Comprehensive Combination for Cough Relief: Understanding the Benefits of a Synergistic Approach

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Abstract

This comprehensive study investigates cough prevalence, management, and treatment options in individuals with respiratory illnesses, stressing the considerable impact of uncontrolled coughing on quality of life. The paper covers the rationale for the World Health Organization -recommended fixed-dose combinations in cough management and highlights the Indian Consensus on the management of cough at primary care setting guidelines advising short-term use of Ambroxol and Guaifenesin for productive cough in autoimmune inflammatory rheumatic illnesses. The combination of Ambroxol Hydrochloride, Guaifenesin, and Terbutaline Sulfate is approved for bronchospasm treatment, with suggested dosages for adults and children. Evidence supports the effectiveness of Ambroxol, Guaifenesin, and Terbutaline in lowering cough severity and improving mucociliary clearance. Real-world studies support the efficacy of short-acting bronchodilators like Ambroxol in the treatment of productive cough. Evidence supports the effectiveness of ambroxol, guaifenesin, and terbutaline in lowering cough severity and improving mucociliary clearance. Real-world studies support the efficacy of short-acting bronchodilators like Ambroxol in the treatment of productive cough. Evidence supports the effectiveness of ambroxol, guaifenesin, and terbutaline in lowering cough severity and improving mucociliary clearance. Real-world studies support the efficacy of short-acting bronchodilators like ambroxol in the treatment of productive cough. Medication adherence studies highlight its importance in the treatment of chronic respiratory diseases. Overall, the study emphasizes the significance of individualized cough management tactics and promotes further research through clinical trials to optimize therapeutic options for optimal patient relief in respiratory disorders.

Key words: Cough, Fixed-dose combinations, Quality of life, Respiratory disorders, Uncontrolled cough

INTRODUCTION

Cough is a common symptom in clinical practice, often stemming from a variety of underlying respiratory disorders. It serves as a protective reflex system, expelling irritants, mucus, and foreign particles from the respiratory tract. While acute coughing is a typical physiological response, persistent or chronic coughing may indicate a health problem.^[1]

The occurrence of cough varies significantly depending on the underlying cause and the specific population

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being studied. For instance, during seasonal outbreaks of respiratory infections such as the common cold or influenza, cough emerges as a prominent symptom, affecting a substantial portion of the population. Chronic respiratory conditions such as chronic obstructive pulmonary disease (COPD) and bronchial asthma also contribute significantly to the overall burden of coughrelated morbidity.^[2]

PREVALENCE AND INDICATIONS

Globally, cough has a prevalence of 9.6%, while in India, it ranges from 5% to 10%. Despite being a reflex action, uncontrolled coughing can substantially impact an individual's quality of life. Acute cough has a prevalence ranging from 9% to 64%, whereas chronic cough is observed in over 10% of the population ranging from 7.2% to 33% in most countries. Regional disparities have been noted, with higher prevalence rates in Western

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countries compared to Eastern countries, likely attributed to conditions such as gastroesophageal reflux disease and obesity. In addition, in the general population, cough is more commonly observed in males who smoke.^[3]

Based on the World Health Organization guidelines, the prescribed fixed-dose combinations in cough management demonstrate rationality in their prescribing trends. Their appropriate use not only reduces burden and cost but also improves treatment productivity.^[4]

Desai *et al.*, preforms a review on the Indian Consensus on the management of cough at primary care setting guidelines, as mucoactive medications are used to treat respiratory disorders that have the clinical consequence of mucus hypersecretion. They act by lowering mucus hypersecretion and boosting sputum expectoration. The guidelines recommend short-term use of ambroxol, and guaifenesin for treatment of productive cough.^[3]

TREATMENT OPTIONS FOR COUGH^[5]

Cough warrants a tailored approach to management. Several treatment options and guidelines have been established to address acute and chronic cough from the Indian Medical Association [Figure 1].

The ambroxol hydrrochloride +guaifenesin + terbutaline sulphate approved from CDSCO recommendation for symptomatic relief of bronchospasm in bronchial asthma and chronic bronchitis.

RECOMMENDED DOSAGE

- Adults: 10–20 mL thrice daily
- Children (6–12 years): 5–10 mL thrice daily
- Children (2–6 years): 2.5 mL thrice daily.^[5]

Recommended for productive cough with short-term use and adverse events can be experienced when administrated with inhalants. The use of mucolytics in advanced airway disease is not advised. Physiotherapy is helpful in case of patients with difficulty in cough and expulsion of phlegm.^[5]

AMBROXOL: ENHANCING MUCOCILIARY CLEARANCE

Ambroxol, a mucolytic agent, has gained prominence for its ability to ameliorate respiratory conditions characterized by excessive mucus production. By stimulating the production of pulmonary surfactant, ambroxol reduces mucus viscosity and enhances its clearance. This mechanism of action holds particular significance in conditions such as bronchitis and COPD, where efficient mucus expulsion is vital for respiratory well-being.^[3]

GUAIFENESIN: FACILITATING MUCUS CLEARANCE

Another stalwart in cough management is Guaifenesin, an expectorant with a long-standing history in clinical practice. It exerts its effects by increasing the volume and reducing the viscosity of respiratory tract secretions. This dual action facilitates the removal of mucus from the airways, thereby enhancing cough effectiveness. Guaifenesin is a mainstay in both acute and chronic respiratory conditions characterized by excessive mucus.^[1]

TERBUTALINE: UNLOCKING AIRWAY CONSTRICTION

Terbutaline, a beta-adrenergic agonist, stands as a potent bronchodilator. By activating beta-2 adrenergic receptors in the smooth muscles of the airways, terbutaline induces bronchial relaxation and subsequent increased airflow. This mechanism is pivotal in conditions characterized by reversible airway obstruction, such as asthma.^[6]

EVIDENCE FOR EFFICACY

These medications have demonstrated significant benefits in managing cough and associated symptoms.

