



Percussion

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‘Thorax sani homini sonat si percutitur’.

(When percussed a healthy man’s chest is resonant)

Leopold Auenbrugger (1722–1809).
Austrian physician.

Percussion, in doctors’ minds, refers to the tapping with one finger on another, to detect fluid by a change in tone, usually in the chest or abdomen. According to Bynum [1] it was introduced into medical practise in France in the 18th century. Leopold Auenbrugger (1722–1809) is credited with perfecting the technique. In expert hands it is very accurate, non-invasive, carried out at the bedside and is inexpensive. It is said that Auenbrugger, the son of a Viennese inn-keeper, developed and perfected the technique when his father asked him to check the levels in wine in barrels in the basement of the inn. Rather than estimating the level of the wine visually, using a candle, he decided to percuss the barrels. The change in tone from air to liquid provided an accurate assessment of the amount of wine in the barrel. Like many other observations his treatise *Noventum novum* (the full English title is *A New Discovery that Enables the Physician from the Percussion of the Human Thorax to Detect the Diseases Hidden Within the Chest*) was largely ignored but popularised sometime later by Jean-Nicholas Corvisart (1755–1821) private physician to Napoleon 1st, professor of medicine and eventually a member of the Académie Nationale de Médecine.

No doubt my younger colleagues will accuse me of being a Neanderthal and tell me that the art of percussion has been replaced by radiographs, computerised tomography (CT) or magnetic resonance imaging (MRI), all expensive and not without possible hazard. I have had a number of MRI

examinations and I can assure you it is a most unpleasant experience.

Percussion has other uses besides in medicine. It is used to detect when an Irish soda bread loaf is cooked by tapping on the base and eliciting a hollow sound. If you are a musician, on the other hand, percussion has a completely different meaning. The art of percussion is especially developed in jazz music, with famous drummers such as Gene Krupa (who died of leukaemia) and Art Blakey, among others, coming to mind. The recent film, *Whiplash*, (2014) about drumming and obsessive behaviour, directed by Damien Chazelle was searing and although fictional, demonstrated convincingly the destructive power of obsessive behaviour.

Apparently, percussion massage guns are used to increase muscle tone. This information is completely new to me and any inspection of my body will testify that I have never used one!

When most of us think of wine in ancient times we think of amphorae. However, my old friend Herodotus, Greek historian (484–425 BC) according to JJP Jeremy Patterson, mentions wood as a way of transporting wine [2]. Whatever about percussing abdomens, chests or wine casks, barrels are extremely important in wine-making [3]. Barrels can be used for fermentation or ageing but the way they are made has a significant bearing on the taste of the wine.

There are two aspects to barrel making; how they are made and how to use them. Coopers (people who make barrels) begin to process tree trunks that are often over 100 years old with staves cut from radial (rather than tangential) sections of the wood [3]. American and European barrels differ in their manufacture, using automation versus manual respectively, which contributes to the huge cost of French oak barrels.

Wood, of course, contributes tannins to the wine. Air drying (up to 36 months) of wood is paramount but time-consuming and expensive so artificial drying is substantially quicker and therefore less expensive. Although many of us automatically associate wine barrels with France and the French *barrique* (225 l) these barrels are not used exclusively by winemakers. For example, much larger barrels, *botti*, 10–10,000 l, made from Slavonian oak (Croatia) are

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Fig. 1 Diogenes and Alexander by Gaetano Gandolfi (Italian Painter 1734–1802). Diogenes, Greek philosopher, who lived in a barrel and Alexander the Great.



Fig. 2 The late Christo (1935–2020). Christo and his ephemeral sculpture Mastaba (a truncated burial pyramid found in ancient Egypt) made of empty oil barrels on the Serpentine, Hyde Park, London, UK 2018.



favoured by many Italian winemakers as they feel that perhaps the botti retain the character and tipicità of Italian wine. They are used widely in Piedmonte and by some winemakers in Tuscany. One advantage is that if treated properly these barrels can be used for many years. Clay Risen, writing in the New York Times in 2016 [4] claims that America is now the largest market for wine barrels. Aside from wine American whiskey, beer and wine are also aged in oak barrels and with increasing consumption, the barrel industry is thriving.

French barrels were more refined and the light toasting increases the flavour of the wine, whereas the American barrels were heavily toasted imparting an intense vanilla flavour to the wine. All has now changed and with advanced technology American barrels are much in demand.

Percussion may have become unfashionable but wooden barrels are still intrinsic to the wine trade. Alexander the Great encountered *Diogenes* (Greek philosopher/cynic 412–323 BC), Fig. 1 who lived in a wine barrel. Alexander asked

him if he could anything for him and Diogenes replied by asking him to stop blocking the sunlight.

The most exotic, beautiful and awe-inspiring use of barrels (oil barrels not wine barrels) was the ephemeral sculpture made of 7560 barrels and floated on the Serpentine in Hyde Park, London by the late, great artist Christo Fig. 2.

So, when you are pressing a glass of the beautiful nectar to your lips think of the contribution of the barrel to the final taste.

Compliance with ethical standards

Conflict of interest The author declares that he has no conflict of interest.

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