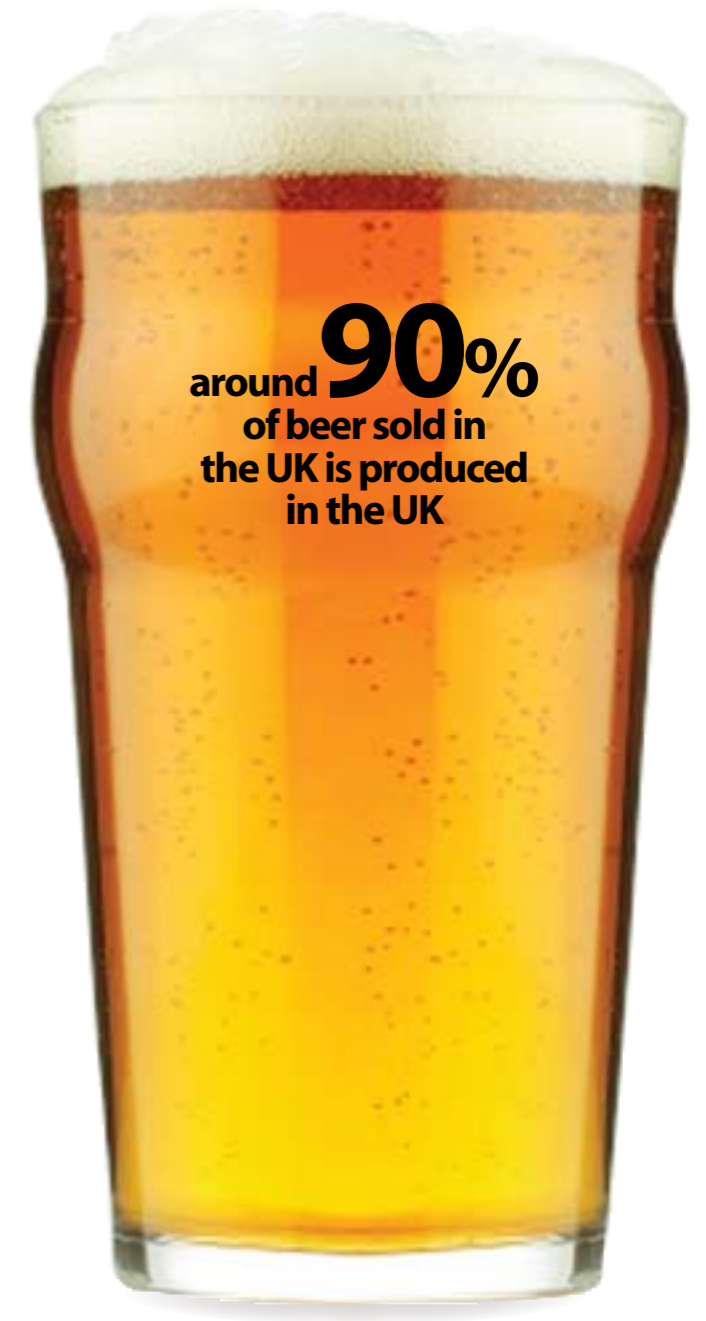




**Beer,
the natural
choice?**



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Everything you think about beer is about to be turned on its “head..”

Beer – the nutritional ‘superdrink’?

Recent headlines would have us believe that red wine drinkers enjoy good health, while those who choose beer are at risk of exactly the opposite. However a closer look at the nutritional content of beer tells a very different story. Beer, when drunk in moderation is one of the healthiest alcoholic drinks around, known down the ages as ‘liquid bread’.

“Beer is sometimes thought of as an unhealthy drink,” explains Dr George Philliskirk, a biochemist and founder member of the Beer Academy. But, as scientists learn more about the properties of beer, it is clear that hidden away in this seemingly understated, thirst quenching drink is an abundance of health giving properties.

10%
still wrongly think
that beer contains
fat. Beer contains
zero fat and zero
cholesterol

In many parts of the world it is often safer to drink beer, which is hostile to harmful bacteria, than water. In medieval times, in areas where the water supply was contaminated with diseases such as dysentery and typhoid, children drank a specially brewed “small” beer which prevented illness and gave them much needed year round nutrition.

Even today, drinks with a high alcohol content such as wine and spirits are not the best choice to maintain hydration, as they increase the amount of water the body loses. However, because normal strength beers and ciders are much lower in alcohol, drinking them helps maintain balanced hydration⁽¹⁾.

Beer contains vitamins which can help you to maintain a well-balanced healthy diet, fibre to keep you regular, readily absorbed antioxidants⁽²⁾ which may protect you against heart disease and some cancers; and minerals such as silicon⁽³⁾ which may lower your risk of osteoporosis⁽⁴⁾. It is low in sodium (salt) and high in potassium, a mineral that helps to control the balance of fluids in the body and possibly contribute to controlling blood pressure^(4a).

