# Health and Nutrition: **Understanding Ale in Medieval Monastic Life** Braden Neihart Colorado State University

### Background

People in the medieval period were concerned with meeting nutritional requirements. Monks were mostly vegetarian, subsisting off of fruit and vegetables. In addition, northern monasteries brewed ale that was a nutritional supplement. Beer confers a number of health benefits beyond hydration and caloric replenishment.

Food was central to medieval monastic punishment; consigning monks to a diet of bread and water was the most common form. This penitential fast would last a commiserate number of days, weeks, or even years. It is my presumption that there is a connection between nutritional punishment and brewing in medieval monastic life. How did beer fit nutritionally into monastic punishments? Did monks who handed out punishments understand what they were denying their brethren in terms of nutrition offered by beer consumption?

USDA National Nutrient Database for Standard Reference Release 28 slightly revised May, 2016

Full Report (All Nutrients) 14003, Alcoholic beverage, beer, regular, all <sup>a</sup>

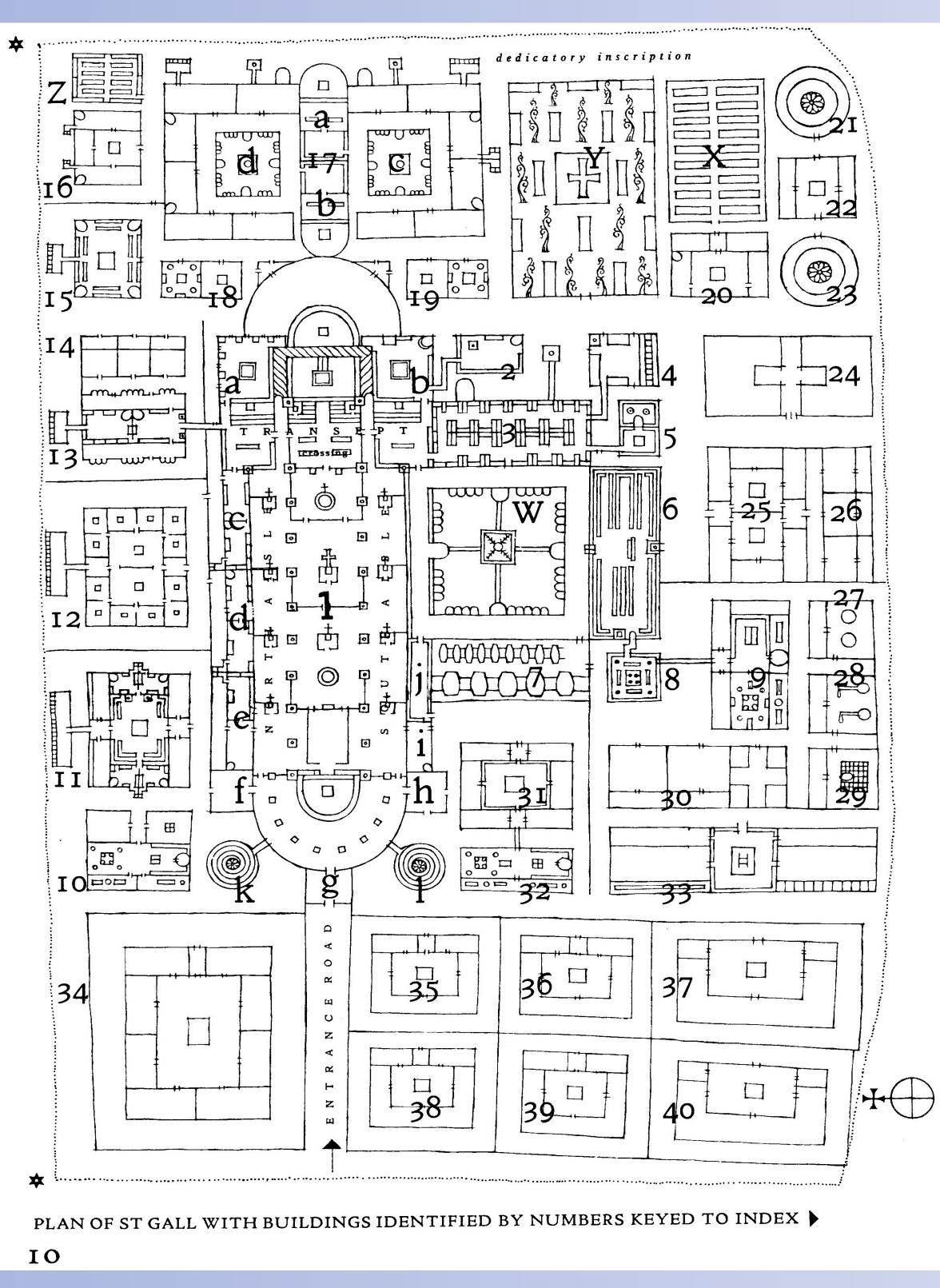
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Nutrient values and weights are for edible portion.

