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Summary of the Cover Page,
Content Page & First
Page of the Publication
Indicating ISBN Number and Year
of Publication for Books, Chapters

ACADEMIC YEAR 2021-2022

BOOKS PUBLICATIONS

Sr. No.	Name of the teacher	Title of the book/chapters published	Year of publication	ISBN number of the proceeding	Name of the publisher
1	Dr. N.S. Vyawahare	Ayurvedic Remedies And Primary Cure To Relief Headache (Chapter No- 9)	2022	978-81-958127-1-4	Academic Decipher press Mumbai
2	Dr. D. S. Shirode	Ayurvedic Remedies And Primary Cure To Relief Headache (Chapter No- 9)	2022	978-81-958127-1-4	Academic Decipher press Mumbai
3	Dr. N.S. Vyawahare	The Magic Of Ayurveda In Dementia (Chapter No-6)	2022	978-81-958127-1-4	Academic Decipher press Mumbai
4	Mr.P.P. Wankhede	The Magic Of Ayurveda In Dementia (Chapter No-6)	2022	978-81-958127-1-4	Academic Decipher press Mumbai
5	Dr. N.S. Vyawahare	Treating Alzheimer's: An Herbal Approach (Chapter No- 7)	2022	978-81-958127-1-4	Academic Decipher press Mumbai
6	Mr.P.P. Wankhede	Treating Alzheimer's: An Herbal Approach (Chapter No- 7)	2022	978-81-958127-1-4	Academic Decipher press Mumbai
7	Mr.P.P. Wankhede	Ayurvedic Remedies For The Diseases Of Vital Organs Volume I (Book)	2022	978-81-958127-1-4	Academic Decipher press Mumbai
8	Dr. N.S. Vyawahare	Ayurvedic approach to food and dietary supplements For brain & neurologic health (Chapter No-8)	2022	978-81-958127-1-4	Academic Decipher press Mumbai
9	Ms. K.Chande	Ayurvedic approach to food and dietary supplements For brain & neurologic health (Chapter No-8)	2022	978-81-958127-1-4	Academic Decipher press Mumbai
10	Dr. N.S. Vyawahare	Potential Role Of Ayurvedic Herbs In Treatment Of Glioblastoma Multiforme (Chapter No-5)	2022	978-81-958127-1-4	Academic Decipher press Mumbai
11	Mr.P.P. Wankhede	Potential Role Of Ayurvedic Herbs In Treatment Of Glioblastoma Multiforme (Chapter No-5)	2022	978-81-958127-1-4	Academic Decipher press Mumbai



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12	Dr. N.S. Vyawahare	Liver Cirrhosis and Ayurveda (Chapter No-8)	2022	978-81-958127-0-7	Academic Decipher press Mumbai
13	Mr.P.P. Wankhede	Liver Cirrhosis and Ayurveda (Chapter No-8)	2022	978-81-958127-0-7	Academic Decipher press Mumbai
14	Dr. N.S. Vyawahare	Pharmacology-I	2022	978-93-90770-86-1	Technical Publications
15	Mr.P.P. Wankhede	Pharmacology-I	2022	978-93-90770-86-1	Technical Publications
16	Dr. D. S. Shirode	Pharmacology-I	2022	978-93-90770-86-1	Technical Publications
17	Dr. N.S. Vyawahare	A Practical Book of Human Anatomy and Physiology	2022	978-93-87686-00-7	Nirali Prakashan
18	Dr. D. S. Shirode	A Practical Book of Human Anatomy and Physiology	2022	978-93-87686-00-7	Nirali Prakashan
19	Dr. N.S. Vyawahare	Communication Skill	2022	978-93-5451-349-7	Nirali Prakashan
20	Dr. N.S. Vyawahare	Advanced Practicals in Pharmaceutical Engineering	2022	978-93-80744-93-3	Pharma Career publication
21	Dr. P. M. Chaudhari	Computer Applications in Pharmacy	2022	978-93-5585-073-7	Technical Publications
22	Dr. S.P.Chaudhari	A Practical book of Pharmaceutical Microbiology for Pharm D. (SY Pharm D)	2022	978-93-5451-489-0	Nirali Prakashan, Pune
23	Dr. P. M. Chaudhari	A Textbook of Novel Drug Delivery System	2022	978 81 7660 3799	Everest Publishing House
24	Dr. S. P. Mahaparale	A Textbook of Advanced Instrumental Techniques	2022	9788176603812	Everest Publishing House
25	Dr. N.S. Vyawahare	A Text Book of Pathophysiology	2022	978-81-96396-16-9	Nirali Prakashan
26	Dr. N.S. Vyawahare 	Remedial Biology For B. Pharmacy PCI Syllabus (1 Edition)	2022	978-93-90450-46-6	Technical Publications

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27	Dr. D. S. Shirode	Remedial Biology For B. Pharmacy PCI Syllabus (1 Edition)	2022	978-93-90450-46-6	Technical Publications
28	Dr. S. V. Pandya	Ayurvedic Remedies for Peptic Ulcer (Chapter 13)	2022	978-81-956220-3-0	Academic Decipher press Mumbai
29	S.H. Alhat	Ayurvedic remedies for Mucormycosis : The Black Fungus (Chapter 19)	2022	978-81-956220-4-7	Academic Decipher press Mumbai
30	Dr. N.S. Vyawahare	Ayurvedic remedies for Mucormycosis : The Black Fungus (Chapter 19)	2022	978-81-956220-4-7	Academic Decipher press Mumbai
31	Dr. N.S. Vyawahare	Ayurvedic Remedies For The Diseases Of Microbial Origin (Chapter No-14)	2022	978-81-956220-6-1	Academic Decipher Press, Mumbai
32	Dr. D. S. Shirode	Ayurvedic Remedies For The Diseases Of Microbial Origin (Chapter No-14)	2022	978-81-956220-6-1	Academic Decipher Press, Mumbai
33	Dr. S.P.Chaudhari	Concepts of Industrial Pharmacy- I	2022	978-93-80744-79-7	Pharma Career Publication
34	Dr. P. M. Chaudhari	Pharmaceutics-II	2022	9789374736845	AITBS Publishers, INDIA
35	Dr. S. S. Sadar	Current Approaches on Covid-19 Disease and Therapeutic Benefits of Some Phytocompounds	2022	978-3-96492-392-9	Weser books, No.79737, Germany
36	Mrs. Neetu Khatri	Pharmaceutical Granulation Technology (Chapter No-6)	2022	978-93-5570-434-4	Akinik Publication, New Delhi
37	Dr. S.P.Chaudhari	Pharmaceutical Granulation Technology (Chapter No-6)	2022	978-93-5570-434-4	Akinik Publication, New Delhi
38	Dr. N.S. Vyawahare	Pharmacy Practice	2022	978-9392159947	Pritam Publication
39	Dr. N.S. Vyawahare	Nanophytovirology Approach to Combat Plant Viral Diseases (Chapter 9)	2022	9781032348117	CRC Press