Like wine and spirits, beer also contains ethanol – alcohol – which when taken in small amounts is thought to be a protective factor for



over **34%**
of British men
incorrectly believe
that beer has more
calories than other
alcoholic drinks

a whole range of health issues. These include atherosclerosis⁽⁵⁾, an inflammatory disease of the blood vessel walls, strokes, Type II Diabetes⁽⁶⁾, gallstones⁽⁷⁾, Parkinson’s Disease⁽⁸⁾, and dementia⁽⁹⁾. In addition it has been found to raise the amount of ‘good’ HDL (High Density Lipoprotein) cholesterol in the blood⁽¹⁰⁾ which is associated with a lowering of the risk of coronary heart disease.

Let’s examine the vitamins in beer. Beer is mostly made from barley. When malted, barley is a very rich source of B group vitamins including nicacin, riboflavin(B2), pyridoxine (B6), folate(B9) and cobalamin (B12). It is these vitamins which, research is suggesting, are providing the protection against cardiovascular disease, especially when compared to red wine and spirits⁽¹¹⁾.

That translates into an awful lot of goodness. According to the US Department of Agriculture,

**Beer may just qualify
as a superfood but
only when enjoyed in
moderation**

a half pint of beer contains on average 7% of daily folate requirement for an adult and 9% of the required vitamin B2 intake.

The hops, the plant which gives the beer its bitter taste, are brimming with healthy potential. And because beer is virtually the only nutritional source of hops, then it gets the exclusive on the benefits!

“If malt is the soul of the beer then hops are the spice,” says Professor Charles Bamforth Professor of Brewing Sciences at the University of California. “The hop is an ancient plant, said to aid digestion, ease constipation, overcome premature ejaculation and soothe anxieties.”

Now new research is uncovering the science behind these legends. It appears that the flavanoids in hops may help to reduce the risk of cancer^(12a&b), diabetes⁽¹³⁾, obesity⁽¹⁴⁾ and improve levels of good cholesterol⁽¹⁵⁾.

It is important to remember that in almost all instances the research showed a correlation between benefits and a safe amount of alcohol. That is, if you drink within sensible drinking guidelines, then you reap the rewards of all that beer contains. But over that amount and benefits start to decline and the risks increase. And remember for some people the only safe option is to avoid alcohol altogether – for instance children, pregnant women and drivers.

If consumed in moderation and alongside a healthy lifestyle, beer will not cause you to get fat. Blaming the beer belly on the beer is actually nonsense

Deflating the weight issue



Only 94 calories

Of all the health myths surrounding beer, none is more enduring than that of the link between beer consumption and the beer belly.

"I've lost count of the number of times that people have told me that beer makes you fat," says Dr George Philliskirk, biochemist and founder member of the Beer Academy. "And when I tell them it simply isn't true they are usually amazed."

"In fact, if you compare other alcoholic drinks by volume, beer has a relatively low calorific value (see table Calorie comparison). In addition, beer contains absolutely no fat or cholesterol, very few sugars and is low in carbohydrates."

A quick look at the ingredients and processes that go into beer will confirm the logic of the Doctor's words. Beer is around 95% water. The major ingredients are barley and hops,

GI (Glycaemic Index) & GL (Glycaemic Loading)

The Glycaemic Index (GI) and Glycaemic Load (GL) rank foods according to how much they raise blood sugar levels after consumption. Low GI and GL levels are thought to be beneficial in terms of encouraging weight loss and staying healthy whereas high GI and GL values tend to be associated with obesity and the accompanying health problems. GI compares foods on the basis of equal amounts of carbohydrates whereas GL takes into account the quantity of food taken at each serving – a much better indicator of dietary impact. Although beer in analytical terms has a relatively high GI, given the relative serving volume of the beer, it has a low Glycaemic Load (about 6) compared with, say, standard servings of regular cola at 17, apple juice at 11.6 or an energy drink at about 40⁽⁶⁾.

Calorie comparison^(1 & 2)

1/2 pint of 3.8% bitter	85 calories
1/2 pint of 4% lager	94 calories
Medium sized glass of red wine (175ml)	119 calories
Half pint of orange juice	128 calories
Medium sized glass of white wine (175ml)	131 calories
34.5g packet of ready salted crisps	183 calories
275ml bottle of 5% 'alcopop'	179 calories
100g bar of milk chocolate	525 calories
100g salted peanuts	601 calories

Typical Carbonation Levels in Drinks

	Volumes of CO ₂
Champagne	4.5 – 5.0
Carbonated Soft Drinks	3.5-4.0
Lager	2.0 – 2.7
Ale	1.2-1.8

both plant materials, which contain virtually no fat at all.

During the beer-making process, the natural sugar from the barley is converted almost entirely into alcohol with very little free sugar left in the end product. Likewise, much of the plant carbohydrate that cannot be broken down by the yeast comes from the barley cell wall and ends up forming a wholesome dietary fibre content in beer.

A half pint glass of beer will contain about 5.7g of total carbohydrates. Of those, just 2.5g will be free sugar and the rest dietary fibre. A standard (175ml) glass of wine contains 5.9g of carbohydrate but 5.6g of that will be free sugars and wine has no dietary fibre at all⁽³⁾. In common with other drinks, the calorie content in beer mainly comes from the ethanol – the pure alcohol in the drink. As beer is relatively low in alcohol compared to other alcoholic drinks it therefore

stands to reason that it will be relatively low in calories.

