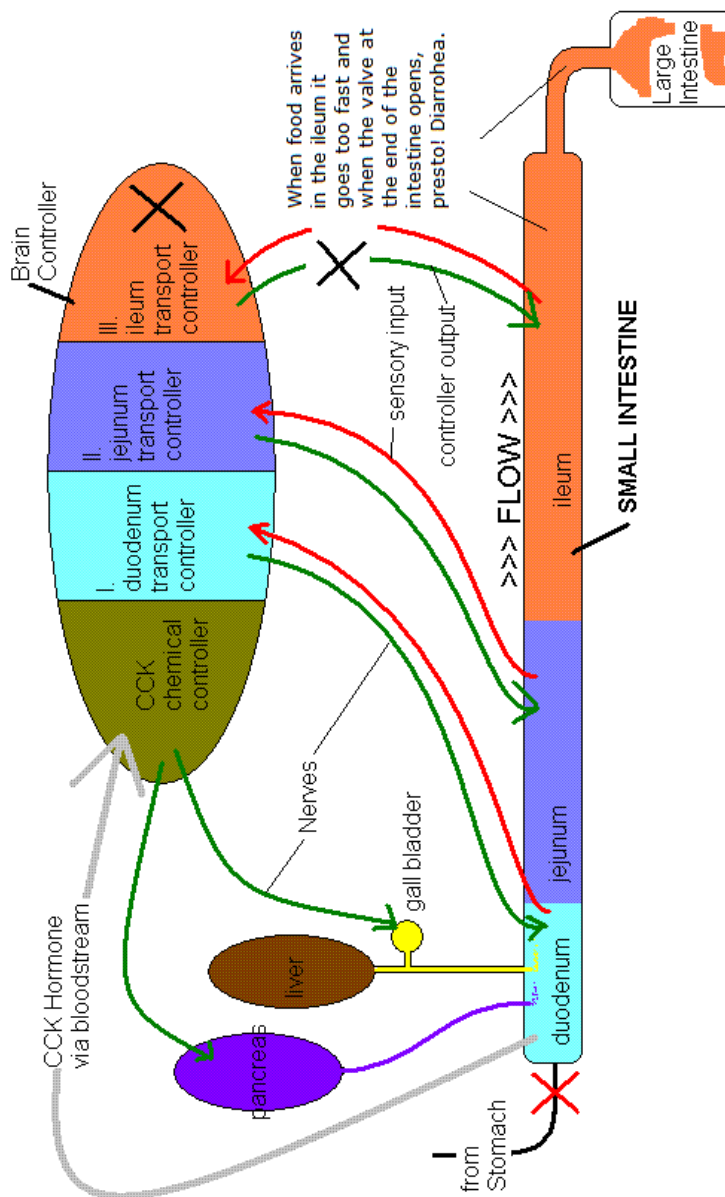
So even though you have lots and lots of other symptoms, these are the only two that matter...

-|-

Yeeee ha! You've done it.  
You have graduated from the IBS-C master-class.

Next IBS-D, man these guys' guts are speedy...

**IBS-D III.** The ileum goes too fast and the valve at the end of the small intestine regulates the flow.



## *Irritable Bowel Syndrome - Diarrhoea (IBS-D)*

This type of IBS is caused by three combinations of brain controller faults, and each one can have IBS-B occurring with it.

This creates a total of six subtypes...

*IBS-D subtype III* (see the diagram opposite)...

When the ileum brain controller is prevented from doing its job then the enteric nervous system takes over control of the ileum. When you sit down to breakfast and eat some cereal, the stomach, duodenum and jejunum work fine, mixing and digesting the soup. But about 2-4 hours after the meal borborygmi starts suddenly. The food soup has arrived at the ileum and the enteric nervous system tries to move it at supersonic speed into the colon.

If the pressure from the enteric nervous system is high enough the soup moves straight into the colon, and it is immediately evacuated. It's just ejecting the undigested food and objectionable chemicals. If diarrhoea continues for a few days then you lose your supplies of bile salts and enzymes. This worsens your symptoms and has the same effect as IBS-B.