AYURVEDIC REMEDIES FOR THE DISEASES OF VITAL ORGANS VOLUME-I



DR. DHANASHRI REVANNATH MALI

DR. ANUPRIYA KAPOOR

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ABSTRACT

The burden of dementia is increasing globally. As the risk of dementia increases with increasing age, the number of people with dementia in the general population is also rising. Dementia is a chronic mental disorder, characterized by a progressive irreversible, global cognitive deficit. It demolishes the vital brain cells causing trouble with memory, thinking, behavior, work, and factors responsible for dementia include acetylcholine deficiency, free radicals, and inflammation of brain tissue. The drugs that are currently available to treat dementia address only its symptoms and with limited effectiveness. Ayurveda has been practiced in India for thousands of years. The main pillars of Ayurveda treatment are based on principles of body constitution (Prakriti), and life forces (doshas). Ayurveda mainly works on the root cause of the disease. Therefore, authors have reviewed the ayurvedic treatment approach which reduces symptoms of dementia and also shows promising results in dementia with fewer side effects and fewer interactions with other drugs. This article focuses on treatment with a lifestyle change, diet, panchakarma, and ayurvedic herbs available in India are focused.

INTRODUCTION

In today's 21st century, the world is facing several diseases and disorders. In each second every 1/3rd of people is suffering from diseases or disorders. Recently 2-3 years we are facing COVID-19, and still, we are facing it. Although there were several diseases and disorders present in the world, various kinds of treatment are given, like Ayurvedic, Unani, Siddha, Homeopathic, etc. mostly in INDIA we prefer ayurvedic treatment for complete relief. In general terms, dementia is a brain-related disease/syndrome in which a person who is suffering from it cannot think properly, cannot able to recognize properly and there is abnormal behaviors person is seen. Dementia is happening due to damaged brain cells which lead to memory loss and other activities in the brain. Dementia is can be defined as the disease of madness, and it is derived from Latin, which originally means "madness". In dementia (de strand for "without" and ment strand for "mind") it indicates that it is an observable decrease in the mental ability of a person. It is a chronic and progressive neurological disease that is characterized by a decrease in mental functioning impaired language, movement, memory thinking, and the inability to concertation.[1]

In other terms by the "WHO" dementia can be stated that a syndrome in which the impairment in cognitive function of the brain takes place. Dementia is the 7th leading cause of death, according to "WHO" dementia is present in over 35.6 million people around the world, and as the population gets increases day by day it may rise in multiple manners. Dementia not only affects physically but also affects their society and families, carers, etc. The lack of awareness and understanding of dementia creates lots of barriers to the proper diagnosis and treatment of the person.[2], [3]

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ABSTRACT

The burden of dementia is increasing globally. As the risk of dementia increases with increasing age, the number of people with dementia in the general population is also rising. Dementia is a chronic mental disorder, characterized by a progressive irreversible, global cognitive deficit. It demolishes the vital brain cells causing trouble with memory, thinking, behavior, work, and factors responsible for dementia include acetylcholine deficiency, free radicals, and inflammation of brain tissue. The drugs that are currently available to treat dementia address only its symptoms and with limited effectiveness. Ayurveda has been practiced in India for thousands of years. The main pillars of Ayurveda treatment are based on principles of body constitution (Prakriti), and life forces (doshas). Ayurveda mainly works on the root cause of the disease. Therefore, authors have reviewed the ayurvedic treatment approach which reduces symptoms of dementia and also shows promising results in dementia with fewer side effects and fewer interactions with other drugs. This article focuses on treatment with a lifestyle change, diet, panchakarma, and ayurvedic herbs available in India are focused.

INTRODUCTION

In today's 21st century, the world is facing several diseases and disorders. In each second every 1/3rd of people is suffering from diseases or disorders. Recently 2-3 years we are facing COVID-19, and still, we are facing it. Although there were several diseases and disorders present in the world, various kinds of treatment are given, like Ayurvedic, Unani, Siddha, Homeopathic, etc. mostly in INDIA we prefer ayurvedic treatment for complete relief. In general terms, dementia is a brain-related disease/syndrome in which a person who is suffering from it cannot think properly, cannot able to recognize properly and there is abnormal behaviors person is seen. Dementia is happening due to damaged brain cells which lead to memory loss and other activities in the brain. Dementia is can be defined as the disease of madness, and it is derived from Latin, which originally means "madness". In dementia (de strand for "without" and ment strand for "mind") it indicates that it is an observable decrease in the mental ability of a person. It is a chronic and progressive neurological disease that is characterized by a decrease in mental functioning impaired language, movement, memory thinking, and the inability to concertation.[1]

In other terms by the "WHO" dementia can be stated that a syndrome in which the impairment in cognitive function of the brain takes place. Dementia is the 7th leading cause of death, according to "WHO" dementia is present in over 35.6 million people around the world, and as the population gets increases day by day it may rise in multiple manners. Dementia not only affects physically but also affects their society and families, carers, etc. The lack of awareness and understanding of dementia creates lots of barriers to the proper diagnosis and treatment of the person.[2], [3]

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Dementia is a broad term for a decrease in cognitive abilities severe enough to impede daily activities. Alzheimer's disease (AD) is the most prevalent kind of dementia, accounting for more than two-thirds of dementia cases in adults aged 65 and over. Alzheimer's disease is a progressive neurological illness that affects behavioral and cognitive abilities such as memory, understanding, language, attention, thinking, and judgment. In the United States, it is the sixth biggest cause of death. Early onset (beginning before 65 years of age) is uncommon, occurring in fewer than 10% of Alzheimer's disease patients. Alzheimer's disease has no cure, although there are therapies that can help with some of the symptoms.

Alzheimer's disease symptoms vary depending on the stage of the disease. Alzheimer's disease is categorized into three stages based on the degree of cognitive impairment: preclinical or pre-symptomatic, mild, and dementia-stage. These phases do not correspond to the DSM-5 categorization of Alzheimer's disease. The earliest and most common presenting symptom is episodic short-term memory loss with relative sparing of long-term memory, which may be evoked in the majority of patients even if it is not the presenting symptom. Impaired short-term memory is followed by impaired problem-solving,

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ABSTRACT

Ayurveda is a comprehensive system of natural health care that originated in the ancient Vedic times of India. Its primary emphasis is on the prevention of disease and the maintenance of health. It also provides treatment for the disease. Ayurveda translates as the 'Science of Life,' and it addresses all aspects of life, including consciousness/mind, physiology, behavior, and environment (Sharma and Clark, 2012). This chapter will focus on the dietary aspects of Ayurveda regarding brain and neurological health. First, a few basic concepts of Ayurveda will be presented.