In fact when you take a good look at the nutritional facts, it is hard to work out just why beer is linked with excessive weight gain. The research shows that the beer belly has nothing to do with beer drinkers' choice of drink – and everything to do with their lifestyle!

Numerous studies have shown time and again that it is not the beer that causes the weight gain, it is the lifestyle associated with beer drinkers. One very large study, for example, carried out in 2003 and reported in the European Journal of Clinical Nutrition⁽⁴⁾ set out to determine whether beer intake was associated with increased BMI (Body Mass Index) or waist hip ratio (WHR). The study concluded that this was unlikely and even pointed to the evidence that showed moderate beer consumption in women to be linked to lower BMI than those who drank no beer.

Beating The Bloat

None of us enjoys the feeling of a full and bloated stomach, especially not on a night out when we could be wearing our tightest fitting clothes. Indeed, one of the most common complaints about beer drinking, especially from women, is that it can make you feel and look bloated after just a few glasses.

As always with beer, there is a scientific explanation for this phenomena and an equally scientific solution.

"The bloat factor is directly related to the volume that you drink and the amount of CO₂, the carbonation level in the drink" explains Dr Philliskirk.

"Carbonation makes drinks more refreshing but can cause you to feel bloated. The nature of CO₂ also means that when it is served cold and then suddenly warmed up, it reacts with the heat to release the gas. This is exactly what happens when a very cold drink hits a warm stomach, which is why you feel bloated."

"The carbonation in beer is quite low compared to Champagne or fizzy soft drinks (Table: Typical Carbonation Levels in Drinks) which will typically have about twice the CO₂ of a beer. It's probably not the level of fizz that's the problem for beer but the volume drunk."

Try drinking from smaller glasses. Many leading restaurants are now serving their beers in champagne flutes, wine glasses or even brandy balloons. Not only stylish, but a great way to avoid feeling too full to eat.

"Also there are some beers that are lower in carbonation. Traditional cask beers are naturally low in CO₂. And recently some lagers have been deliberately brewed with less carbonation to allow you to drink the beer with food without feeling full."

Essential minerals: the silicon story

Think of a miracle nutrient that protects you against the bone-thinning disease osteoporosis, could improve your skin, ease your joints, help your blood vessels to stay healthy, make your hair look great and even prevent the onset of Alzheimer's. You probably wouldn't have guessed silicon, one of the most underrated and least trumpeted of minerals but essential, nonetheless, for many of the body's anti-ageing functions.

Silicon is thought to play an important role in the synthesis of collagen, the protein found in tendons, nails, hair, vessel walls and skin. Silicon could literally hold your body together, increase your collagen levels and help your body in the fight against ageing.

But silicon is not produced naturally by the body. Our ancestors got their minerals from untreated water that passed through soil, mineral and rocks and from unrefined grains. Now, in this age of highly treated water, the processes used to clean water removes silicon and over-processed food, so that source of silicon has all but vanished. Instead we take it from plants such as green beans, a bowl of wholegrain cereal or certain types of mineral water. And guess what? There is also a very high concentration of silicon in beer⁽¹⁾.

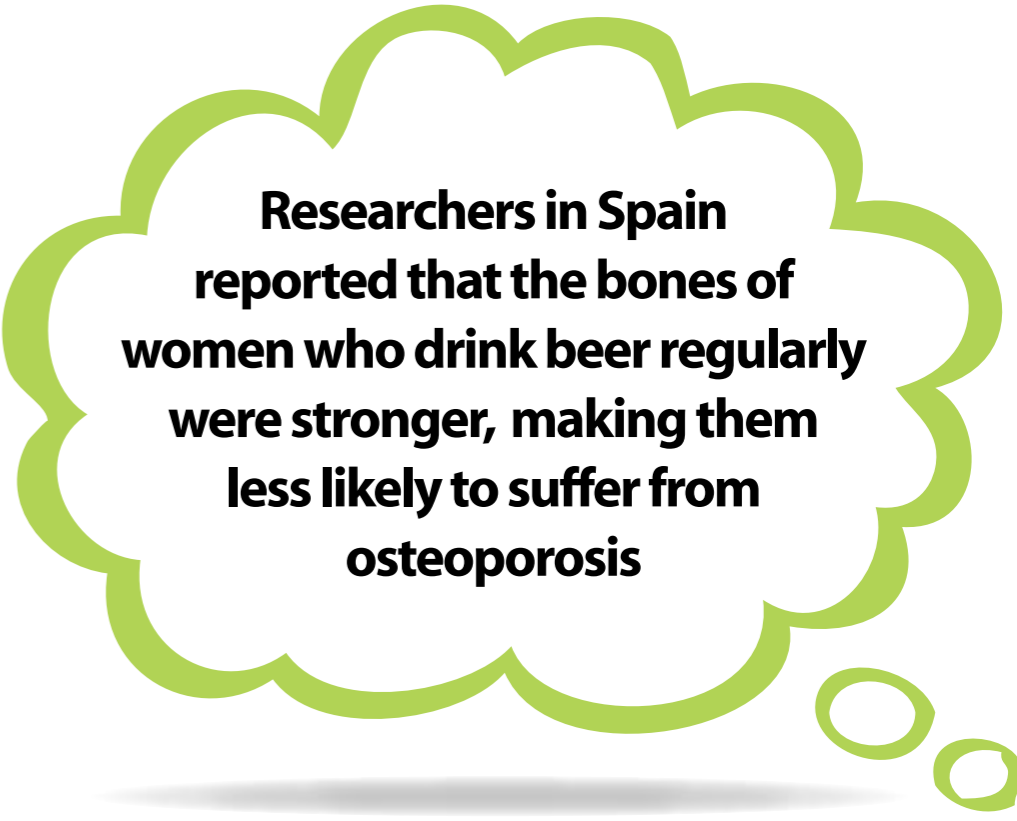
"Silicon is found in large amounts in the husk of barley, the very substance that is used in the beer-making process and is dissolved into the fluid of the beer," says Professor Jonathan Powell Head of MRC Human Nutrition Research in Cambridge (and visiting chair of Medicine at King's College London), the first scientist to show a link between the effects of silicon and bone density⁽²⁾.