Food Group : Beverages

Carbohydrate Factor: 4.12 Fat Factor: 8.37 Protein Factor: 3.87 Nitrogen to Protein Conversion Factor: 6.25

| Nutrient                            | Unit | 1<br>Value Per100<br>g | Data points | Std. Error | 1 fl oz<br>29.7g | 1 can<br>356g |
|-------------------------------------|------|------------------------|-------------|------------|------------------|---------------|
| Proximates                          |      |                        |             |            |                  |               |
| Water                               | g    | 91.96                  |             |            | 27.31            | 327.38        |
| Energy                              | kcal | 43                     |             |            | 13               | 153           |
| Energy                              | kJ   | 181                    |             |            | 54               | 644           |
| Protein 1                           | g    | 0.46                   | 588         | 0.007      | 0.14             | 1.64          |
| Total lipid (fat) <sup>2</sup>      | g    | 0.00                   | 3           | 0.000      | 0.00             | 0.00          |
| Ash <u>1</u>                        | g    | 0.16                   | 588         | 0.002      | 0.05             | 0.57          |
| Carbohydrate, by difference         | g    | 3.55                   |             |            | 1.05             | 12.64         |
| Fiber, total dietary $\frac{2}{}$   | g    | 0.0                    | 1           |            | 0.0              | 0.0           |
| Sugars, total $\frac{2}{}$          | g    | 0.00                   | 3           | 0.000      | 0.00             | 0.00          |
| Sucrose <sup>2</sup> / <sub>-</sub> | g    | 0.00                   | 3           | 0.000      | 0.00             | 0.00          |



#### Methods

Since brewing was primarily a northern monastic feature, the study emphasizes these over monastic establishment in the southern wine region. The goal of the study was to find examples of allowances for ale or beer to monks undergoing penance. Books of law, called penitentials, from northern European monasteries, early Irish, Welsh, Anglo-Saxon, and Frankish churches, were primarily used to obtain these examples. Recent scientific articles were brought in to further the connection of beer and health.

### Findings

In the main, penitentials did not include exemptions that allowed beer for elderly or otherwise weakened monks. Ireland and Wales were the only two places found to allow, and in Ireland force, fasting monks to consume ale at least somewhat regularly. This may be due to the circumstances of Irish monasticism, which was extremely zealous with monks holding competition fasts called *troscud* to renegotiate power in monasteries.

In terms of the nutritional aspects of ale, scientific studies of beer have revealed that it contains many nutrients and vitamins, which are known to provide many anti-inflammatory benefits. Most commonly found are niacin, folic acid, folates, pyridoxine, riboflavin, thiamine, pantotenic acid, biotin, and cobalamine. They would not have known this, but they would have seen the effects of reduced risk of cancer, heart disease, and effects on aging, such as dementia, osteoporosis, and memory loss.

## Conclusion

Overall, there was not a significant amount of penitentials that made allowances for ale or beer. Those that did were located in Ireland and Wales. The next step is to locate monasteries in Germany and Belgium.



Sources