The History of Wine as a Medicine

The History of Wine as a Medicine:

From its Beginnings in China to the Present Day

Ву

Philip Norrie

Cambridge Scholars Publishing



The History of Wine as a Medicine: From its Beginnings in China to the Present Day

By Philip Norrie

This book first published 2019

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data A catalogue record for this book is available from the British Library

Copyright @ 2019 by Philip Norrie

All rights for this book reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the copyright owner.

ISBN (10): 1-5275-2153-2 ISBN (13): 978-1-5275-2153-7 This book is dedicated to oenotherapy or wine therapy

CONTENTS

| About the Authori | X |
|---|----|
| Joseph C. Maroon, MD. FAANS Co-Author of the Resveratrol Chapter | κi |
| Co-Audioi of the Resveration Chapter | |
| Jeff Bost, PACxi | ii |
| Co-Author of the Resveratrol Chapter | |
| Forewordx | v |
| [From the First Edition] | |
| By Robert Mondavi (1913 – 2008) | |
| World Wine Authority | |
| Forewordxv | ii |
| [From the First Edition] | |
| By Robert Lusby | |
| Professor of Vascular Surgery, University of Sydney | |
| Introduction | 1 |
| Chapter One | 5 |
| Royal Medicine: Wine Used as a Medicine through the Ages | |
| Chapter Two1 | 9 |
| The Australian Experience | |
| Chapter Three | 1 |
| America's Wine Doctors | |
| Chapter Four | 5 |
| America's Elder Statesmen's Thoughts on Wine | |
| Chapter Five | 1 |
| Wine: A Modern Medicine | |

viii Contents

| Chapter Six | 51 |
|--|-----|
| Wine and Good Health | |
| Chapter Seven | 65 |
| Allergies, Side Effects, and Hangovers | |
| Chapter Eight | 69 |
| Resveratrol | |
| By Joseph C. Maroon and Jeff Bost PAC | |
| Chapter Nine | 89 |
| Red Wine versus White Wine | |
| Chapter Ten | 93 |
| The Role of Wine in Women's Health | |
| Chapter Eleven | 97 |
| Conclusion | |
| Chapter Twelve | 101 |
| Chronology of Wine as a Medicine | |
| Chapter Thirteen | 115 |
| Dr. Fiaschi Lecture | |
| Medical Glossary | 133 |
| | 10- |
| References | 135 |

ABOUT THE AUTHOR



Dr. Philip Norrie was born in Sydney, Australia in 1953. He attended Knox Grammar School and graduated with the degrees of bachelor of medicine and bachelor of surgery from the University of New South Wales Medical School in 1977. He is a General Practitioner or Family Physician at Elanora and lives at Palm Beach on Sydney's northern beaches with his wife Belinda and two sons.

Dr. Norrie has a keen interest in medical history, especially as it relates to the oldest human medicine, wine. His writing includes *Australia's Wine Doctors*, an account of Australian doctors who have established vineyards, the histories *Dr. Lindeman* (1993), *The Penfold Wine Group* (1994) and *Leo Buring* (1996), an account of the early wine industry in and around Sydney, *Vineyards of Sydney* (1990), and *Dr. Philip Norrie's Advice on Wine and Health—Thinking and Drinking Health. Dr. Philip Norrie's Wine and Health Dairy* is published annually.

Dr. Norrie graduated as a master of science in history and philosophy of science at the University of Sydney in 1993. His thesis was the history of the McLeay family's involvement in the early wine industry of New South Wales.

In 1998 he completed a master of social science (hons) at Charles Sturt University, Wagga Wagga. His thesis was the contribution made to Australian winemaking by Leo Buring.

His research into the history of wine as a medicine for the past five thousand years was the subject of his 2006 doctor of philosophy degree at the University of Western Sydney, where he lectured on wine and health.