"Even so we were surprised to find that some of the beers we tested were literally drenched with silicic acid (silicon).



Only **2%** of people realise that beer contains a valuable source of silicon

1/2 pint
of beer contains **8mg of silicon**
Average intake of silicon is around **30mgs a day**
A glass of beer would provide around **1/3** of that amount



Researchers in Spain reported that the bones of women who drink beer regularly were stronger, making them less likely to suffer from osteoporosis

"We found that half a pint of beer contained around 8mg of silicon. Considering that the average intake of silicon is around 30mgs a day you can see that a glass of beer would provide around a third of that amount."

Professor Powell's initial studies measured the density of bones in the hip and spine of more than 1,200 men and 1,500 women and analysed this in relation to the amount of silicon that they consumed. His results showed that the higher their silicon intake, the denser their bones⁽³⁾.

More recently, researchers in Spain reported that the bones of women who drink beer regularly were stronger, making them less likely to suffer from osteoporosis, a disease which affects around three million Britons and causes an increased risk of bone fractures. Around 1,700 healthy women underwent ultrasound scans of their hands, chosen because hands are the first to show signs of the disease. Those who drank even

a small amount of beer, under the Government recommended safe alcohol guidelines, had a significantly higher bone density than those who never drank beer⁽⁴⁾.

Recently Professor Powell has shown that some of the effect of moderate beer consumption on bone mineral density is attributed to the silicon content of beer⁽⁵⁾.

"Scientists have pinpointed that silicon is active in the regeneration of connective tissue," says Professor Powell. "It is early days but we are moving towards the theory that silicon is important in all the areas that people worry about most – their joints, skin, blood vessels and therefore their heart. As we all age these areas of health will become even more of an issue."

Understanding units



Average Strength⁽¹⁾

Beer	4.2%
Alcopops	5%
Cider	5%
Wine	12.6%
Spirit	37.5 – 40%

Over the last few years millions of pounds and several times as many words have been spent making everyone aware of units and urging us all to drink within the Government's daily guidelines.

But what do units actually mean?

Some people may know that one unit of alcohol is exactly 10ml of pure alcohol (equivalent to 8 gms by weight). Many more know that the UK Government's sensible drinking guidelines say that we should not regularly drink more than three or four units per day if you are a man – and two to three units per day if you are a woman⁽²⁾. But do people know how many units there are in a typical serving of their favourite drinks? The evidence suggests many still do not.

Units are not always easy to understand in everyday life. Many wines now have an alcohol content of 13 or 14% (by volume), and glass sizes range from 125ml to 250ml making it complicated to keep track of your drinking. So a single glass of wine can easily contain 3.5 units of alcohol.

With spirits, which like wine are predominately consumed at home, self-pouring can lead to a higher number of units being consumed than realised. Whilst a single measure (25ml) of a



Units in typical servings of alcoholic drinks⁽³⁾

BEER	Half pint	Pint
4%	1.1	2.3
5%	1.4	2.9
WINE	12%	14%
Small 125ml	1.5	1.8
Medium 175ml	2.1	2.5
Large 250ml	3	3.5

SPIRITS (40%)

Single small pub measure (25ml)	1
35ml measure	1.4
Double	2

TYPICAL HOME Poured MEASURES⁽⁴⁾

57ml	2.3
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40% spirit equates to around 1 unit of alcohol, a recent BBC study found that most people considerably over-estimated what a single measure was when asked to pour this themselves.

For beer it is generally easier. Beer is primarily sold in single-serve containers and over 90% of the beer sold in cans and bottles is now labelled to show the exact number of units in the container. Even in the pub, tracking units is not much more difficult because the strength and serving size for beer are more consistent. Beer is primarily sold in pint or half pint glasses and has alcohol content in the range 3.5% to 5.5%

alcohol. As a rule of thumb, a pint in a pub will normally contain between 2-3 units of alcohol.