INTRODUCTION

India is known for its traditional medicinal systems - Ayurveda, Siddha, and Unani. Medical systems are found mentioned even in the ancient Vedas and other scriptures. The Ayurvedic concept appeared and developed between 2500 and 500 BC in India [1]. The literal meaning of Ayurveda is "science of life," because the ancient Indian system of health care focused on views of man and his illness. It has been pointed out that positive health means metabolically well-balanced human beings. Ayurveda is also called the "science of longevity" because it offers a complete system to live a long healthy life. It offers programs to rejuvenate the body through diet and nutrition. It offers treatment methods to cure many common diseases such as food allergies, which have few modern treatments. However, one should be aware that Ayurvedic nutrition is not a "magic bullet" system but requires the full participation of the patient to succeed. It is an interactive system that is user-friendly and educational. It teaches the patient to become responsible and self-empowered. Ayurveda is not a nutritional system for those seeking an escape or excuse to further abuse their body or mind. It is a system for empowerment, a system of freedom, and long life.

Expanding Complementary and Alternative (CAM) Approaches:

More than 80 percent of people in developing countries cannot afford the most basic medical procedures, drugs, and vaccines. Among wealthier populations in both developed and developing countries, complementary and alternative practices are popular although proof of their safety and effectiveness is modest. Evidence-based research in Ayurveda is receiving larger acceptance in India and abroad. The National Center for Complementary and Alternative Medicine has been inaugurated as the United States Federal Government's lead agency for scientific research in this arena of medicine. Its mission is to explore complementary and alternative healing practices in the context of rigorous science,

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ABSTRACT

Ayurveda is a comprehensive system of natural health care that originated in the ancient Vedic times of India. Its primary emphasis is on the prevention of disease and the maintenance of health. It also provides treatment for the disease. Ayurveda translates as the 'Science of Life,' and it addresses all aspects of life, including consciousness/mind, physiology, behavior, and environment (Sharma and Clark, 2012). This chapter will focus on the dietary aspects of Ayurveda regarding brain and neurological health. First, a few basic concepts of Ayurveda will be presented.

INTRODUCTION

India is known for its traditional medicinal systems - Ayurveda, Siddha, and Unani. Medical systems are found mentioned even in the ancient Vedas and other scriptures. The Ayurvedic concept appeared and developed between 2500 and 500 BC in India [1]. The literal meaning of Ayurveda is "science of life," because the ancient Indian system of health care focused on views of man and his illness. It has been pointed out that positive health means metabolically well-balanced human beings. Ayurveda is also called the "science of longevity" because it offers a complete system to live a long healthy life. It offers programs to rejuvenate the body through diet and nutrition. It offers treatment methods to cure many common diseases such as food allergies, which have few modern treatments. However, one should be aware that Ayurvedic nutrition is not a "magic bullet" system but requires the full participation of the patient to succeed. It is an interactive system that is user-friendly and educational. It teaches the patient to become responsible and self-empowered. Ayurveda is not a nutritional system for those seeking an escape or excuse to further abuse their body or mind. It is a system for empowerment, a system of freedom, and long life.

Expanding Complementary and Alternative (CAM) Approaches:

More than 80 percent of people in developing countries cannot afford the most basic medical procedures, drugs, and vaccines. Among wealthier populations in both developed and developing countries, complementary and alternative practices are popular although proof of their safety and effectiveness is modest. Evidence-based research in Ayurveda is receiving larger acceptance in India and abroad. The National Center for Complementary and Alternative Medicine has been inaugurated as the United States Federal Government's lead agency for scientific research in this arena of medicine. Its mission is to explore complementary and alternative healing practices in the context of rigorous science,

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INTRODUCTION

Glioblastoma Multiforme (GBM), is a grade 4 astrocytoma, a cancer that forms from star-shaped glial cells in the brain called astrocytes. Glioblastoma is a fast-growing and aggressive brain tumor. Tumors make their own blood supply, which helps them grow and easily invades the nearby normal brain tissue, but generally does not spread to distant organs.[5,6] GBMs can be primary (arise in the brain de novo) or secondary (evolve from lower-grade astrocytoma).[7] In adults, GBM occurs most often in the cerebral hemispheres, especially in the frontal and temporal lobes of the brain. GBM is a devastating brain cancer that can result in death in six months or less, if untreated; hence, it is imperative to seek expert neuro-oncological and neurosurgical care immediately, as this can impact overall survival.[5] Children with higher-grade tumors tend to survive longer than adults. About 25% of kids who have this tumor live for five years or more.[8]

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ABSTRACT

Ayurveda offers a highly effective treatment for liver cirrhosis. According to Ayurveda, Pitta is the major part of the liver and most liver disorders are caused due to the aggravated conditions of Pitta. Although, both ayurveda and allopathy are good and relevant in their own treatments. But mostly ayurvedic treatment is recommended because it treats the body in a natural way through natural herbs without any side effects and has a low toxicity rate. At present, plants are still an important source of medicine in the health care delivery system so ayurvedic herbal treatment plays a vital role in these conditions.

Cirrhosis is a condition that can be caused by a variety of factors, including obesity, non-alcoholic fatty liver disease, excessive alcohol intake, hepatitis B or C infection, autoimmune disorders, cholestatic diseases, and iron or copper overload. Cirrhosis develops after a lengthy period of inflammation, resulting in the fibrotic tissue and regenerating nodules replacing the healthy liver parenchyma, resulting in portal hypertension. Cirrhosis of the liver is the end stage of chronic liver disease. Among the many liver disorders that can lead to cirrhosis, some progress rapidly (years) and others more slowly (decades). In the present review, Introduction to liver cirrhosis, its epidemiology, etiology, symptoms, pathogenesis, ayurvedic treatment and allopathy have been discussed.

INTRODUCTION

Chronic liver diseases are a type of liver disease that involves the gradual destruction and regeneration of the liver parenchyma, resulting in functional and structural changes such as fibrosis and cirrhosis. It encompasses a wide spectrum of liver diseases, including inflammation (chronic hepatitis), shrinkage (liver cirrhosis), polycystic liver disease, and hepatocellular cancer. It causes a variety of problems in patients with end-stage liver disease and hepatic failure.[1] Cirrhosis is caused by a variety of liver damage processes that culminate in necroinflammation and fibrinogenesis.[2] Following liver injury, hepatic fibrosis is a reversible wound-healing process defined by the formation of an extracellular matrix (ECM). These changes are temporary if the insult is acute or self-limited, and the liver architecture returns to normal. If the damage is not treated, chronic inflammation and ECM buildup continue, eventually causing scar tissue to replace the liver parenchyma. Cirrhosis is the end result of increasing fibrosis, and it can have a bad prognosis and a high fatality rate. In patients with chronic liver injury, progression to this end stage is often diverse but slow, taking 20 to 40 years to develop; the rate is controlled by both inherited and environmental variables. Epithelial cells (hepatocytes), endothelial cells, and resident nonparenchymal cells, such as hepatic stellate cells (HSCs) and Kupffer cells, make up the hepatic parenchyma (KCs). The hepatic microvascular unit is the sinusoid. It has an endothelial lining with fenestration of pores and is separated from hepatocytes by

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ABSTRACT

Ayurveda offers a highly effective treatment for liver cirrhosis. According to Ayurveda, Pitta is the major part of the liver and most liver disorders are caused due to the aggravated conditions of Pitta. Although, both ayurveda and allopathy are good and relevant in their own treatments. But mostly ayurvedic treatment is recommended because it treats the body in a natural way through natural herbs without any side effects and has a low toxicity rate. At present, plants are still an important source of medicine in the health care delivery system so ayurvedic herbal treatment plays a vital role in these conditions.