In 2007 Dr. Norrie completed a master of arts degree from the History Department at the University of Sydney with a thesis on the causes of death at the Darlinghurst Gaol in Sydney from 1867 to 1914. This thesis showed that the Darlinghurst Gaol was the first prison in the world to properly

record the causes of death of its inmates, thus giving an insight into what diseases were present in prisons in the Victorian era.

In 2014 Dr. Norrie gained his latest degree, a doctor of medicine from the University of New South Wales, with a thesis giving an account of diseases in the Near East during the Bronze Age. Dr. Norrie is also a Fellow of the Royal Society of New South Wales and a Fellow of the Royal Society of Medicine. For his services to wine history and health, Dr. Norrie has been made a Commander of the Renaud Society, named after the famous "French Paradox" researcher, Professor Serge Renaud of France.

Philip Norrie is the Australian representative on the Editorial Board of Alcohol in Moderation (AIM), an independent journal which reviews scientific literature on alcohol and health, and a member of the Vinopolis Wine Advisory Board. He has written the wine and health segments in the Oxford Companion to Wine and regular wine and health articles for the Wine Hunter, Wine Selector, Winestate, New Asia Cuisine, and Wine Scene magazines.

Dr. Norrie and his wife Belinda have developed a twenty-hectare vineyard, Pendarves Estate, on their property at Belford in the Lower Hunter Valley of New South Wales. Set on the unique Belford dome of limestone, Pendarves Estate has produced award-winning chardonnay, verdelho, sauvignon blane, pinot noir, shiraz, chambourcin, and merlot-malbec-cabernet wines.

Dr. Norrie invented and patented the world's first full-strength resveratrol-enhanced wine with 100mg/l of resveratrol, first released in Australia in 2008. This unique resveratrol-enhanced wine is now the world's healthiest wine and beverage. It is also the best way to consume resveratrol, because it is absorbed up to 250 times more via the buccal mucosa (the lining of the mouth) than the bowel, as with pills or capsules.

JOSEPH C. MAROON, MD. FAANS CO-AUTHOR OF THE RESVERATROL CHAPTER

Dr. Maroon is a board-certified clinical professor of neurological surgery and Vice Chairman of the Department of Neurosurgery at the University of Pittsburgh Medical Center. He is also the Heindl Scholar in Neuroscience, Team Neurosurgeon for the Pittsburgh Steelers and a member of the NFL's Head, Neck, and Spine Committee.

Working with neuropsychologist Mark Lovell PhD, he co-developed ImPACT (Immediate Post-Concussion Assessment and Cognitive Testing). ImPACT is the first computerized system to determine concussion severity and the timing for return to contact sports. It is now the standard of care for concussion management in the NFL, NHL, major league baseball, and NASCAR, and is used in over four thousand colleges and high schools in the United States. For over twenty years, Dr. Maroon has served as the neurosurgical consultant to professional and college athletes in football, baseball, golf, hockey, and soccer.

Dr. Maroon was honoured by his peers when he was elected president of the Congress of Neurological Surgeons, the largest society of neurosurgeons in North America. He has also been honoured by the neurosurgical societies of Japan, Korea, Thailand, Egypt, Brazil, Lebanon, and China for his neurosurgical contributions.

Dr. Maroon served as a member of the board of directors of Mylan Laboratories, the third largest generic drug manufacturer in the world from 2003 to 2018. He is also the chairman of the scientific advisory board of the General Nutrition Corporation. Since 2008 he has been the Medical Director to the WWE Corp. Also, in 2008, he was named senior vice president of the American Academy of Anti-Aging Medicine (A4M).

Honoured as one of America's best neurosurgeons for fifteen consecutive years, he has published four books and written over 275 papers and forty-two book chapters. His two most recent books include Fish Oil: the Natural Anti-Inflammatory (2006) and The Longevity Factor: How Resveratrol and Red Wine Activate Genes for a Longer and Healthier Life (2009).

The latter book is based on his interest in epigenetics and how red wine polyphenols and other foods activate genes for better or worse. His latest book is entitled *Square One: a Simple Guide to a Balanced Life*.

