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## The Sourdough Difference 03

### ***Carbohydrates: the most misunderstood controversial food constituent, and how they fit into a healthy, balanced diet.***

*Carbohydrates are an essential part of a healthy diet. There is a huge difference between simple and complex carbohydrates. Wrong modern preparation methods and incorrect eating habits of complex carbohydrates have led to many gastrointestinal disorders and diseases. Anyone that wants to consciously strive for a healthy diet needs to understand the carbohydrate issues to prevent serious health consequences.*

The latest revision of the classic food pyramid, promoted 20-30 years ago, symbolizes our need to be skeptical of the facts that authoritative organizations or individuals come up with. The underlying innuendo is that complex carbohydrates are rightly blamed for many modern gastrointestinal disorders, like ulcerative colitis, Crohn's disease, Celiac disease, diverticulitis, and various types of chronic diarrhea. What is not understood is that it is our modern preparation methods that are to blame for this epidemic outbreak of intolerance of a whole food group. Our ancestors relied heavily on complex carbohydrates, namely as bread, for their daily nutritional intake. Grains have and are still feeding the majority of our population. It is just that with the aid of modern chemistry that our daily bread managed to go from being healthy to compromising our health.

In my personal library, which is rather extensive, I have books baking, archeology, diverse diets, medical information and more, but the most enlightening insight on the subject of carbohydrates I found in the book called Breaking the Vicious Cycle: Intestinal Health through Diet, by Elaine Gottschall, B.A., M.Sc. In its first chapter, "Past and Present", startling information regarding this issue. It is with my own background of investigative research, gained over the past 15 years into anything relating to bread, that I came across substantiating evidence for what I believe is largely to blame for the massive outbreak of grain intolerances.

Having studied and analyzed modern baking practices it is no big surprise that we are experiencing epidemic proportions in this matter. In the past 100 years the preparation methods for making bread has systematically escalated into an alien food that is causing sickness rather than nourishing us. We have to look in retrospect and ask ourselves, what changed, why, and how can we prevent further slipping into a dilemma which can jeopardize not only individual health but actually our whole existence as the human race on our planet. One may be tempted to belittle the situation, but let me point out that grains are feeding the world, and people that are either sensitive, allergic or have related disease are rising dramatically. Estimates from experts go as high as 50% or more of the populace is affected by one stage or another already.

If evolution has any solid foundation, and we know that roughly 10 000 years ago our esthetical civilized humans started agriculture and the first cities. Since then, it has risen to our present technologically advanced specimen. That our daily bread facilitated much of this rise in prosperity, it is conclusive that it must not have harmed our ancestor, and instead, it provided a solid food provision, so appropriately named the 'Staff of Life'. So, what happened to it, what changed? Instead of nourishing us and providing us with a staple food, it now seems to be bucking us and nipping us in the rear in widespread and developing allergies, sensitivities, and in the most extreme cases, disease.

What happened? Wrong preparation methods of wheat and the other grains that make up our staple food. New inventions and discoveries in the past 100 years coupled with industrialization changed a once healthy food into a health compromising food. Here comes the contentious, and mostly misunderstood, carbohydrate issue. I have to keep it to a minimum since I have limited space, but here it is in a nutshell:

Simple carbohydrates are made of single or double sugar molecules, called Monosaccharides and Disaccharides, respectively. These are largely found in fruits and certain vegetables. Complex carbohydrates are made from multiple or many sugar molecules called Polysaccharides. All grains are made of starch or multi sugar molecules. Simple carbohydrates (sugars) are easily digestible; all complex carbohydrates need to be converted into simple sugars first and then they are digestible. This fact is why fruits and vegetables or your average chocolate bar is quick energy but does not last long and you get hungry again. As Elaine Gottschall explains nicely in Breaking the Vicious Cycle, "'Predigested' or simple sugars can easily pass through the intestinal absorptive cells, enter the bloodstream, and nourish the body, whereas complex carbohydrates need to undergo extensive digestion or break down into simple sugars before they are able to be absorbed into the bloodstream." You can understand why bread, being a complex carbohydrate became the Staff of Life; it stilled the hunger for a much more extended period of time, and provided a slow release of energy over a longer time, like a marathon runner compared to a sprinter. This also plays a huge role in modern obesity; since most of our foods are snack derived and we consume high caloric foods more often, instead of eating a slice of bread.

Our ancestors fully understood this concept. The evolution of agriculture went hand in hand with fermentation practices prior to consumption any grain planted as a crop in the field. It is a toss up if beer making or sourdough bread was the very first fermented food, but it has been well established through archeological findings that all grains were fermented before consumption. This fermentation is to make it digestible of is the 'predigesting' stage of it. It is no coincidence that the same type of bacterial cultures predominantly present in our own gastrointestinal tract, such as *Lactobacillus*, is responsible for fermenting in traditional bread, which was the Sourdough Bread our ancestors baked.

Modern laboratory alchemy has concocted 'dough conditions' that are man made synthetic replicates of the acids produced by natural fermentation. 90% or more of today's breads rely on dough conditions. This same goes for the yeast fermentation, being of a mono culture only in the way of 'baker's yeast'. The time has come to retrace our steps and to analyze where we have gone wrong in light of the problems we are encountering with complex carbohydrates. Our ancestors ate primarily sourdough bread. Raw grain was avoided because they knew it would cause problems. Modern food chemistry allows unnatural foods to be manufactured that are not intrinsic or beneficial to a healthy sustainable diet and eventually leads to diseases that were uncommon up until now.

Again and again the problem is staring us in the face. It is time to reevaluate and come to our senses in light of these pressing facts. We have naturally fermented many foods prior to eating them, but the most important one is to ferment grains prior to consumption and bake 'Sourdough Bread' from it.

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