Cirrhosis is a condition that can be caused by a variety of factors, including obesity, non-alcoholic fatty liver disease, excessive alcohol intake, hepatitis B or C infection, autoimmune disorders, cholestatic diseases, and iron or copper overload. Cirrhosis develops after a lengthy period of inflammation, resulting in the fibrotic tissue and regenerating nodules replacing the healthy liver parenchyma, resulting in portal hypertension. Cirrhosis of the liver is the end stage of chronic liver disease. Among the many liver disorders that can lead to cirrhosis, some progress rapidly (years) and others more slowly (decades). In the present review, Introduction to liver cirrhosis, its epidemiology, etiology, symptoms, pathogenesis, ayurvedic treatment and allopathy have been discussed.

INTRODUCTION

Chronic liver diseases are a type of liver disease that involves the gradual destruction and regeneration of the liver parenchyma, resulting in functional and structural changes such as fibrosis and cirrhosis. It encompasses a wide spectrum of liver diseases, including inflammation (chronic hepatitis), shrinkage (liver cirrhosis), polycystic liver disease, and hepatocellular cancer. It causes a variety of problems in patients with end-stage liver disease and hepatic failure. [1] Cirrhosis is caused by a variety of liver damage processes that culminate in necroinflammation and fibrinogenesis. [2] Following liver injury, hepatic fibrosis is a reversible wound-healing process defined by the formation of an extracellular matrix (ECM). These changes are temporary if the insult is acute or self-limited, and the liver architecture returns to normal. If the damage is not treated, chronic inflammation and ECM buildup continue, eventually causing scar tissue to replace the liver parenchyma. Cirrhosis is the end result of increasing fibrosis, and it can have a bad prognosis and a high fatality rate. In patients with chronic liver injury, progression to this end stage is often diverse but slow, taking 20 to 40 years to develop; the rate is controlled by both inherited and environmental variables. Epithelial cells (hepatocytes), endothelial cells, and resident nonparenchymal cells, such as hepatic stellate cells (HSCs) and Kupffer cells, make up the hepatic parenchyma (KCs). The hepatic microvascular unit is the sinusoid. It has an endothelial lining with fenestration of pores and is separated from hepatocytes by

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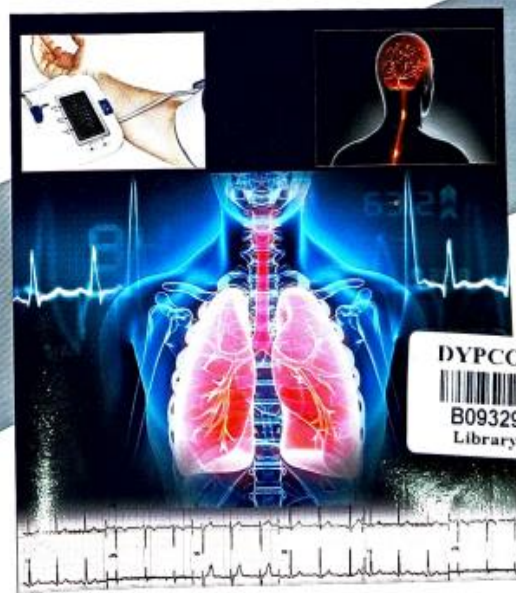
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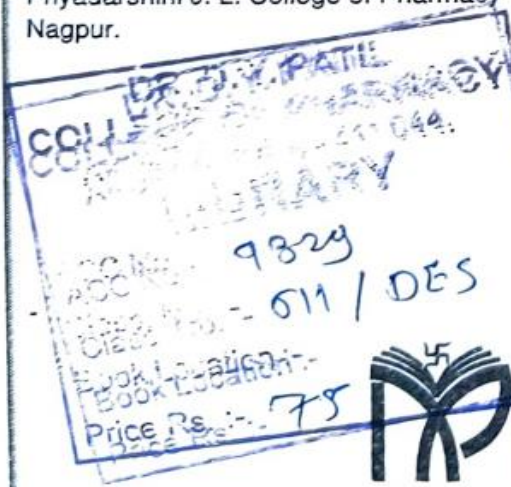
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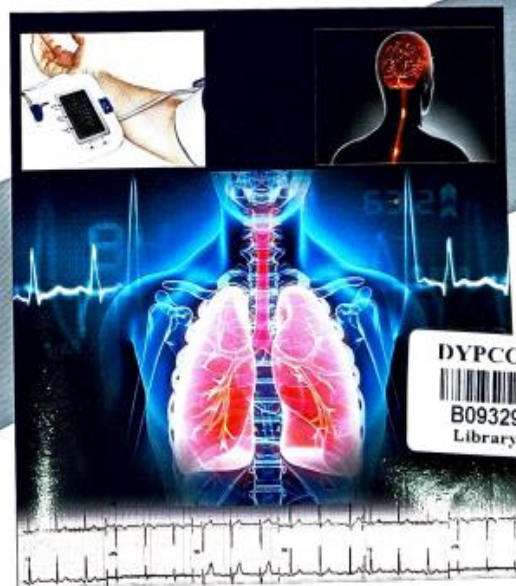
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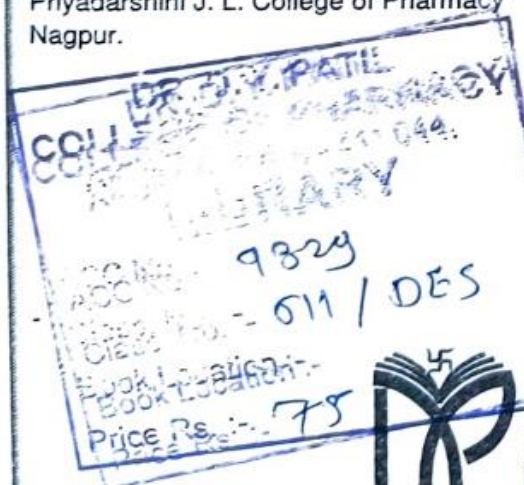
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Syllabus

UNIT I

Communication Skills : Introduction, Definition, The Importance of Communication, The Communication Process - Source, Message, Encoding, Channel, Decoding, Receiver, Feedback, Context.