Despite his busy professional schedule, Dr. Maroon remains an avid athlete and has competed in over seventy triathlon events. These include seven ironman distance triathlons (2.4 mile swim, 112 mile bike, and 26.2 mile run) in Hawaii (1993, 2003, 2008, 2010, and 2013), Canada (1995), New Zealand (1997), and Europe (2000). He placed sixth in the Senior US Olympic Triathlon in 2005.

In 1999, along with Joe Montana and Kareem Abdul Jabaar, he was inducted into the Lou Holtz Hall of Fame for his athletic accomplishments and contributions to sports medicine. In 2009 he was inducted into the Western Pennsylvania Sports Hall of Fame, and in April 2010 into the National Fitness Hall of Fame in Chicago. In 2011 Dr. Maroon was given the Distinguished Alumni Service Award from Indiana University in Bloomington, Indiana where he was scholastic all American in football as an undergraduate.

JEFF BOST, PAC CO-AUTHOR OF THE RESVERATROL CHAPTER

Jeff Bost PAC has been a Neurosurgical Physician Assistant and associate with Dr. Joseph Maroon since 1987. Jeff is a clinical instructor at the Department of Neurosurgery University of Pittsburgh Medical Center and clinical assistant professor at Chatham University. He and Dr. Maroon have a special interest in minimally invasive spine and brain surgery and have collaborated on scores of scientific medical papers and books in these areas. Over the last fifteen years they have developed, researched, and promoted the use of alternative medicine for pain control.

Dr. Maroon and Jeff Bost have co-authored two books on the use of omega-3 fish oil, including *Fish Oil: the Natural Anti-Inflammatory*, currently in its fourth printing with over seventy-five thousand copies sold, and more recently *Why You Need Fish Oil*. He has given over one hundred invited lectures, twenty-four national posters and oral presentations, twenty-nine coordinated research projects, and five workshops presentations, and written thirty-five scientific articles and ten book chapters.

FOREWORD [FROM THE FIRST EDITION]

By Robert Mondavi (1913 – 2008)

WORLD WINE AUTHORITY NAPA VALLEY, CALIFORNIA



I began taking an interest in wine and its health benefits around 1950. It was then that the first rigorous medical research began to demonstrate that moderate consumption of wine had positive health outcomes.

In the United States there were groups totally opposed to the consumption of wine and any form of alcohol that did not believe these

findings. These groups would not accept even the most rigorous and detailed scientific research.

Since 1950, through the continuing work of many scientists, researchers, and industry spokespeople, including the work of Dr. Philip Norrie, the scientific findings that there are health benefits from moderate wine consumption have changed the views of many former sceptics and non-believers.

I know that for all those interested in wine and involved in the wine trade, or for those consumers who simply enjoy a glass of wine, *Wine and Health:* a New Look at an Old Medicine will be an excellent guide and an enjoyable education.

FOREWORD [FROM THE FIRST EDITION]

BY ROBERT LUSBY

PROFESSOR OF VASCULAR SURGERY, UNIVERSITY OF SYDNEY



The consumption of wine has been connected with good health since ancient times, particularly in Mediterranean countries. The grape vine through the ages has been symbolically linked to rebirth, since it flourishes in spring. Indeed, the consumption of wine has often brought people into communion with each other and also with their gods.

The celebrated Greek physician, Hippocrates (450–370 BCE) prescribed wine as a wound dressing, as a purgative, as a diuretic, as a nourishing dietary beverage, and as a cooling agent for fevers. These practices continued into the Middle Ages. The decline in wine consumption after the Middle Ages in England can be attributed to the Puritan religious movement led by Oliver Cromwell, who destroyed the vineyards of England after he came to power in 1653. The Puritan movement spread to the New World when the Pilgrim Fathers settled the East Coast of North America in 1620. This Puritan movement in England and overseas eventually led to the temperance movement of the nineteenth century, which condemned alcohol in all forms and culminated in the Prohibition movement in the United States in the 1920s.

