

## Chewing gum

First of all, let's start with the history.

The ancient Greeks were known to be fond of a gummy substance named mastiche, derived from the resin of the mastic tree.

But the Mayans were not too far behind the Greeks in developing the custom of chewing gum. In about the Second Century, they practiced the art of chewing what was later to be known as "chicle"- the coagulated sap of the Sapodilla tree.

Meanwhile, the American Indians of New England were also chewing gum - but made from the resin of spruce trees. From the beginning in America, the custom of chewing gum grew, until during the early Nineteenth Century, the first gum products, lumps of spruce gum, were sold commercially.

Spruce gum continued to be sold, being replaced gradually by paraffin wax gum. Paraffin gum unfortunately required the heat and moisture of the mouth to render it suitable for chewing, and was therefore replaced as a base of all "regular" gums. Sweetened and flavored paraffin wax is still used in the production of novelty chewing products.

Modern day gum products actually appeared in second half of the 19th century, when the famous Mexican general Santa Anna was searching for a substitute for rubber. He thought that perhaps chicle would fit the purpose. The General contacted American inventor Thomas Adams, who experimented with chicle but found it unsuitable as a rubber base.

One day, however, Adams noticed a girl chewing paraffin-based gum and remembered that General Santa Anna had chewed the very substance which he was trying to turn into rubber. The inventor, realizing that chicle was superior to all other gum bases then available, produced some chicle-based gum and persuaded a local druggist to carry it. This rediscovery of what the Mayans had known over one thousand years earlier revolutionized the manufacture of chewing gum.

So, how are the base, sugar, flavoring and synthetic materials combined to make the various kinds of chewing gums one buys at candy stores and other retail outlets? Most chewing gums are manufactured in the same manner up to a certain point.

The gum base is melted in large, steam-jacketed kettles which heat it to about 135°C. At this point it achieves the consistency of thick maple syrup. This "syrup" is then filtered through fine mesh screens, clarified in a centrifuge, and further filtered through very fine vacuum strainers. Throughout the process, the melted gum base is kept hot.

The "mixers" now come into play. These are huge vats capable of holding up to 900 Kg each, and are equipped with slowly revolving blades. The first additions take place in these mixers. Powdered sugar, whose particle size has a definite effect on the brittleness or flexibility of the final product, is added.

So is corn syrup, or glucose, which keeps the gum moist and pleasant to chew, and helps the sugar to combine easily with the gum base. Also softeners, which further retain moisture in the gum to insure a flexible, resilient chew; finally, either natural or artificial flavoring, whichever is desired, is added to the gum base in the huge mixing vats.

The blended gum then passes out of the mixers onto cooling belts and is bathed in currents of cool air to reduce its temperature. After this it moves to the extruders, machines which manipulate it to make it much smoother and finer in texture. From the extruders, the gum passes to a series of giant rollers which make up the "sheet-rolling machine." There, the gum is flattened into thinner and thinner sheets, the final thickness determined by the type of gum it is to be.

Stick gum comes from the thinnest sheets; candy-coated gum from a thicker sheet; and bubble or ball gum, from the thickest sheet of all. The stick gum passes into the cutting and scoring machines, where it is cut into smaller sheets. The gum destined for candy coating is scored into little square or oblong pellets, and broken up by machine. The process is done and gums are ready to be packed and delivered.

Chewing gums come in a variety of flavors, depending on location, and are most often chewed for the flavor. There is no standard type of gum, since it can be formed in many different shapes and sizes. And here are some interesting examples:

**Ball gum** - shaped like a ball and coated, and is often found in vending machines. In the United Kingdom, these are often referred to as 'Screwballs' and commonly called "gum balls" in the US.

**Bubble gum** - formulated with film-forming characteristics for blowing bubbles.

**Candy & Gum combinations** - predominantly bubble gum found in the center of some types of lollipop.

**Chiclet gum** - is a colloquialism for candy coated chewing gum.

**Dragée gum** - a pillow-shaped coated pellet, often packed in blister packs.

**Medicated gum** - makes use of a chewing gum as a 'delivery system' to introduce medicated substances into the saliva and thus into the blood stream faster than pills.

**Powdered gum** - free flowing powder form or powders compressed into unique shapes.

**Tube gum or spaghetti gum** - very soft bubble gum which can be squeezed from a tube.

Recent research into the history of chewing gum indicates that the custom may not be as exclusively American as we have always thought it to be, although the U.S. does lead the world in total gum consumption.

The U.S. Armed Forces have regularly supplied soldiers with chewing gum since World War I because it helped both to improve the soldiers' concentration and to relieve stress. Studies show chewing gum can also improve one's mood.

Recently the U.S. Armed Forces have been providing soldiers with caffeinated gum to keep soldiers alert for extended periods of time. Each stick of gum has approximately 100 mg of caffeine in it, which is about the same amount as in an average cup of coffee.

Gum is also included in Canadian Forces Individual Meal Packs as an aid to oral hygiene.

The chewing gum industry guards the purity and integrity of its products. These manufacturers want their customers to continue enjoying one of the finest food products in the world.

Sources: <http://www.fordgum.com/story.html>  
[http://en.wikipedia.org/wiki/Chewing\\_gum](http://en.wikipedia.org/wiki/Chewing_gum)