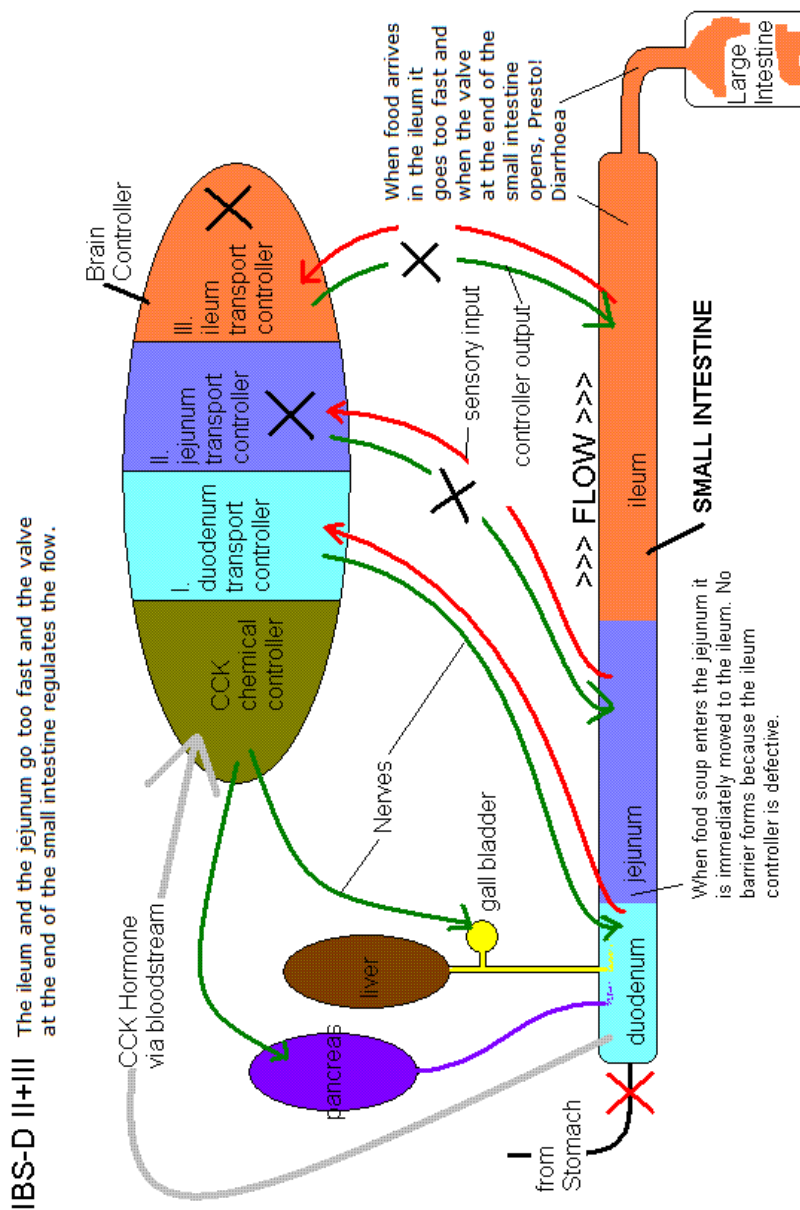
If the valve at the end of the small intestine is shut tight (this happens at night), the soup may be stopped by the valve. In the morning when you get up and have a shot of adrenal hormones, the valve opens. The MORNING RUSH commences.

If IBS-B occurs as well... then steatorrhea causes severe symptoms. The only way to cure this problem is for the ileum to be slowed down; either by relaxing it or by paralyzing it.

We learn to do these two things later.

*Symptom Summary for IBS-D subtype III...* approximately two to four hours after a meal containing cereal fibre, borborygmi commences. Cramping is possible. Diarrhoea can happen soon after OR in the morning immediately on arising. Continual diarrhoea and IBS-B worsen the symptoms. Cramping may occur when the colon evacuates. Gall bladder removal fixes any problems digesting fat (IBS-B), if diarrhoea is controlled.





*IBS-D subtype II+III* (see the diagram opposite)...

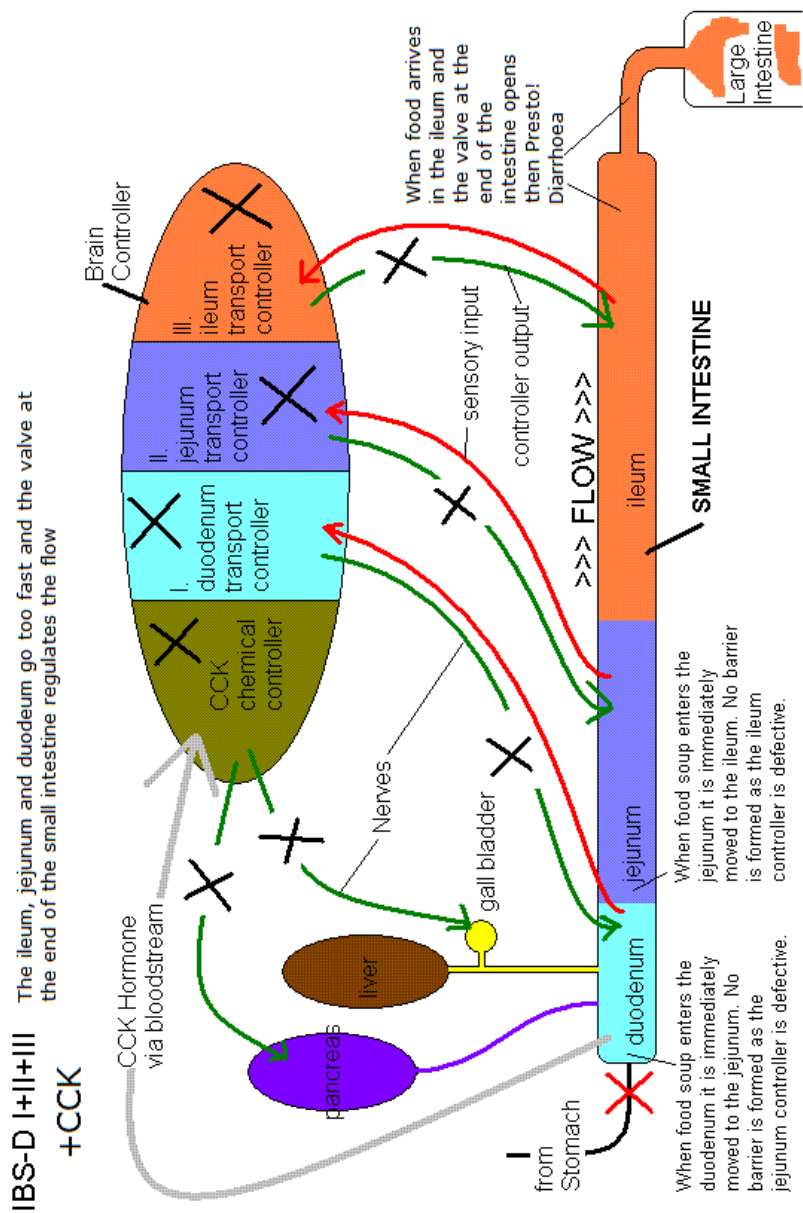
When the jejunum and ileum brain controllers are prevented from doing their jobs then the enteric nervous system takes over control of them both. When you sit down to breakfast and eat some cereal, the stomach and duodenum work fine. But about 5-15 minutes or so after the meal commences, borborygmi start. Food soup has arrived at the jejunum and the enteric nervous system moves it *poste haste* all the way along the small intestine to the end of the ileum. This may take a few hours. The borborygmi are symphonic. Cramping may occur.