Today, we turn to the "French Paradox" – the surprising lack of cardiovascular disease in a large number of the French population who eat a fat-saturated diet, have little exercise and continue to smoke, but for whom red wine is an integral part of their diet. The moderate consumption of red wine appears to afford them protection. This observation of the apparent good health of the people of southern Europe was also made by James Busby, the prophet of the Australian wine industry. In 1830 he recommended to the colonists of New South Wales that they assimilate the habits of the Southern Europeans in respect of wine, which he referred to as "the more natural, more wholesome drink prepared from the pure juice of

the grape," rather than "consume the strong brandied preparations which contributed to the ill-health of the Northern Europeans."

We are currently looking for the scientific evidence as to why wine – in particular red wine – should be so beneficial. Antioxidants such as polyphenols, resveratrol, and quercetin are readily identified in red wines. These substances have the potential to alter the blood lipids in a favourable way and prevent the development of atheromatous plaque, which can obstruct our arteries. Flavonoids contained in the red grape skins are preserved in the alcohol and then released to also produce a positive effect when ingested. Research such as the Copenhagen Study, which demonstrates a 350 percent reduction in cardiovascular death among moderate wine drinkers, highlights the importance of moderate wine consumption to the health of the general population.

Wine and Health: a New Look at an Old Medicine looks through the ages at the benefits of wine consumption for physical and psychological health, establishing the necessity to consider once again the use of wine as a medicine and an aid to wellbeing.

INTRODUCTION

"Beer is made by man – wine is made by God" —Martin Luther (1483–1546), scholar and religious reformer

Wine: The Thinking Person's Health Drink

The purpose of this book is to help you to die young as late as possible – in other words, to recommend how it is possible to have a healthy, youthful body for as long as possible and increase both quality and length of life.

Its purpose is to also alter the perception that wine is only a drink for special occasions but can and should be consumed daily, as a health drink, to add "enjoyment" to a healthy, disease-free life.

The History of Wine as a Medicine from China: From its Beginnings in China to the Present Day presents the facts about the use of wine as a medicine by the medical profession in the past and the results of current research into the benefits of moderate wine consumption on people's health today.

An Ingredient in a Healthy Lifestyle

Wine is the human's oldest medicine, having been used as such by the medical profession for more than five thousand years. Wine is also our most documented medicine, its virtues recorded by the original wine scribes who were doctors describing its use thousands of years ago.

Consumed in moderation, wine is our most potent preventative medicine. It has the potential to reduce death rates from all causes by fifty percent. There is no human-made, patented medicine that can claim as high a success rate as the consumption of wine in moderation. Consuming wine in moderation is, in fact, the most important preventative health measure one can take, with the exception of ceasing to smoke, as it reduces our death rate from vascular disease by up to fifty percent and cancer by up to twenty-four percent. It also reduces stress levels by acting as a relaxant.

2 Introduction

Vascular and stress-related diseases are the two greatest causes of illness in Western society. The biggest killer is vascular disease, in the form of heart attacks and strokes, which account for up to half the death rate. Vascular disease can be largely prevented by lifestyle changes, including not smoking, reducing excess weight, lowering blood pressure, treating diabetes, exercising, eating less fat, lowering cholesterol, eating high fibre foods such as fruit and vegetables, and lowering stress levels. It is simply unrealistic, however, to expect most people to comply with these important lifestyle demands for the rest of their lives. It is more realistic to encourage people to regularly enjoy some wine with dinner. Medical research into the benefits of wine in the past decade has shown that consuming wine in moderation is the best way to prevent vascular disease. It is also an easier demand to make in the modification of lifestyle.

Over the past four decades, doctors have treated vascular disease with various new forms of surgery, from bypasses to angioplasty (inserting balloons to push open the blockages in the disease-causing blood vessels). Today, the emphasis of medicine is turning towards the prevention of vascular disease. Wine has the potential to play a vital role in this.