Barriers to Communication : Physiological Barriers, Physical Barriers, Cultural Barriers, Language Barriers, Gender Barriers, Interpersonal Barriers, Psychological Barriers, Emotional Barriers.

Perspectives in Communication: Introduction, Visual Perception, Language, Other Factors affecting our perspectives - Past Experiences, Prejudices, Feelings, Environment.

UNIT II

Elements of Communication: Introduction, Face to face Communication, Tone of Voice, Body Language (Non-Verbal Communication), Verbal Communication, Physical Communication.

Communication Style: Introduction, The Communication Styles Matrix with example for each - Direct Communication Style, Spirited Communication Style, Systematic Communication Style, Considerate Communication Style.

UNIT III

Basic Listening Skills: Introduction, Self-Awareness, Active Listening, Becoming an Active Listener, Listening in Difficult Situations.

Effective Written Communication: Introduction, When and When Not to Use Written Communication-Complexity of the Topic, Amount of Discussion Required, Shades of Meaning, Formal Communication.

Writing Effectively: Subject Lines, Put the Main Points First, Know Your Audience, Organization of the Message.

UNIT IV

Interview Skills: Purpose of an Interview, Do's and Don'ts of an Interview.

Giving Presentations: Dealing with Fears, Planning Your Presentation, Structuring Your Presentation, Delivering Your Presentation, Techniques of Delivery.

UNIT V

Group Discussion: Introduction, Communication Skills in Group Discussion, Do's and Don'ts of Group Discussions.



About the Book

The book *Advanced Practicals in Pharmaceutical Engineering* is for B. Pharm students. It provides updated knowledge about practicals, explained in a student-friendly way, so that students will understand exact use and application of the same in the pharma industry. It is a comprehensive compilation of practicals and covers all topics as per PCI syllabus. Every practical includes its application, which contains probable and best use of that practical in the current pharma industry.

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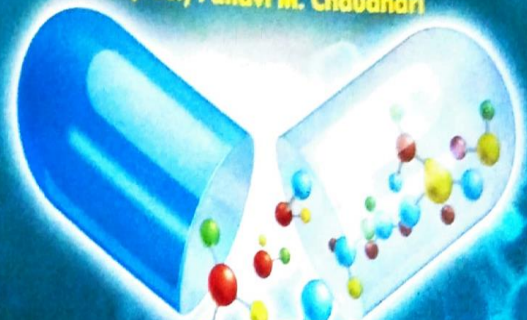
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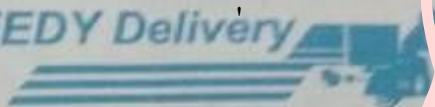
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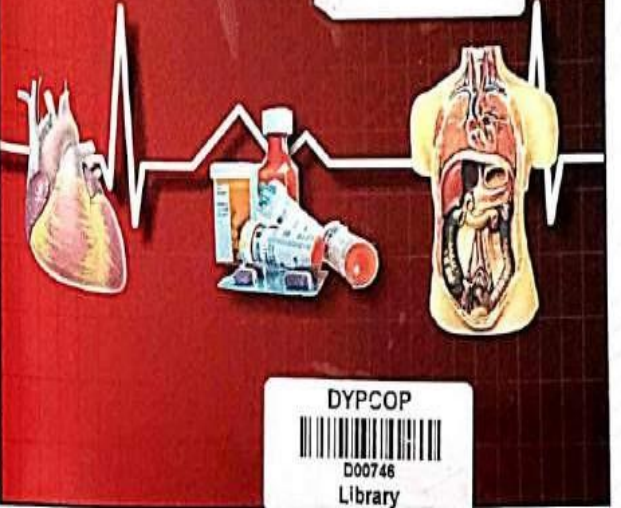


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PREFACE

The Importance of **Remedial Biology** is well known in legislation Pharmacy field. The need as per the new syllabus inspired us to write this book. The book is structured to cover the key aspects of the subject **Remedial Biology**.

The book uses plain, lucid language to explain fundamentals of the subject. The book provides logical method of explaining various complicated concepts and stepwise methods to explain the important topics. All the chapters in the book are arranged in a proper sequence that permits each topic to build upon earlier studies. All care has been taken to make students comfortable in understanding the basic concepts of the subject.

Representative questions have been added at the end of each chapter to help the students in picking important points from that section. Important MCQ's are provided at the end of the each chapter.

The book not only covers the entire scope of the subject but explains the philosophy of the subject. This makes the understanding of this subject more clear and makes it more interesting. The book will be very useful not only to the students but also to the subject teachers. The students have to omit nothing and possibly have to cover nothing more.

We Wish to express our profound thanks to all those who helped in making this book a reality. Much needed moral support and encouragement is provided on numerous occasions by our whole family. We wish to thank the **Publisher** and the entire team of **Technical Publications** who have taken immense pain to get this book in time with quality printing.

Any suggestion for the improvement of the book will be acknowledged and well appreciated.

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Dedicated to God and Students

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Remedial Biology

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Dr. Neeraj S. Vyawahare, Dr. Devendra S. Shirode,
Dr. Ashwini Singh, Binduran L. G. P. Ram

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REMEDIAL BIOLOGY

B. Pharmacy

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PREFACE

The Importance of **Remedial Biology** is well known in legislation Pharmacy field. The need as per the new syllabus inspired us to write this book. The book is structured to cover the key aspects of the subject **Remedial Biology**.

The book uses plain, lucid language to explain fundamentals of the subject. The book provides logical method of explaining various complicated concepts and stepwise methods to explain the important topics. All the chapters in the book are arranged in a proper sequence that permits each topic to build upon earlier studies. All care has been taken to make students comfortable in understanding the basic concepts of the subject.

Representative questions have been added at the end of each chapter to help the students in picking important points from that section. Important MCQ's are provided at the end of the each chapter.

The book not only covers the entire scope of the subject but explains the philosophy of the subject. This makes the understanding of this subject more clear and makes it more interesting. The book will be very useful not only to the students but also to the subject teachers. The students have to omit nothing and possibly have to cover nothing more.

We Wish to express our profound thanks to all those who helped in making this book a reality. Much needed moral support and encouragement is provided on numerous occasions by our whole family. We wish to thank the **Publisher** and the entire team of **Technical Publications** who have taken immense pain to get this book in time with quality printing.

Any suggestion for the improvement of the book will be acknowledged and well appreciated.

Authors

*Dr. Neeraj S. Dyanahare
Dr. Devendra S. Shirode
Dr. Ashwini Singh
Bindurani L. G. P. Ram*

Dedicated to God and Students

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Dr. Sanjeev Kumar Sahu

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ABSTRACT

Peptic ulcer is basically an inflamed break in the skin or the mucous membrane lining the alimentary tract. Ulceration mainly occurs when there is a disturbance of the normal equilibrium which is either caused by enhanced aggression or reduced mucosal resistance. Various synthetic drugs are available to treat ulcers, but these drugs are expensive and may cause side effects. Medicinal plants are widely used by the traditional medical practitioners for curing various diseases in their day-to-day practice due to the resistance to antibiotics and with the toxicity during prolonged treatment with several drugs.