If the pressure from the enteric nervous system is high enough the soup moves straight into the colon, and the part of the enteric nervous system in charge of the colon evacuates it immediately. It's just ejecting the objectionable chemicals. If diarrhoea continues for a few days then you lose your supplies of bile salts and enzymes. This worsens your symptoms and has the same effect as IBS-B.

If the valve at the end of the small intestine is shut tight (this happens at night), the soup can be stopped by the valve. In the morning when you get up and get a shot of adrenal hormones, the valve opens. The MORNING RUSH commences. This is a severe form of IBS and when IBS-B occurs as well, you are very unhappy.

The only way to cure this problem is for the jejunum and the ileum to be slowed down; either by relaxing them or by paralysing them. We learn to do these two things later.

*Symptom Summary for IBS-D subtype II+III...* about 10-15 minutes after a meal containing cereal fibre, borborygmi and cramping can start. Diarrhoea can happen a few hours after this OR in the morning immediately after arising. Cramping may occur when the colon evacuates. Continual diarrhoea and IBS-B worsen the symptoms. Gall bladder removal fixes any fat problems (IBS-B), if diarrhoea is controlled.



*IBS-D subtype I+II+III...*

The diagram opposite is for the variety where the CCK Chemical controller is defective. This causes IBS-B. This complete failure of all brain controllers is the worst type of IBS.

When the duodenum, jejunum and ileum brain controllers are prevented from doing their jobs then the enteric nervous system takes over control of them all. When you sit down to breakfast and eat some cereal, and the stomach starts to pump food soup into the duodenum a few minutes later, borborygmi start.

The enteric nervous system moves the soup at supersonic speed all the way along the small intestine to the end of the ileum. It can take a few hours to do this and the borborygmi are symphonic. Cramping may occur.

If the pressure from the enteric nervous system is high enough the soup moves straight into the colon, and this evacuates immediately. If diarrhoea continues for a few days then you lose your supplies of bile salts and enzymes. This worsens your symptoms and has the same effect as IBS-B.

If the valve at the end of the small intestine is shut tight (this happens at night), the soup can be stopped by the valve. In the morning when you get up and have a shot of adrenal hormones, the valve opens, and the MORNING RUSH commences. This is a very severe form of IBS and when IBS-B occurs as well, you are very, very unhappy. The only way to cure this problem is for the duodenum, jejunum and ileum to be slowed down; either by relaxing them or by paralysing them. We learn to do these two things later.

*Symptom Summary for IBS-D subtype I+II+III...* very soon after starting a meal containing cereal fibre, borborygmi and cramping can start. Diarrhoea can happen a few hours after this OR in the morning immediately after arising. Cramping may occur when the colon evacuates. Continual diarrhoea and IBS-B worsen the symptoms. Gall bladder removal fixes any fat problems (IBS-B), if diarrhoea is controlled.