Leading a Longer, Disease-free Life

Consuming wine in moderation should be incorporated into any preventative approach to healthcare. Abstaining from wine may in fact be a factor in increasing the risk of vascular disease.

Research currently underway across the world is taking a new look at our oldest medicine in its various forms. Wine has been used in the past as an antiseptic reducing the rate of infection, which in centuries past was the most common cause of death. Now wine is part of a medical revolution to prevent vascular disease and degenerative diseases such as cancer, which are the most common causes of death today.

Wine contains potent antioxidant properties which alter the fats and counter other harmful substances or waste products known as free radicals, which cause these diseases. Consuming wine in moderation can potentially add years to life expectancy.

Both red and white wine convey benefits to our health. While red wines usually contain more antioxidants than white, both provide adequate antioxidant activity, the extra in red wine being redundant once one hundred percent antioxidant activity is reached. Recent studies by Dr.

Gordon Troup at Monash University, Dr. Klaus Jung at Mainz University, Dr. Vinson and Dr. Hontz of Scranton University, and the Jordan Heart Research Foundation in the United States have shown that white wine is just as effective as red wine as an antioxidant.

Wine is usually consumed as an accompaniment to food, where the most important point is that the correct wine variety is married to that food, not whether the wine is red or white. Wine consumed with food adds to the nutritional benefit of the food, while the absorption of the alcohol in the wine is slowed down by digestion of food. This adds to the enjoyment and health benefits of wine. Both red and white wine are sources of sugars, proteins, anti-oxidants, vitamins, and minerals.

Why all the Interest in Wine and Health?

The notion that consuming any form of alcohol is bad for you – the line taken by the influential anti-alcohol lobby – has now been proven as false. Recent medical and scientific studies have shown that alcohol consumed in moderation is not only not favourable to health, but that the moderate consumption of wine, in particular, has significant health benefits.

It's time to let everyone in on the secret. The good news of the health benefits of wine, as reported in numerous research articles, has been largely ignored by medical and scientific literature in the supposed interest of public health. It has been thought that to report the medical benefits of drinking wine may encourage alcohol abuse, which is a legitimate concern. But is it justified?

Research papers are being published regularly, showing new medical benefits of consuming wine in moderation. In *Wine and Health: a New Look at an Old Medicine*, this latest information is explained, letting everyone know the potential role of wine in the general maintenance of health.

The Story of Wine

Wine is a cerebral commodity for a host of reasons. For instance, there is great interest in the different varieties, the vineyard terroir, that is the aspect, location, soil, and microclimate, alongside the vintages and varying winemaking techniques. Wine appreciation requires significant consideration to fully appreciate. Wine in moderation could be considered the thinking person's health drink, giving increased quality and length to life.

4 Introduction

The great eighteenth-century French philosopher Voltaire wrote about moderation: "Use, do not abuse. Neither abstinence nor excess ever rendered man happy." He may well have been talking about wine.

The modern era of wine and health is illustrated in Australia in the eighteenth century. In 1787 the First Fleet sailed from England for Australia, using wine as a medicine and a source of vitamins to help convicts survive the long sea voyage. This tradition of Australian doctors' medical use of wine was the springboard for today's research into the relationship between wine and health.

The story of wine as a medicine begins in ancient times, moves through the centuries and the continents to Australia's and America's wine doctors, and continues today with research into the role of wine in preventative medicine.

CHAPTER ONE

ROYAL MEDICINE: WINE USED AS A MEDICINE THROUGH THE AGES

"In wine there is health"
—Pliny the Elder (23–79 CE),
Roman soldier, scientist and historian

A Historical Overview of the Medicinal Uses of Wine

Ancient China - Where Wine Began

Traditionally, in famous reference works such as Hugh Johnson's book *The History of Wine*, Georgia is accepted as the place where winemaking began about nine thousand years ago. However, new research has changed this Western perception. It can now be shown that China is where the first grape wine was made some five hundred years earlier.