INTRODUCTION

“Peptic ulcers are open sores that develop on the inside lining of the stomach and the upper portion of the small intestine.” Peptic ulcers occur in the part of the gastrointestinal tract which is exposed to gastric acid and pepsin i.e. the stomach and duodenum. It results due to the imbalance between the aggressive factors i.e. acid, pepsin, bile, helicobacter pylori and defensive factors i.e. gastric mucus and bicarbonate secretion, prostaglandins, nitric oxide, high mucosal blood

innate resistance of mucosal cells.⁽¹⁾ In peptic ulcer there are two words which derived from two different languages i.e. one is the ‘Peptic’ from the Greek word ‘peptikos’ meaning ‘digestive’ and another is ‘Ulcer’ from the Latin word ‘sulcus’ meaning ‘sore or ulcer’.

In 2005, *Barry Marshall and Robin Warren* both were awarded the Nobel Prize in Physiology or Medicine for their discovery that peptic ulcer disease (PUD) was primarily caused by *Helicobacter pylori*, a bacterium with affinity for acidic environments, such as the abdomen. Chronic infection with *Helicobacter pylori* and use of non-steroidal medicine (NSAIDs) together with in fact acetyl group hydroxy acid (aspirin), this square measures the foremost common etiological causes of ulcer. a number of the less common causes which will cause ulcer i.e., Zollinger-Ellison syndrome that a system neoplasm, that happens within the head of bowel i.e. At the small intestine half, infectious agent infections, dysplasia.

Tobacco abuse, O blood group, alcohol consumption, cigarette smoking are the risk factors for the development of the ulcer disease.

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AYURVEDIC REMEDIES FOR MUCORMYCOSIS: THE BLACK FUNGUS



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ABSTRACT

Mucormycosis could be a dangerous infection caused by a growing variety of fungi of order Mucorales. It's a rare sickness however more and more recognized in immune-compromised patients. A larger understanding of the pathologic process of the sickness could result in future therapies. For instance, it's currently clear that iron metabolism plays a central role in controlling mucormycosis infections which deferoxamine predisposes patients to mucormycosis by not suitably supplying the flora with iron. Typically, a mobile infection, primary sickness is initiated within the higher or lower airways and is related to the clinical development of rubor, odd-toed unguate cerebral mucormycosis, or pulmonic infection. Dissemination of infection to skin, brain, and different sites is a smaller amount common, however direct extension of the infection to contiguous sites is common if patients don't receive aggressive surgical and medical aid. In Spite of aggressive treatment once detected or diagnosed the overall inflated death rate is accordingly. The treatment value is additionally terribly high and desires an extended course of treatment. written material possesses cost-efficient, potent, and broad-spectrum Antifungal agents. Today it's

determined that individuals WHO have suffered Covid-19 area unit are additionally susceptible to mucormycosis. This is often because of steroid medical aid given to Covid-19 recovered patients as steroids make the immunity very low. During this article, preventive pointers and treatment protocol for mucormycosis area unit mentioned supported the evidence-based information collected from experiential information, experimental and clinical analysis findings.

INTRODUCTION

Mucormycosis which is also known as black fungus is a critical fungal infection which mostly occurs in people with low immune system ^[1]. Molds of mucormycetes in groups cause this infection ^[2]. Mucormycetes are present in soil, decomposing organic matter, air, water, moist surface around us, in damp places and in animal manure ^{[1][2]}. Mucormycosis is non-contagious. Spores of mucormycosis can grow in sinus or airways and invade body tissues. The common sites that it attacks are sinuses and nose, it also manifests in the lungs. From there it can spread to the eyes which can cause blindness and then slowly it spreads toward the brain causing

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ABSTRACT:

Furuncle is one of the most severe bacterial diseases, occurring because of the grievous *Staphylococcus aureus*. *Staphylococcus aureus* is more prone to those people who are unhygienic and are immune compromised. Formation & accumulation of the pus & redness around the hair follicle are the characteristics of the furuncles at face, nose, armpits, groin region & sweaty region are more vulnerable the infection known as furunculosis. Within more vulnerable for the 6-14 days of the infection & furuncle reaches at the matured phase of the infection. Several Allopathic medicines were effective against the furuncles which can be administered orally or by intravenous routes, but these medicines have adverse effects. Also, some of them will eventually become resistant to the *Staphylococcus aureus*. Ayurvedic remedies have performed well for the treatment of the furuncles with minimal to no adverse effects which either can be neglected, also ayurvedic remedies does not provide the bacterial resistance. Shankhprakashalana yoga is also effective to get rid of the furuncles. This article is meant to discuss the pathophysiology risk factors allopathic & ayurvedic remedies to treat the furuncle.

INTRODUCTION:

Furuncle or boil is a infection occurring by the bacteria called *S.Aurues*. [1] Infection occurred by bacteria. It occurs in hair follicles and infects the surrounding area. The hair follicles on body parts as well as scalp hair follicles can be affected by furuncle.[1] The formation of furuncle is a result of body's defence mechanism to kill bacteria. Emmerich and Weibel provided the evidence of furunculosis in 1894. They found in winter of 1888/1889. They observed swellings and after that found ulcerative lesions in brown colour in German fish farm. [2] Furuncle or boil is a skin abscess occurring the attack of *staphylococcus aureus* bacteria is called as staph infections. When it collects pus in hair follicles, skin tissues or under the skin it also known as boils. Painful and deep infection that occurs around hair follicles is known as furunculosis [3] Pus is an accumulation of dead bacteria, dead skin, and dead white blood cells. The furuncle sometimes becomes more severe known as carbuncles. It is collection of number of boils that develop below the skin. First bacteria attack then it swells and turns to furuncle or boil and carbuncles.

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AYURVEDIC REMEDIES FOR THE DISEASES OF MICROBIAL ORIGIN



Dr. Saba Maanvizhi

Dr. C. Suryaprakash Reddy

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AYURVEDIC REMEDIES FOR FURUNCLE (BOILS)



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About the Book

This book has been compiled to meet the needs of students of Pharmacy at all UG levels. An attempt has been made to write Industrial Pharmacy related concepts in simple and easily understandable style avoiding complex vocabulary. To grasp the essence of concepts, figures, models, charts and tables are used.

Authors have taken special care to cover all important Industrial Pharmacy concepts such as formulation studies and formulation concepts of non-sterile dosage forms such as tablets, capsules, pellets and liquid orals. Concepts related to sterile dosage forms such as parenteral, ophthalmic as well as cosmeceuticals are also covered.

This book has been aligned strictly according to PCI Syllabus for B.Pharm- Vth semester (BP 502 T. Industrial Pharmacy-I (Theory)). This book will be of immense value to students of B.Pharm. and M. Pharm.