		Irritable Bowel Syndrome - Diarrhoea (IBS-D) - Symptom and Fault Summary				
		Brain controller.....				
#	CCK Chemical	I Duodenum	II Jejunum	III Ileum	Subtype	Symptoms
1	0	0	0	X	III	Borborygmi starts 2-4 hours after eating. Diarrhoea can occur a few hours later or in the morning on arising.
2	X	0	0	X	III + CCK	Borborygmi starts 2-4 hours after eating. Diarrhoea can occur a few hours later or in the morning on arising. Severe symptoms and difficulty digesting fats.
3	0	0	X	X	II + III	Borborygmi starts about 10-15 minutes after eating. Diarrhoea can occur some hours later or in the morning on arising.
4	X	0	X	X	II + III + CCK	Borborygmi starts about 10-15 minutes after eating. Diarrhoea can occur some hours later or in the morning on arising. Severe symptoms & difficulty digesting fats.
5	0	X	X	X	I + II + III	Borborygmi starts immediately after eating. Diarrhoea can occur some hours later or in the morning on arising.
6	X	X	X	X	I + II + III + CCK	Borborygmi starts immediately after eating. Diarrhoea can occur some hours later or in the morning on arising. Severe symptoms & difficulty digesting fats.
	X = defective and 0 = functioning					

### *IBS-D Summarized...*

Opposite is a table summarizing IBS-D.

You can see that all six subtypes of IBS-D have these things in common. The ileum brain controller does not work, and when two or more transport controllers are defective, then they are consecutive.

Because of this it is impossible for those with IBS-D to have bloating as a symptom. There is no barrier created. There may be constipation caused by paralysing foods, but no bloating.

So the diagnostic symptoms for IBS-D are...

### **Diarrhoea and NO Bloating.**

So even though you may have lots and lots of symptoms,  
these are the only two that matter...

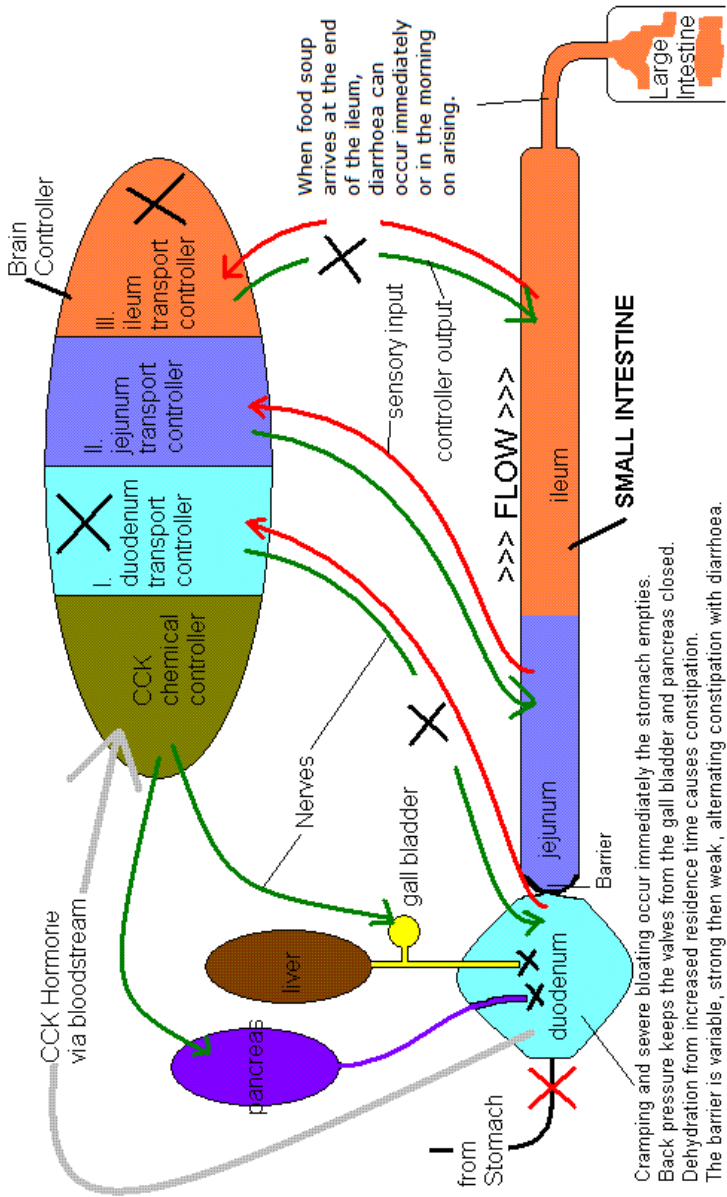
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Congratulations!  
You have graduated from the IBS-D master-class.

Next IBS-A... these guys have double trouble...

**IBS-A**

Here IBS-C subtype I and IBS-D subtype III occur together. Constipation and bloating are followed by diarrhoea controlled by the valve at the end of the small intestine.



## *Irritable Bowel Syndrome - Alternating (IBS-A)*

This type of IBS is caused by one combination of brain controller faults, and it can also have IBS-B occurring with it. This creates a total of two subtypes. IBS-A is actually a combination of two subtypes that we have already met.

These are IBS-C subtype I and IBS-D subtype III.