Jiahu is a Neolithic archaeological dig site in Northern China near the middle of the Yellow River Valley. Very early examples of Chinese pictogram writing and bone flutes, "the earliest playable musical instruments in the world," have been found there, along with pottery shards or fragments of storage vessels. The dried remains of the liquid contents of these storage vessels have been analysed by Professor Patrick McGovern, an expert in these matters, at the University of Pennsylvania in Philadelphia, USA. Professor McGovern was also assisted by researchers from the Chinese Academy of Sciences, the Chinese Academy of Social Sciences, the University of Science and Technology of China, and the Henan Institute of Cultural Relics and Archaeology.

The results of the examinations showed that the residue contained a mixture of honey mead, hawthorn fruit wine, rice wine, and indigenous Chinese grape wine ("some 40 grape species are found in China, the

highest concentration in the world"), and was dated as being five hundred years older than that found in Georgia. "This beverage currently predates the earliest evidence of grape wine from the Middle East by more than 500 years," thus making the Jiahu wine the earliest fermented alcoholic beverage in the world. The reason this can be confirmed is because China began making pottery earlier than in the Middle East (as early as 13000 BCE versus 6000 BCE), hence there were storage vessel fragments made from pottery analysed from Jiahu. By contrast, in Georgia there were no storage vessel pottery fragments to be analysed because pottery had not been invented, and the only archaeological evidence of grape wine production was the accumulation of heaps of grape pips left over after fermentation.

It should also be remembered that this wine beverage was made over four thousand years before Chinese tea was first used by the Chinese Emperor Shen Nong in 2737 BCE.

Later grape wine played a very important role in Chinese medicine as part of the Chinese *materia medica*, and was also used as a menstruum or mixing medium for other medicines. Red wine was also used in sacrificial ceremonies because its colour was associated with blood.

China is where winemaking began, not the Middle East or Europe. China should now rediscover its unique wine heritage and embrace wine as its own national health beverage and best preventative medicine.

The Shanghai Museum of Chinese History has many examples of wine vessels dating back to 3800 BCE for grey pottery, 3100 BCE for red pottery, and 1600 BCE for bronze. The bronze gallery has vessels for storing food, water, and wine, with the wine vessels accounting for the largest number. Chinese *materia medica* not only mixed plants and minerals with wine, but also selected parts of various animals that were thought to have virtues. At that time, Opium (not available to European medicine for many centuries) was also commonly mixed with wine.

Examples of uses where animal parts were mixed in wine include prescriptions to produce an abortion, which meant rubbing a mixture of lizard's liver, skin of the cicada locust, and wine into the navel, or the flesh of a pit viper prepared by placing the snake in a gallon of wine then burying the sealed jar under a horse's stall for one year. The resultant liquid was a cure for apoplexy, fistula, stomach pain, heart pain, colic, haemorrhoids, worms, flatulence, and bleeding from the bowels. Alcoholism

could be cured by a donkey's placenta mixed with wine, and malaria with the liver of a black cat in wine, while for a bad cold an owl was smothered to death, plucked, and boiled, its bones then being charred and taken with wine.

The German medical historian Franz Hubotter spent twenty-five years studying in China and Tibet, and in 1957 published *Chinesisch-Tibetische Pharmakologie and Rezeptur*. In this book, nineteen of the eighty-seven prescriptions listed included wine. Hubotter notes that these wines were from the European cultivated grape vitis vinifera and not from grain or wild, indigenous grapes. Vitis vinifera was introduced into China by Chang Ch'ien during the second century BCE after he had learned winemaking in Persia.

Earlier wines would have been made from indigenous grapes because, during the Chou Dynasty (1000 BCE), red wine, which could only be made from red grapes and not from grain, was used in sacrifices because its colour was associated with blood. The wine was mixed with human blood and bone marrow and then drunk.