Jonathan Neame, Chief Executive of Kent Brewer Shepherd Neame says "The average strength of beer is just under 4.2% making beer the UK's lowest alcohol drinks category. Beer is one of the few alcoholic drinks where you can reduce the alcohol content and still produce an enjoyable drink with good flavours and complexity. In recent years, brewers both large and small, have been creating lower alcohol beers to satisfy the growing consumer demand for beer's flavour and refreshment without wanting to consume large amounts of alcohol."



Beer is one of the few alcoholic drinks where you can reduce the alcohol content and still produce an enjoyable drink with good flavours and complexity

Community spirit

From the earliest recorded use of alcohol by Neolithic man right up to the present day, across every culture and continent, there has been one constant behavioural rule in place. In every society and in every era, beer (or its cultural equivalent) has been always drunk as part of a community activity with solitary drinking seen as taboo⁽¹⁾.

“Our societal attitudes to drinking is one of the few things that have not changed over time,” says Dr Peter March, a chartered psychologist and director of Social Issues Research Centre based in Oxford, who has edited a report on the cultural aspects of alcohol use. “Even back in Egyptian times there were rules and regulations designating when and where people drank alcohol.

“Sometimes the drinking was ceremonial, sometimes celebratory or even quasi-religious. But it was always done in a group and therefore subject to group imposed restraints.”



There is evidence that even ancient societies had a specific designated place for communal drinking – a place that today we would call the pub.

“The pub is not about just drinking alcohol although of course that is generally what we do when we go to the pub,” says Dr Marsh. “A good pub is a place where you can go in as a stranger and come out knowing something or someone local. A pub is about networking, finding out who is the best plumber and on the most basic level providing human company for the lonely.

“All the research points to the conclusion that drinking as part of a group is far better for your emotional wellbeing than drinking alone. It also adds to the welfare of the community as a whole. Alcohol is the facilitator of all these things but drinking as part of a group provides a far greater function than just the imbibing of beer.”

A good pub is a place where you can go in as a stranger and come out knowing something or someone local



Even back in Egyptian times there were rules and regulations designating when and where people drank alcohol

Beer makes up over 60% of drinks sales in Britain's community pubs⁽¹⁾

SAFER TO DRINK IN A GROUP THAN ALONE

Today scientific research is indicating that there may be a very good evolutionary reason for these restraints. That is, it is safer to drink in a group than alone.

Psychologist Professor Dominic Abrams and his colleague Dr Tim Hoptrow of Kent University studied the risk taking behaviour of around 250 students half of whom had drunk enough alcohol to take them just to the drink driving limit, half of whom were given a placebo drink. Some were placed in groups, others were left on their own and all were offered a monetary risk⁽²⁾.

“We found that those who were drinking as part of a group were protected from the negative effects of alcohol,” explains Dr Hoptrow. “They were less likely to indulge in high risk behaviour than the solitary drinkers and actually took the same level of risk as when they were sober.

“On the other hand solitary drinkers took more risk than they did when they were sober and higher risks than the group drinkers.

“The group drinkers talked to each other, recognised the high risk takers and discarded their opinions and overall seemed to follow the sensible common denominator.”

However it is not all good news.

“It is important to point out that this effect was only evident when the group had drunk moderately,” says Dr Hoptrow. “We believe that as alcohol consumption increases then this protective mechanism breaks down and group behaviour deteriorates into competitiveness or even aggression.”

The wholesomeness of brewing

Crafted and brewed using natural, healthy ingredients; maintaining time-honoured British traditions; famed throughout the world for its unique quality and diversity; and environmentally friendly to boot! Not many drinks can claim to be as all-round wholesome as beer.

Brewing, a complex and time consuming process, does not tolerate shoddy workmanship. Beer is made principally from seasonal, natural ingredients and any mistakes will show up immediately in the taste and the aroma. Consistent and careful craftsmanship are critical. Today's brewing industry is a byword for stringent quality with the big players setting the standard.

"Beer is seen as a simple, unsophisticated drink especially when compared to wine," says Charles Bamforth, Professor of Malting and Brewing Sciences at the University of California, and the author of several books on beer and brewing. "Wine is made from one basic ingredient, grapes, and the finished product can vary from year to year in its flavour and quality.

"In a good year they call it vintage. A bad year is simply passed off to the customer as 'one of those things'. Compare that with beer which is made from a variety of 'live' and temperamental ingredients and yet still, day to day, year by year, it achieves consistency of flavour and quality.



13%
of people believe incorrectly that beer is made from "chemicals" rather than from malted barley and hops.

The Micro Brewer

Sue Hayward and her husband John Martin are the founders and owners of The Waen Brewery near Newport in mid Wales, which they set up in late 2008 using second hand equipment and a grant from the local council. Just over a year later business is booming and John has long given up his job as a purchasing manager to act as the business manager, whilst Sue is head brewer with children Hermia, 10, and Oscar, 8, helping out at weekends. Sue and John see their brewery as a business but also as a vocation which carries with it a certain spirit.

"One of the most important things for us was that our brewery was local," says Sue, 43. "That is we sold our beer locally and we used, as much as possible, local ingredients in our beer."