There is one difference from the explanation for IBS-D subtype III. The timing of the borborygmi is different as it can only happen some hours after the jejunum barrier is relaxed. Go back and read the explanation for these two subtypes and combine them. It's not nice is it. The alternation of the two principal symptoms constipation and diarrhoea, depends on the state of the autonomic nervous system. If it is at a high level the jejunum barrier is strong and it may last long enough to produce sufficient dehydration to cause constipation. If it relaxes quickly in the evening the jejunum barrier is released and food soup will arrive at the end of the ileum before morning and cause the 'morning rush'.

*Symptom Summary for IBS-A...* severe bloating and cramping in the upper abdomen when a breakfast is eaten that contains cereal fibre. There is constipation and difficulty digesting fats. Borborygmi starts a few hours after the jejunum barrier is relaxed and diarrhoea can occur in the morning on arising, or earlier in some cases. Gall bladder removal does not improve digestion of fat regardless of whether IBS-B occurs.

### *IBS-A Summarized...*

Those with IBS-A have both bloating and diarrhoea as symptoms. There will be constipation too, but this can have many causes.

So the diagnostic symptoms for IBS-A are...

### **Diarrhoea AND Bloating.**

Even though you may have lots and lots of symptoms, these are the only two that matter...

Well you have seen it all. The King is totally stripped bare...



*The IBS Strip Show...*

Irritable Bowel Syndrome - Fault Summary						
Brain controller.....						
#	CCK Chemical	I Duodenum	II Jejunum	III Ileum	IBS Type(s)	IBS subtype
1	X	O	O	O	B	CCK
2	O	X	O	O	C	I
3	X	X	O	O	C & B	I + CCK
4	O	O	X	O	C	II
5	X	O	X	O	C & B	II + CCK
6	O	X	X	O	C	I + II
7	X	X	X	O	C & B	I + II + CCK
8	O	O	O	X	D	III
9	X	O	O	X	D & B	III + CCK
10	O	O	X	X	D	II + III
11	X	O	X	X	D & B	II + III + CCK
12	O	X	X	X	D	I + II + III
13	X	X	X	X	D & B	I + II + III + CCK
14	O	X	O	X	A	I + III
15	X	X	O	X	A & B	I + III + CCK
X = defective and O = functioning						

Wow! What we have here is all the King's fifteen costumes stripped off and laid out for you to see. As the researcher, I consider them all beeeautiful. As the seriously ill man, I would like to strangle the bastard and burn the lot.

Instead I am laying him out for you to see, revealing his beauty and his ugliness. I need your help. I want to kill him, put him on a funeral pyre, and incinerate everything.

We can do it. All we need is INTENT

### *Factors Modifying IBS Symptoms...*

IBS produces a vast range of symptoms in its victims. If you compare two subjects with the same brain fault(s), then the symptoms that they each suffer from can appear to be very different.

I am going to try to explain why...

### *Food Factors...*

These affect the speed set by the enteric nervous system in the defective part(s) of your small intestine.

The higher the speed, the stronger any barrier is, and the more severe the borborygmi, bloating & cramping are. The higher the speed, the faster a defective ileum moves food into the large intestine. At very high speeds the ileum pushes food through the valve at the end of the small intestine immediately. At lower speeds the food soup waits at the end of the ileum until the valve opens in the morning.

Cramping can occur from the extreme effort that the muscles lining the intestine are making to achieve the set speed. Cramping can also occur in the colon when it receives food from the ileum that has fat in it, or high levels of digestive enzymes and bile salts. It tries to get rid of these as soon as possible.

At very low speeds it is likely that constipation will occur. A strong barrier of course produces a complete halt for long periods, causing dehydration to occur before it should. This dehydration makes the later processes of the small intestine much harder to complete and so they take longer. This makes constipation worse. When you eat paralysing foods as well (see below) then you get a complete blockage requiring laxatives to shift.

*Fibre...*

There is a huge range of fibre types in food. Some are very stimulating to the enteric nervous system (cereals, legumes & root vegetables) and the enteric nervous system sets a high speed and causes your symptoms to be severe. Some are gentle (fruits and above ground non-fibrous vegetables), the speed is medium and your symptoms are much less. Others hardly raise a sweat (nuts & animal foods), the speed is at a minimum and it produces almost no symptoms at all.

<i>Fibre Type</i>	<i>Speed</i>
Wholemeal cereal flours	Supersonic
Whole brown rice	Very fast
Whole white rice	Fast
Whole legumes	Supersonic
Split legumes	Very fast
Root Vegetables	Fast
Above ground vegetables	Medium
Fruits	Medium
Animal foods	Slow
Nuts	Slowest

*Paralysing Foods...*

These are foods that have special properties. They reduce the speed of the digestive system and there is more time for dehydration to occur. The trick is that you will only see them at work when foods containing stimulating fibre are not eaten. These foods are cereals, legumes and root vegetables. If they are eaten, their stimulation overpowers the effects of the paralysing foods.

The paralysing foods are...