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B.Pharm. Vth Semester

UNIT-I

07 Hours

Preformulation Studies:

Introduction to preformulation, goals and objectives, study of physicochemical characteristics of drug substances.

- Physical properties: Physical form (crystal & amorphous), particle size, shape, flow properties, solubility profile (pKa, pH, partition coefficient), polymorphism
- Chemical Properties: Hydrolysis, oxidation, reduction, racemisation, polymerization
BCS classification of drugs & its significance

Application of preformulation considerations in the development of solid, liquid oral and parenteral dosage forms and its impact on stability of dosage forms.

UNIT-II

10 Hours

Tablets:

- Introduction, ideal characteristics of tablets, classification of tablets. Excipients, Formulation of tablets, granulation methods, compression and processing problems. Equipments and tablet tooling.
- Tablet coating** : Types of coating, coating materials, formulation of coating composition, methods of coating, equipment employed and defects in coating.
- Quality control tests**: In process and finished product tests

Liquid orals : Formulation and manufacturing consideration of syrups and elixirs, suspensions and emulsions; Filling and packaging; evaluation of liquid orals official in pharmacopoeia

UNIT-III

08 Hours

Capsules :

- Hard gelatin capsules: Introduction, Production of hard gelatin capsule shells. size of capsules, Filling, finishing and special techniques of formulation of hard gelatin capsules, manufacturing defects. In process and final product quality control tests for capsules.
- Soft gelatin capsules: Nature of shell and capsule content, size of capsules, importance

of base adsorption and minim/gram factors, production, in process and final product quality control tests. Packing, storage and stability testing of soft gelatin capsules and their applications.

Pellets : Introduction, formulation requirements, pelletization process, equipments for manufacture of pellets

UNIT-IV

10 Hours

Parenteral Products :

- Definition, types, advantages and limitations. Preformulation factors and essential requirements, vehicles, additives, importance of isotonicity
- Production procedure, production facilities and controls, aseptic processing
- Formulation of injections, sterile powders, large volume parenterals and lyophilized products.
- Containers and closures selection, filling and sealing of ampoules, vials and infusion fluids. Quality control tests of parenteral products.

Ophthalmic Preparations: Introduction, formulation considerations; formulation of eye drops, eye ointments and eye lotions; methods of preparation; labeling, containers; evaluation of ophthalmic preparations

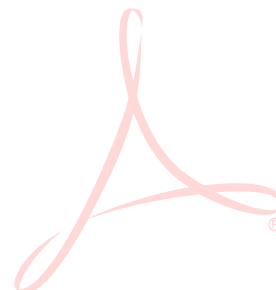
UNIT-V

10 Hours

Cosmetics : Formulation and preparation of the following cosmetic preparations: lipsticks, shampoos, cold cream and vanishing cream, tooth pastes, hair dyes and sunscreens.

Pharmaceutical Aerosols : Definition, propellants, containers, valves, types of aerosol systems; formulation and manufacture of aerosols; Evaluation of aerosols; Quality control and stability studies.

Packaging Materials Science : Materials used for packaging of pharmaceutical products, factors influencing choice of containers, legal and official requirements for containers, stability aspects of packaging materials, quality control tests.



PHARMACEUTICS-II

DISPENSING PHARMACY

The book has been designed for Diploma students as per the syllabus prescribed by Pharmacy Council of India (PCI).

To get acquainted with the recent trends, the curriculum of Diploma has been upgraded by PCI. Thus, the aim of this book is to make students understand the concepts of this subject. At the end of every chapter, we have provided practice questions, for better learning of this subject.

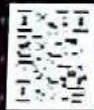
This book is a genuine effort to clarify the basics of Pharmaceutics-II and provide information in lucid way in the form of pictographic, flow charts and existing marketed preparations.



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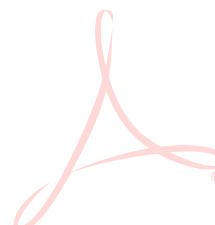