To that end the hops come from Herefordshire, just over the border, and the barley from Warminster. The water is local, coming from the River Severn and is perfect for brewing. The end result is a drink packed with wholesome flavours and ingredients that are sold in casks to pubs all over the UK even in the House of Commons bar.

Many of the beers are low in alcohol content, which Sue says has a special appeal to a growing band of drinkers. She is particularly proud that all her beers are suitable for vegans and vegetarians. And there is another consumer group that Sue has made a point of encouraging.

"Women are discovering cask ale in ever increasing numbers," says Sue. "We run beer tasting for women and Our First of the Summer Waen is light in colour and fizz, not too hoppy and full of flavour. It happens to have a pink label on it and women can't get enough of it. That encourages them to come and taste our other ales and suddenly you've got a regular new customer."

Indeed there is little in beer that cannot be described as healthy and wholesome. Not for nothing was the drink known for so long as 'liquid bread.' And to add to the miracle that is beer, nothing from the brewing process goes to waste; leftover yeast is converted to marmite, the used grain fed to farm animals and the spent hops converted to high nutrient fertiliser.

All brewing starts with barley, a plant bursting with goodness, containing not only natural starch but protein and fibre too. During malting, the barley is allowed to sprout or 'germinate' and this releases the natural enzymes that unlock goodness from the grain. During the final stage of malting, the green malt is roasted or 'kilned'. Kilning is needed to stop the germination process – otherwise you would produce new barley plants rather than beer! Malt is at the heart of the colour and flavour

of the beer, so it is down to the method of malting used to determine the final flavour of the beer. Different methods of malting are used to produce the different malts used to brew lager, ale, mild and stout. High temperature kilning produces malt that is dark with flavours such as toffee, chocolate or coffee. A more gentle heat produces paler malts used to brew lighter beers like lagers and pale ales.

Next up is the brewing of the beer. The malt is crushed and mixed with hot water. Then the thick porridge, 'the mash', is left in a special container called a mash tun while the sugars are released by the malt's enzymes. Now the hops are added to

provide the bitter flavour and aroma synonymous with beer and the mixture is boiled in a vessel called a 'copper'.

"Brewing water must always be of the highest quality," explains Professor Bamforth. "Soft water, such as that found in the Czech town of Pilsen, is needed for brewing lager. Hard water is generally considered the best for brewing ales. Rain that falls on the Peak District picks up salt as it seeps through the rocks into the deep wells around Burton on Trent where it is used to brew the town's famous India Pale Ales.

"Hops give beer both bitterness and aroma.

The more hops that are added to a beer the more bitter it will be. There are so many varieties of the hop plant and each has its own distinctive flavour, from the Bramling Cross, which provides a spicy curranty aroma to the mild herbal flavour of the Millennium."

Finally the resulting liquid – the wort – is filtered, cooled and run into tanks, where the yeast is added and the fermentation takes place. Yeast is one of nature's miracles, a fungus which feeds on sugar to produce alcohol, carbon dioxide and the host of flavours that make beer taste like beer. In just a few days most of the fermentation is complete and the 'green' beer left for the yeast to do the last of its work. Finally the beer – made with just these natural ingredients – is ready to be packaged and sent to the pub, the shop or the supermarket. A naturally wholesome and healthy drink ready for you to enjoy.

The Regional Brewer

The beauty of the brewing industry is that it is not just the small guys that have the monopoly on environmentally friendly product sourcing and production methods. Wells & Young's, Britain largest independently owned brewery, produces around seven thousand gallons a day of ales and yet still manages to use 100% British ingredients, provide employment for hundreds of British workers and keep its carbon footprint low.

"Our barley comes from East Anglia, less than forty miles away from our Bedford site and our hops come from Worcestershire or Kent," explains Johnny Kirkham, marketing manager for Wells & Young's. "Where possible we try to have a direct relationship with our suppliers, for example the farmers who supply the barley for Young's bitter – incidentally the first ale to be awarded the Red Tractor symbol – are regular visitors to our brewery."

Wells & Young's water is still supplied by the on-site aquifer well that was dropped by the Wells founder Charles Wells in 1902. The water is extracted from the porous limestone layer that runs about 100 foot under the North Bedford. Geological studies have shown that it can take up to 200 years for the water to filter through the limestone before it is pumped from the brewery wells.

Nothing is allowed to go to waste. All the spent grain after the malted barley has been used for brewing is sold for animal feed, and leftover yeast is sent off to make Marmite.

"Breweries such as ours, provide a perfect example of how an industry can be successful, yet at the same time both environmentally and socially responsible," says Johnny.

"We employ around 600 people here in Bedford and use 100% British ingredients which travel a short distance to get to us. We recycle virtually all our waste product and finally around 90% of our beers are sold here in the UK, which keeps our carbon footprint relatively low. British brewing is an industry we should all be very proud of."

Not many drinks can claim to be as all round wholesome as beer

Beer and The Great British Heritage

At the heart of every community in Britain is the pub. The place where we go to meet friends, drink, sometimes to eat, to play games and listen to live music, to enjoy a roaring log fire in the winter and a sunny garden in the summer, to gossip and network, to commiserate and to cheer.