- Cooked Animal Foods... when you cook meat, fish and eggs, chemicals called Heterocyclic amines (HCAs) are formed. These have an anaesthetic action in the digestive system. We learn more later about HCAs.
- Dairy Proteins... these contain special opioid peptides (short chains of amino acids), that likewise anaesthetize the digestive system. Again we learn more later.
- Gluten... this is the protein found in wheat and some other cereals. It contains opioid peptides just as in dairy protein.
- Banana... this fruit slows the digestion. The mechanism is unknown.
- Bitter & Astringent Tastes... these tastes cool and dry the digestion, and slow it down.

This means that if you do not eat cereals, legumes or root vegetables, then you can give yourself constipation (even with severe IBS-D), by eating these paralysing foods.

### *Digestive Factors...*

When the small intestine malfunctions, the heart of the digestion is faltering...

- A defective duodenum can no longer emulsify fats and mix in enzymes. In fact if a jejunum barrier occurs, then very little bile and enzymes can be released due to the back pressure. The degree of digestive impairment depends on diet, lifestyle, constitution and disease state. So you can get very mild symptoms or very severe symptoms and everything in between.
- A defective chemical controller in the brain means that not enough bile is released to digest fats. These then coat the inside of the small intestine, hindering nutrient uptake, chemical recycling, and causing evacuation of the colon. The severity of symptoms depends on the type of fat eaten, how much fat is eaten, lifestyle, constitution and disease state.

- A jejunum barrier means that very little plant fibre can be eaten without severe bloating. So food intake is cut back. Dehydration occurs in the duodenum and the resulting constipation can be aggravated by paralyzing foods. The food soup becomes too thick and this impairs nutrient uptake in the jejunum and chemical recycling in the ileum. Constipation becomes worse as the jejunum and ileum need to retain the soup longer to carry out their functions. The strength of the barrier depends on the type and amount of fibre, the state of the autonomic nervous system, lifestyle, constitution and disease state.
- A defective jejunum can no longer regulate the uptake of nutrients. Uptake is dependent on when and what is eaten and simple diffusion. So the uptake of carbohydrates is insufficient when it is cold, and this may cause Raynaud's disorder (frozen fingers, toes and face). When it is hot, the uptake of nutrients cannot be reduced and this may cause overheating.
- An ileum barrier causes constipation and makes the job of the ileum more difficult as dehydration occurs in the jejunum and the soup is too thick when it finally enters the ileum. Chemical recycling is slowed and constipation becomes worse as the ileum must retain the soup longer. The strength of the barrier depends on the type and amount of fibre, the state of the autonomic nervous system, lifestyle, constitution and disease state.
- A defective ileum cannot regulate chemical recycling and it then depends on simple diffusion. This takes lot longer than regulated mixing. Also it pushes food soup containing high levels of bile salts and enzymes into the colon before recycling is complete. When this continues the bodies supply of these chemicals is depleted. They cannot be manufactured quickly enough to compensate for the loss. The liver and pancreas go into emergency mode and demand resources from the rest of the body so they can make as much as they can. Cholesterol is needed to make bile salts and the bodies largest supply is in the brain. When the brain has to give up some of its cholesterol this causes depression. When the supply of chemicals becomes low there may not be enough to digest the next meal. This will cause indigestion

and aggravate your IBS. The speed of the ileum depends on the type and amount of plant fibre that you have eaten, lifestyle, constitution and disease state.

Nasty isn't it. This all adds up to lots of very variable distressing symptoms, which of course causes STRESS which makes them all worse! Read on...

### *Lifestyle Factors...*

These affect the amount of adrenal hormones released. High levels of hormones cause the autonomic nervous system to be in an elevated state. Low levels cause the autonomic nervous system to be relaxed.

Now the small intestine is controlled by five divisions of the autonomic nervous system. The four brain controllers, and the enteric nervous system (acting as backup controller). So IBS symptoms are affected by lifestyle and behaviour that raises and lowers the levels of adrenal hormones. When adrenal hormones are low (a relaxed state), symptoms are less. When adrenal hormones are high (a stressed state), symptoms are worse. IBS symptoms cause stress and stress makes symptoms worse. But...

\*\*\*Stress does not cause IBS\*\*\*

Adrenal hormone levels rise and fall in natural cycles. They are high just after rising in the morning. At this time, IBS symptoms are worst. Bloating & cramping are worse and the morning rush can happen as the terminating valve opens. During the day if a stressful event occurs, adrenal hormone levels rise further and increase symptoms. Overnight the levels fall, bloating & cramping subside and the terminating valve is firmly shut.

Now here is the good part... we can learn to lower our adrenal hormone levels! This is called *Relaxation Therapy*. These therapies come in many flavours and all of them teach how to lower adrenal hormone levels and keep them low. When this can be done then symptoms are minimised. More later...

### *Malnutrition...*

Modern diets cause malnutrition. Processed foods are low in nutrients, and their consumption causes digestive impairment. Cereals, legumes and root vegetables damage the digestive system and depress the immune system. When IBS occurs as well then this causes multiple symptoms of malnutrition, and distress.