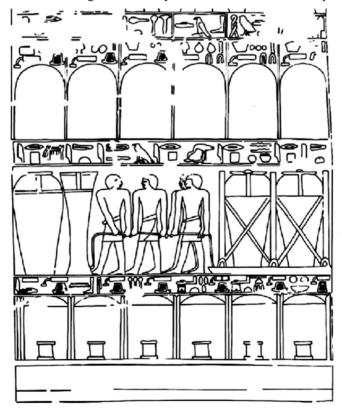
Hua To was the most important surgeon in ancient China. He used a strong mixture of hashish and wine to induce narcosis prior to surgery, so the patient felt little pain.

In Europe and the Middle East, viticulture probably began some nine thousand years ago in the region of Georgia, which lies on the eastern shores of the Black Sea near the Caucasus Mountains. From here, viticulture appears to have spread to the evolving cultures of the Middle East, with each adopting its own myth of the origins of wine. The grape vine travelled down the Tigris and Euphrates Rivers to Babylon and over land to Persia. It spread to Egypt and Greece and was adopted by the ancient Greek and Roman empires, which spread viticulture throughout the Mediterranean. Viticulture continued to expand until the most climatically favourable areas of Europe grew grapes.

Since the age of the Egyptian Pharaohs five thousand years ago, wine has been used as a medicine. The ancient Egyptian, Greek, and Roman empires all appreciated and utilized wine as a medicine. Into the Middle Ages, monks ran hospitals in their monasteries and made medicines from wine. These were the basis of many of the liqueurs enjoyed today.

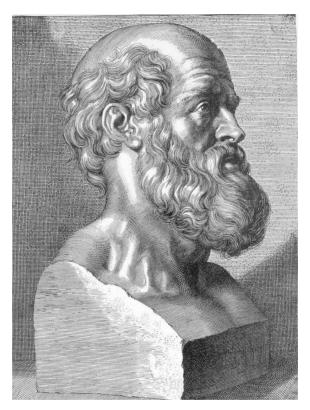
The Middle East

Wine is supposed to have been discovered in Persia (now Iran) by the mistress of King Jamshid, who was so fond of grapes that he had them stored in jars so that he could eat them all year round. One year, the grapes fermented in a jar and were no longer sweet, and assuming the new liquid in the bottom of the jar was poisonous he marked it accordingly. His mistress, so the story goes, had such a bad headache that she wanted to die, so she drank the liquid in the "poisonous" jar. The wine made her feel better, greatly easing her pain and enabling her to fall asleep. Upon hearing of this miraculous cure, King Jamshid tested the poison himself and enjoyed the wine so much that the wonderful tonic was named the royal medicine. Wine was then held in the highest esteem by the Persians for its curative qualities.



Part of a wall scene from the tomb of Nikauisesi at Saqqara, Egypt, depicting offering bearers dragging jars containing four different types of wine

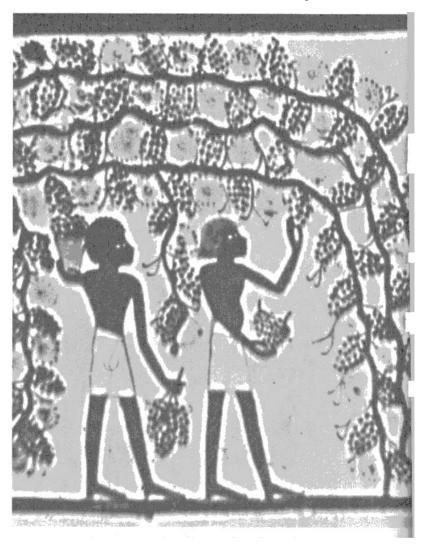
This accidentally concocted wine was a result of the simple process of fermentation. All that is required to make basic wine is to crush grapes into a vessel and allow the natural yeast present on the skins to ferment the juice. Eventually, wine will be produced, which can be drained from the skins and consumed.