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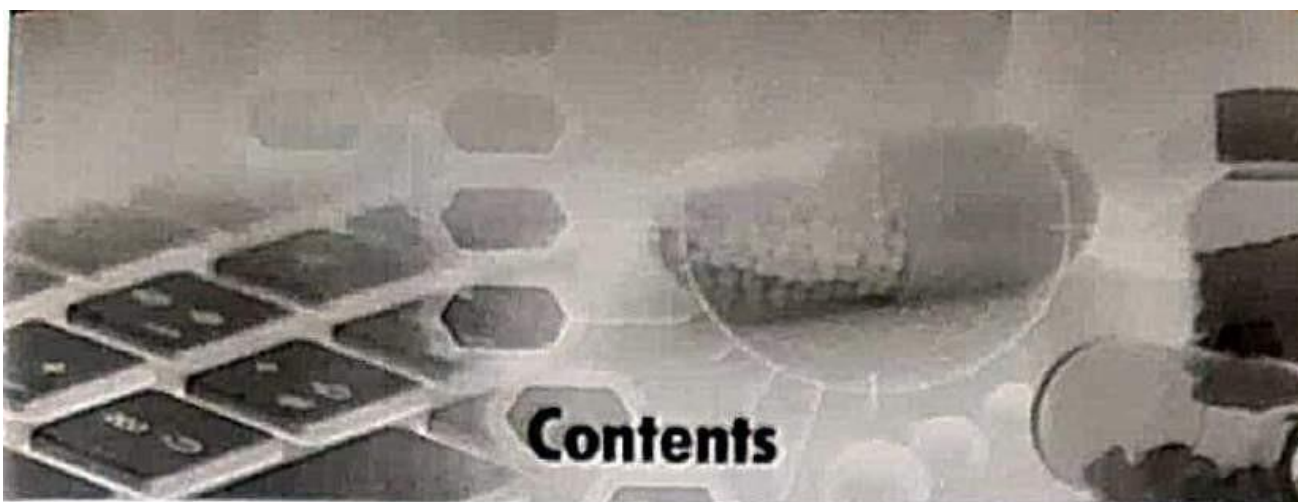
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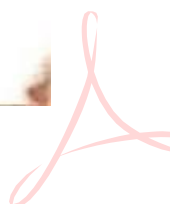
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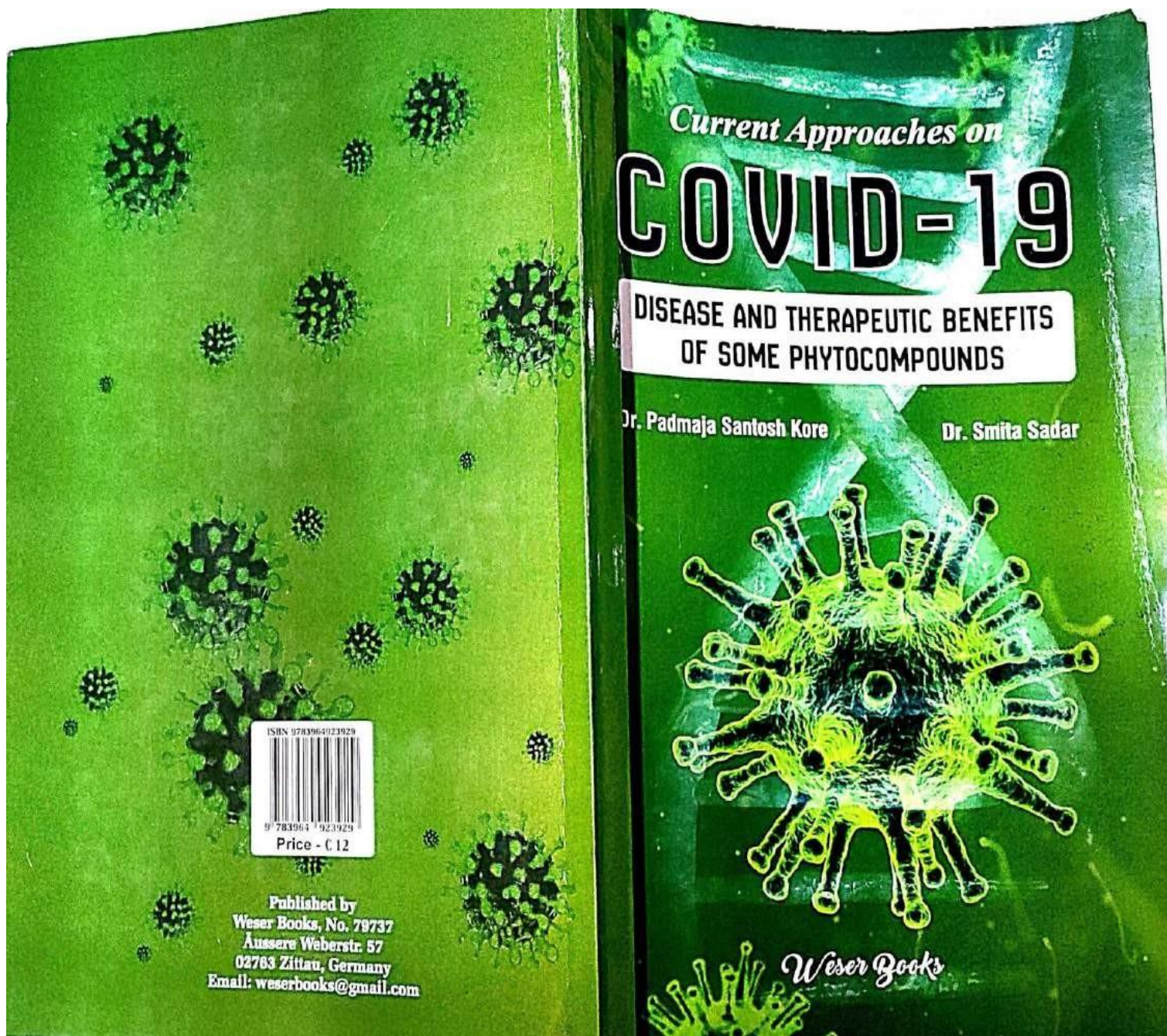
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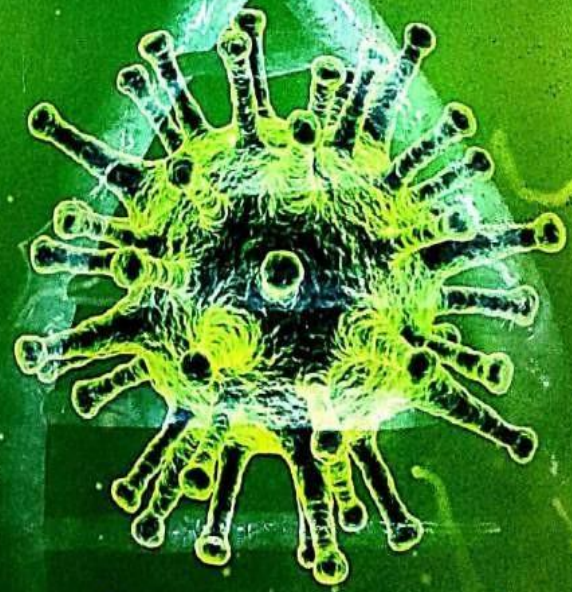
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Abstract

Granulation is one of the most significant unit operations in the production of oral pharmaceutical dosage forms like tablets and capsules. Granulation process converts fine powders into free-flowing, dust free granules that are easy to compress. However, granulation possess numerous challenges due to high quality requirement of the formed granules in terms of content uniformity and physicochemical properties such as granule size, bulk density, porosity, hardness, moisture, compressibility, etc. together with physical and chemical stability of the drug. The size of granules depends on the quantity and feeding rate of the granulating liquid. This review focuses on the different methods of granulations with their mechanism. This review gives an overview of these with a short description about each development along with its significance and limitations.

Keywords: Challenges, compress, granulation, ingredients, mechanism, dosage forms.

1. Introduction

Granulation is a process to convert fine particles into larger and stronger agglomerates having superior compression characteristics, uniformity and flow property [1]. 'Granulated' material is originated from the 'granulatum,' which a Latin word is meaning grained [2]. Granulation technology is an art and science for the production of granules in which primary powder particles are made adhere to form larger, multi particle entities called granules. The size range of pharmaceutical granules comprise between 0.2 and 4.0 mm.

Granulation normally commences after initial dry mixing of the necessary powdered ingredients so that a uniform distribution of each ingredient through the mix is achieved. After granulation the granules will either be packed (when used as a dosage form), or they may be mixed with other excipients prior to tablet compaction or capsule filling.

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Chapter - 6

Pharmaceutical Granulation Technology

Nectu Khatri and Shilpa Chaudhari

Abstract

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Nanotechnology in Agriculture and Environmental Science

**Sunil K. Deshmukh,
Mandira Kochar, Pawan Kaur, and
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Chapter 8

Nanophytovirology Approach to Combat Plant Viral Diseases

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1. Introduction

It has been estimated that by 2050, global population growth will exceed 9 billion people. Globally, one of the major challenges facing humanity is food security. The various abiotic, like climate change, and biotic factors (pests) are the reasons for the occurrence of challenges in food security (Elmer and White, 2018; Farooq et al., 2021). Plant pathogens are the major contributing factor to the food security challenge because they are responsible for substantial quantitative and qualitative loss of the crops (Farooq et al., 2021). These phytopathogens are accountable for about 10-40% losses in the quality and yield of food crops and horticultural produce. The major causative agents for plant diseases are viruses, fungi, bacteria, and nematodes (Rajwade et al., 2020). Plant viruses or phytoviruses are responsible for the austere negative effect on agriculture due to their rapid mutation, genetic