### *Constitution...*

Some types of people suffer more from their IBS symptoms than others do, due to their physical makeup. See the next section entitled 'Ayurveda and IBS'.

### *Age...*

This plays a big part in the intensity of IBS symptoms. When we are young our IBS is not so bad. As we get older, it increases in intensity. When we are very old, it is worst. See the next section entitled 'Ayurveda and IBS'.

### *Climactic Factors...*

Cold and dry conditions worsen symptoms, warm and wet conditions improve symptoms. We look at the reasons for these three factors in the next section on Ayurveda.

### *The State of your Illness...*

When you have a defect that causes a neurotransmitter deficiency (or deficiencies) to develop in your small intestine brain controller, this does not happen overnight. The deficiency usually develops gradually. As an example I will use my illness of IBS-D... at the age of fourteen some symptoms started. From then on they occurred irregularly until about age 45 years. Sometimes there would be an interval of as much as a few years between occurrences of IBS symptoms. However by about 45 years old I started to get the 'morning rush' everyday. By about age 50 I was severely ill and losing weight rapidly.

### *Doctors Diagnosis...*

The doctor has diagnosed your illness as IBS. Now doctors do not know (yet) what causes IBS. They cannot even agree on a set of symptoms that they can define as IBS. So they end up diagnosing IBS when they cannot find a reason for your illness. There is nothing wrong with your digestive system and yet it does not work!

**\*\*The doctor might be wrong. You may not have IBS\*\***

But don't worry, the treatment diets that follow can fix you up even if you have some other illness. Even if you cannot fit your symptoms into the categories I have described, all you have to do is to eat one of the diets. If the Easy IBS Diet does not work, then try the IBS Eskimo Diet or the IBS Fruit Diet.

### *The Diagnostic Symptoms...*

By now you will realize just how much food, lifestyle, behaviour, constitution, age, climate and disease state can influence your symptoms, and why your flavour of IBS is unique. I have devised some diagnostic symptoms to identify each type of IBS. We met these earlier but I will briefly restate them...

- IBS-C produces constipation and NO diarrhoea.
- IBS-D produces diarrhoea and NO bloating.
- IBS-A produces diarrhoea AND bloating.
- IBS-B produces severe symptoms and steatorrhea (this one is a bit difficult though and not as clear cut).

I hope this lets you navigate through the symptom fog and understand a bit more about your illness. The good news is that it does not matter which flavour of IBS that you have, or even if you cannot identify your type. The dietary treatment programs treat all types of digestive disorders!



## *Ayurveda & IBS...*

The ancient health science of Ayurveda has a clever way of explaining why each person is affected differently by IBS.

### *Ayurvedic Constitutions...*

In Ayurveda, everyone is classified into different combinations of constitutions or doshas. The three basic doshas are...

- *Vata* - means 'that which moves things'. Vata has the properties of grey, cold, dry, light, rough, subtle and agitated.
- *Pitta* - means 'that which digests things'. Pitta has the properties of yellow, hot, moist, light, oily, sharp, mobile, and unpleasant in odour.
- *Kapha* - means 'that which holds things together'. Kapha has the properties of white, cold, moist, heavy, dull, sticky, soft and firm.

We all have these three doshas in us. Most of us have more of one (or two) and less of the others.

### *Constitutional Disorders...*

- Vata disorders show loss of coordination, emaciation, tremors, distension, constipation, cold diarrhoea, insomnia and depression. They mostly affect the nervous system, joints and transport systems of the body.
- Pitta disorders show heat, hunger, thirst, hot yellow diarrhoea, and burning sensations. They are fevers, inflammations and infections.
- Kapha disorders show digestive depression, nausea, lethargy, heaviness, chills, coughing, breathing problems and excessive sleeping. They affect the upper chest and clog up the tissues, lungs and digestion with watery fluids.

### *IBS and Vata...*

IBS symptoms are aggravated by cold, windy & dry conditions, and it is a transport and nervous system disorder. So IBS is a disorder of VATA. When Vata is high then IBS symptoms become worse.

- Vata becomes more prominent as we get older. We become grey, dry, lose weight, and feel the cold.
- Vata is increased by a cold, windy and dry environment (Winter & Alpine/Arctic regions).
- If we were born with more of the Vata dosha in our constitutions, then our IBS symptoms will be more severe (Vata people are uneven in their body symmetry).

### *The Tastes of Food...*

Ayurveda classifies food into six tastes. Each taste has the following properties...

- Sweet... is building, strengthening, nutritious and cooling. It gives contentment. Excess causes depression and excessive growth of body tissue.
- Bitter... is cooling & detoxifying. It reduces body tissue and lightens the mind. Excess causes depletion and depression.
- Astringent... is cooling and dehydrating. It helps the body heal and form the stool. Excess causes dryness and depression.
- Pungent... is heating, stimulating, improves digestion and causes sweating. It promotes all functions of the body. Excess causes anger, excessive appetite, diarrhoea and dehydration.
- Sour... is heating, stimulating, nutritious and it relieves thirst. It increases body tissue and maintains acidity. Excess causes retention of body fluids, and bloating.
- Salty... is heating, softening, stimulating, maintains minerals, and increases fluids, in small amounts. Larger amounts may cause bloating, have a laxative action or even cause vomiting.