From the early alehouses of medieval times, through to the great coaching inns of the 18th and 19th century and onto today's wide variety of smart city, friendly town and ancient village pubs, public houses have been central to the British way of life for nearly a thousand years. Quite simply, we could not imagine life in Britain without them.

The figures speak for themselves. More than a quarter of all adults visit a pub every week, and each year tourists and visitors to Britain enjoy 13.2 million trips to the pub. As a result the pub and brewing industry employs 540,000 people directly and 380,000 in associated trades which contribute around £28 billion to the UK economy.

And at the heart of every pub is the beer, mostly British, often brewed locally, created with the craftsmanship and consistent quality that has made our national drink an icon around the world.

"There is something inherently convivial and sociable about beer, more so than any other drink," says Pete Brown, the award-winning author of several books on British beer and pubs. "Whisky is nosed and contemplated in solitude, wine drunk sedately with a meal. But every single ritual surrounding beer – regulars at the local, clinking of glasses, saying cheers, all reinforce the drink as



the symbol of a group of people or a community coming together.

As long as humans have been around we have been brewing using the cereal that is closest to us to make alcohol. It appears that drinking alcohol has been part of human society for thousands of years.

Although the original big brewing nations were Iraq and Egypt, there is evidence that brewing was taking place in Ireland as far back as 3,000 years ago. The Romans talked about the British natives drinking a 'wine made of barley' and when the Saxons and Angles from Germany colonised our islands in the fourth and fifth century they brought with them the technique of using grain to make beer.

Today beer as a drink is absolutely ingrained in our national psyche, and brewing a British industry we can be truly proud of.

There is much to celebrate. We have more breweries than at any time since the Second World War, producing innovative beers of great variety and a consistently high standard. And they are environmentally friendly, by and large using locally grown produce and selling in the UK.

Yet still we persist in the myth that somehow beer is an inferior drink to foreign imports such as wine. From government receptions, through to weddings and business conferences, wine is served rather than beer.

"It hasn't helped that the British have traditionally served beer in plain pint or half pint glasses," explains Pete. "It is hard to look elegant when you are holding one of those."

But British brewers are getting the message and now many of them are producing beautiful drinking glasses – goblets, flutes and slender rummers, which rival those of their Belgium and Dutch counterparts – and selling them in wonderfully designed bottles you can easily give as a gift or take to a dinner party. Now beer can look, as well as taste, sophisticated.

But it is not all good news. Pubs are closing at a rate of thirty-nine per week and beer sales in them are down by 17 million pints a day compared to their peak in 1979. In the last year alone beer sales were down 5%.

The National Brewer

If you think that large industry practise is fundamentally incompatible with positive environmental and social consequences, brewing is one industry that could make you change your mind.

"Of the four ingredients contained in beer, three of them are sourced here in the UK," says Martin Thomas, Supply Chain Director for Molson Coors in the UK, the makers of 100% British Barley Carling and the second largest brewing company in the UK. "Our barley comes from farmers in Derbyshire, Hampshire, Lincolnshire, Shropshire and Yorkshire and because our maltings is centrally located in Burton upon Trent this means that none of our barley travels more than a few hours to get to us.

"Our yeast is grown on site and our water comes from bore holes close to or in our breweries. Only our hops come from overseas and this is mainly because plant disease and the British climate make it difficult to grow hops in large enough quantities to support the brewing industry here. However we currently buy 15% of our hops from UK growers and have made a commitment to increase that figure to 25% over the next few years."

Martin reckons that Molson Coors sources barley from around 600 – 700 British suppliers, providing them with all or part of their income. To support the farmers the company has set up a Carling growing group, comprising barley farmers who sell to Molson Coors. The group meets twice a year with the company to discuss supply, quality and environmental issues. "We have a really good two way dialogue," adds Martin. "If we are in close contact with our farmers, then they know that we are supporting them, and we can also be assured of the provenance and quality of the ingredients that go into our beer."

Like many industries, brewing relies heavily on water.

"We pump our own water supply direct from underground aquifers, but we know that the resource is not infinite," says Martin. "When you compare our water use to other industries, brewers already have a very good story to tell."

"But we are not complacent. We currently use around four pints of water to make one pint of beer but we are committed to reducing that to three to one. Any waste water has to be returned to the main supply system and cleaned up, and that costs us money. It makes good economic, as well as social, sense to conserve the quantity and quality of water within the brewing process."

Finally, Molson Coors, in common with most British brewers, sell their beer almost exclusively to the domestic market.

"Only around 2% of our beer goes overseas, which saves on environmental costs," he says. "In addition, we work hard with our distributors to ensure that we keep our carbon footprint as low as possible. For example we always send out a full lorry and carefully co-ordinate routes. Over the last few years we have taken around half a million beer miles out of our road use – a huge saving on energy and carbon emission."

"It's a no-brainer that all of us, the public and the Government should support the great British icon that is beer," says Pete Brown. "For too many years it has been fashionable to look down on our own national drink in favour of other more exotic overseas imports.

"But to do that is to turn our backs on our great British success story and our own heritage, and miss out on the myriad varieties of wonderful tastes and complexities that beer can offer."