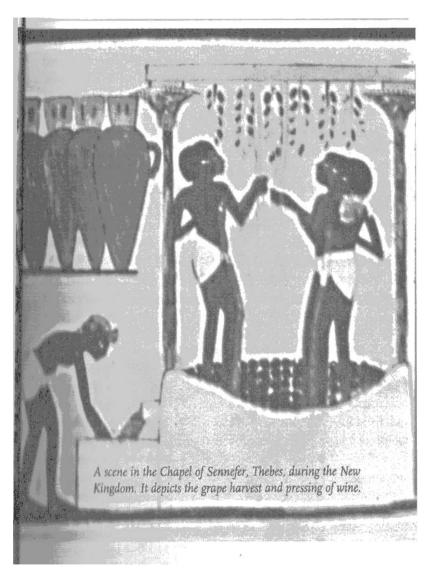
Hippocrates (460–377 BCE) was the leading Greek physician of the ancient world and author of the Hippocratic oath.

Armenian winesellers spread the knowledge of winemaking down the River Euphrates to Babylon (now Iraq), where the Sumerian culture began around 4000 BCE. The oldest known medical handbook, a Sumerian pharmacopaeia written on a clay tablet dated approximately 2200 BCE, recommends the use of wine as treatment for ailments, making wine the human's oldest documented medicine. Sweet wine mixed with honey, for

instance, was used to treat coughs. Tabatu was a Babylonian medical drink made from water and small amounts of fermented fruit juice or wine.



Ancient Egyptian painting from temple wall depicting grape picking



Ancient Egyptian painting from temple wall depicting crushing grapes and making wine

There are many examples from ancient times, for instance Ptahhotep, the vizier of Ancient Egypt, who was highly regarded for his wisdom and

literary achievements, and lived at Memphis in North Egypt in about 4000 BCE. In his tomb were the oldest known inscriptions depicting winemaking. Egyptian papyri dating from 2000 BCE also record the medicinal use of wine. Wine made from grapes, dates, and palm sap was used as a solvent for mixing other medicines, including, for example, treatment for an infected ear, where wine was used as an antiseptic.

Islamic doctors, restricted by the teachings of the Koran, used wine for medicinal purposes only. Leading Arabian doctors through the first millennium, including Rhazes (860–932 CE), Avicenna (980–1032 CE), known as the "Prince of Physicians," and Albucasis (936–1013 CE), used wine to prevent infection in wounds.

The Mediterranean

In the Middle East, wine as a medicinal remedy had been prescribed in a form diluted three to five times by water. The ancient Greek physicians were the first to prescribe wine undiluted, and it was one of their most used medicines. Hippocrates (460–377 BCE), a leading physician in the ancient world, is recognized as the father of modem Western medicine. He was the first to claim that illness was not due to the wrath of the gods but poor nutrition or disease. He wrote extensively of using wine "as a wound dressing, as a nourishing dietary beverage, as a cooling agent for fevers, as a purgative and as a diuretic." He made distinctions between the various types of wine, described their different effects, directed their uses for specific conditions, advised when they should be diluted with water, and stated when wine should be avoided. In an essay on wounds, Hippocrates wrote "no wound should be moistened with anything except wine, unless the wound is in a joint."

Regarding the therapeutic uses of wine, Hippocrates noted that the yeast and unaltered sugar of new wines were irritants of the gastrointestinal tract; white, thin, and acid wines were the more diuretic, and wines rich in tannin were anti-diarrhoeic. Hippocrates said of wine as medicine: "Wine is fit for man in a wonderful way provided that it is taken with good sense by the sick as well as the healthy."

Even after the ascent of Rome in 200 BCE, Greek physicians still dominated the world of medicine but were not trusted by the Romans, who thought they were poisoners or assassins. Asclepiades of Bithyria (124–40 BCE), a Greek physician who established Greek medicine in Rome, recommended fresh air, light, an appropriate diet, hydrotherapy, massage,