Foods have a taste in the mouth and a taste after they have been digested. For most foods this is the same, but some change after digestion. An example of one of these foods is ripe banana. We use this useful fruit later in the treatment programs. Understanding how the tastes of food affect the body, makes the art of treating IBS with it, more effective.

*Lifestyle Factors aggravating Vata...*

The way we live our modern lives aggravates Vata. Here are some of the habits we have that make our IBS worse... eating leftovers, eating heat treated foods, eating out of season foods, food additives, high fibre diets, high starch diets, low fat diets, sleeping in, staying up late, shaving, using soap, toothpaste and cosmetics, pollution, driving, travelling, travelling fast, wearing synthetics, using plastics, airconditioning, artificial lighting, electricity, electric appliances, computers, telephones, excessive talking, television, movies, drugs, not having a siesta in mid-afternoon, no exercise or too much exercise. Vata rulez!

*Treating excessive Vata...*

Vata is reduced with diet and medicine featuring sweet, sour, salty and pungent tastes. A typical Vata reducing diet is the Inuit or Eskimo Diet. This diet is designed for the very cold, windy and dry conditions of the Arctic. Typical Eskimo foods are cooked red meat (sweet, salty and pungent), fermented fish, meat & fat (sweet, sour, salty and pungent), raw fish, liver & organs (sweet, salty and pungent) and fats (super sweet). These foods give large amounts of calories, strength, heat, and hydration in Arctic conditions. They also contain no plant fibre and cause no IBS symptoms!

If you would like to know more about Ayurveda then the author recommends a good book. See the resources section...

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*Assumptions...*

The hypothesis fleshed out in this chapter has been pieced together from observing the symptoms of different types of IBS over many years. It accounts for all of the major symptoms of each type. BUT the evidence is circumstantial and I have had to make some assumptions. Future research will confirm or deny the hypothesis. The treatment programs have no assumptions and are based on solid long-term research. Each one has been tested over at least a whole year and the bugs have been ironed out. You can have complete confidence in them.

## Summary...

?So how is IBS caused again?

\*\*\*IBS is caused by a failure of the nervous system to control the batch processes of the small intestine\*\*\*

Was that enough?..... Ok, ok, I will give you a little more.

The small intestine has three parts... in order, the duodenum, the jejunum and the ileum. Food is processed in batches. Each part of the intestine has a brain controller with a unique neurotransmitter. There is a fourth brain controller for managing digestive chemicals. These are bile salts and pancreatic enzymes.

The brain controllers sometimes fail. This can be due to a neurotransmitter deficiency, a toxic insult to the walls of the small intestine, or a failure to develop the nervous system fully in infancy. There may be other causes.

The enteric nervous system has a backup role. It takes over when any brain controllers fail. It cannot do the job of the brain and instead just moves food along. When you eat plant fibre, the enteric nervous system goes too fast.

When a brain controlled part follows a part controlled by the enteric nervous system, and you eat plant fibre, then the too fast speed is sensed by the brain controller and it blocks the intestine. It is programmed to manage the speed of food so that it goes slowly. This barrier causes constipation, bloating and cramping.

When the final part of the intestine is controlled by the enteric nervous system, there is no brain controlled part following. Now food containing plant fibre is moved fast into the colon. The food has not been digested properly and can contain fats, raw bile salts and enzymes. These cannot be tolerated in the colon and it is evacuated immediately causing diarrhoea.

The control systems of the small intestine are all automated, they are part of the autonomic nervous system. This division of the nervous system is influenced by adrenal hormone levels. When these hormones are high the autonomic nervous system is at a high level, and when they are low it is at a low level.

There are natural daily fluctuations in the levels of adrenal hormones. They are high in the morning soon after arising, and cause the valve at the end of the small intestine to open. This is when the 'morning rush' occurs, and when breakfast is eaten, the strength of any barrier is strong. Overnight adrenal hormones drop to low levels, and the autonomic nervous system is relaxed. This causes the valve at the end of the intestine to close firmly and any barrier to relax.

IBS causes stress. Stress is also caused by modern lifestyles. Stress raises the level of adrenal hormones, and the level of the autonomic nervous system. This makes IBS worse.

There is no possibility of a cure for IBS, you have it for life. BUT you can remove most or all of your symptoms by changing your diet. This involves removing the offensive plant fibre causing your IBS, and slowing down the part controlled by the enteric nervous system.

You can also learn to influence the autonomic nervous system, and reduce your symptoms by doing Relaxation Therapies.

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Far out... well since you have got here, I guess that there is understanding? A good sleep will straighten things out if you still have blanks, and of course you can read it again!

The next chapter is very good (if I may say so).  
Well worth the price of the book.