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Matching beer to food

"As a rule of thumb, the lighter the meat the lighter the colour of the drink," explains Rupert. "Typically, sweeter foods need stronger beer. But even a strong beer is still only typically half the alcohol of an average serving of wine."

"Therefore a delicate meat deserves a lemony pale ale, and many of the lighter coloured American-style lagers go especially well with fish."

"The heavier white meats such as chicken and pork suit the flowery flavours of summer beers, whilst many lagers perfectly complement the delicate flavours of Thai and Chinese cuisine."

"British bitter ales really come into their own with red meats such as roast beef, or a stew casserole. A hearty pale ale works well with most red meats especially beef and if you are following up with an old-fashioned pudding such as spotted dick then look for a beer with a slightly higher alcohol level and big rich flavours such as chocolate or toffee."

"Stilton goes well with higher alcohol plum-flavoured beers or a hoppy brown ale while stout complements game dishes. Speciality continental beers or stronger British ales work perfectly as a digestive, or with a variety of cheeses."



Beer – back on the menu

With over 2,500 amazing British lagers, ales and bitters to choose from and enjoy, it's no wonder that the cognoscenti are turning their sophisticated taste buds towards beer.

Year on year, the sales of cask ale are growing at a rate of around 7%⁽¹⁾. And women too, who have traditionally eschewed beer on the grounds that it may be too bitter, confusing or generally unappealing, are now discovering the delights of a really good beer. According to a survey carried out in 2009, around 30% of women drinkers have now tried cask ale compared to just 16% in 2008⁽²⁾.

Beer is no longer seen as a mundane workaday alternative to wine. Instead, for the truly discerning drinker is it the height of chic to 'know your beers'. Hardly surprising then, that Michelin-rated chefs Raymond Blanc and Michel Roux have been quick to introduce beer lists in their restaurants, complete with beer sommeliers. And numerous other boutique hotels and restaurants are following their lead.

But you don't have to go upmarket to find out about beer. The phenomenal increase in the number of beer festivals and tasting events up and down the country are all adding to the numbers of ale and lager drinkers – many of them women – who are learning for the first

time about the complexities that make up the flavours and aromas of the average British pint.

Indeed appreciating the beer you are drinking, understanding what makes a good quality drink and how to differentiate between a huge range of flavours is every bit as complicated and skilled as wine tasting.

"Beers are easily as interesting as wine, both in terms of their flavours, tastes, and textures, but also in terms of their provenance, history and, in these environmentally friendly times, their carbon footprints too," says Rupert Ponsonby, beer connoisseur.



A healthy perspective

Back in the middle of the twentieth century, when diets were poor and nutritional levels often low, beers such as stouts were frequently prescribed by doctors as a quick and cheap way of giving patients access to deficient vitamins and minerals," explains Dr Jack Edmonds, a private GP in central London.

"There are many healthy reasons to drink a pint of beer. This report shows that beer, as well as promoting 'good' cholesterol, contains B vitamins, various minerals and antioxidants including high levels of silicon which is good for bones, skin and hair. There is some evidence that beer is beneficial in preventing dementia, Parkinson's Disease, Type II diabetes and atherosclerosis.

"This report also debunks the myth that beer makes you fat. Beer is around 95% water, contains very few free sugars to convert into fat – which gives it a low glycaemic load – and has a relatively low level of alcohol (ethanol) per volume. This all means that it is less fattening than spirits or wine. It is not beer that makes you fat but the lifestyle and eating habits which may go along with beer drinking.

"If you are going to accept that people want to drink alcohol then, on balance, beer is one of the healthier ways to do so.

"However this doesn't mean we can all rush out and drink huge amounts of beer. This report clearly shows that all the benefits of beer – health, social and psychological – are only enjoyed when beer is drunk in moderation and preferably with a low alcohol content.

If you are going to accept that people want to drink alcohol then, on balance, beer is one of the healthier ways to do so

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Beer – the nutritional 'superdrink'?

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Deflating the weight issue

Calorie comparison Table

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Beer back on the menu

- (1) CAMRA reveals results of real ale premier league – 10/09/2009
- (2) Women drinkers turn to real ale, says new CAMRA research 03/08/2009

NOP survey results for the report

– March 2010 –

68% of people think that beer is Britain's national drink

Over a third of British men (34%) incorrectly believe that beer has more calories than other alcoholic drinks

Despite recent statistical evidence on the rise of 'alcoholic drinking at home', almost a third (31%) of people still say that they normally drink when out with friends in a pub or bar

One in ten people surveyed don't realise that beer contains vitamins and minerals

A quarter of people (24%) surveyed wrongly think that it is red wine, rather than beer, that contains the most vitamins

Only 2% of people realise that beer contains a valuable source of silicon

Just over ten per cent (13%) of people believe incorrectly that beer is made from "chemicals" rather than from malted barley and hops

One in ten people (10%) still wrongly think that beer contains fat. Beer contains zero fat and zero cholesterol

ICM interviewed a random sample of 2,004 adults aged 18+ via online between 26th -28th Feb 2010





www.beeracademy.co.uk