Kiran *et al.* performed a on efficacy analysis resulted in reduction of cough severity score in relation to cough intensity with a combination of terbutaline, ambroxol, and guaiphenesin is efficacious and safe in management of productive cough.^[7]

Shankar *et al.* analyses provide a real-world approach to the management of acute or chronic cough where short-acting bronchodilator, ambroxol results offer ancillary actions by increasing expiratory flow and mucociliary clearance for their role as Mucokinetics for productive cough in adults.^[8]

MEDICATION ADHERENCE STUDY

Makwana *et al.* conducted a study focusing on medication adherence as a critical component of successful treatment in patients with asthma COPD and elderly adults since these conditions are difficult to manage with long-term comorbidities.^[9]

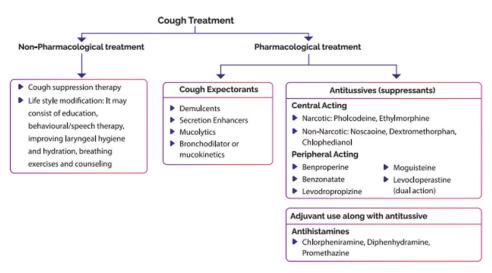


Figure 1: Management of cough

Overall, these studies contribute to the understanding of cough management, particularly in the context of respiratory conditions prevalent in India.

CONCLUSION

The studies offer important insights into cough management, it is essential to note the efficacies and safety of medication. In addition, the study on medication adherence underscores the importance of patient compliance in effectively managing chronic respiratory conditions. Overall, the collective body of research underscores the significance of these medications in providing relief to patients suffering from respiratory conditions. Further research and clinical trials may continue to improve understanding of efficacy and optimal use in clinical practice.

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EXPERT OPINION

Dr. Pramod Shingre

In my practice, the duration of cough remains consistent at 5–7 days, with dry cough being the most prevalent. I prescribe cough syrup with tailored ingredients for specific cough types. However, across various formulations, effectiveness rates low (rated 1 on a scale of 1–5). Approximately 2–5% of patients experience concurrent congestion or cold symptoms, warranting a 5–7 day cough syrup regimen. Personally, I find 15 mg of Dextromethorphan more effective than 10 mg for cough treatment.

Dr. S Vetrivelan

MBBS, VIVEK CLINIC, Coimbatore, Tamil Nadu

In my practice, coughs often persist beyond 10 days, commonly of the protective type. I prioritize tailored, approved cough syrups with cooling and soothing effects. Ambroxol + Guaifenesin + Terbutaline + Menthol and Phenylephrine Chlorpheniramine maleate Dextromethorphan rate highest (5/5). About 5–10% have concurrent cold symptoms, warranting a 5–7 days regimen. I find 15 mg of Dextromethorphan more effective than 10 mg.

Dr. Vaibhav Surve

BHMS, CCH, SUYASH CLINIC, PUNE, Maharashtra

In my practice there were no significant changes in cough duration, typically lasting 5–7 days. The protective cough variant is most common. I prioritize cough syrups with a cooling and soothing effect, rating them 5 for effectiveness, and 4 for both cooling and soothing properties. Approximately 10–20% of patients experience concurrent cold symptoms, warranting a 10–12 days regimen. Regarding dextromethorphan dosage, I need more data to make a conclusive assessment. Additional information would be helpful.

Dr. Sanjiv Gujrathi

MBBS, Dr. Gujarathi Clinic, PUNE, Maharashtra

In my clinical practice, I have not observed any significant changes in cough duration, which typically lasts for 5–7 days. Dry cough is the most common type I encounter. When selecting a cough syrup, I prioritize the presence of appropriate ingredients for the specific cough type and consider the viscosity of the syrup. Approximately 10–20% of my patients experience concurrent cold symptoms. In such cases, I recommend a 10–12 days regimen of cough syrup. However, I do not have enough data to make a conclusive assessment regarding Dextromethorphan dosage. More information would be required for a definitive evaluation.

Dr. Bal Krishan Arora

MBBS, PCMS, MRSH, Dr. BK Arora Clinic, Ludhiana, Punjab

In my practice, I often encounter prolonged cough durations, primarily of the dry type. I prioritize prescribing cough syrup with tailored ingredients for specific cough types, ensuring a cooling and soothing effect. I prefer rational combinations approved by drug authorities. Highest effectiveness was observed with ambroxol + guaifenesin + terbutaline + menthol syrup, levosalbutamol + ambroxol + guaifenesin syrup, dextromethorphan + chlorpheniramine in dry cough, around 10–20% of my patients experience concurrent congestion or cold symptoms with their cough. I typically recommend a 5–7 days regimen of cough syrup for such cases. Regarding Dextromethorphan dosage, I do not have a specific preference.

Dr. M Shamshad

MD, FCCP, PGDHA, AFIR, Health care clinic, New Delhi

In my practice, coughs typically last 5–7 days without notable changes. Dry cough is most prevalent. When prescribing cough syrup, I prioritize tailored ingredients, emphasizing cooling and soothing effects, and ensure a rational, approved combination. Ambroxol + guaifenesin + terbutaline + menthol, dextromethorphan + chlorpheniramine in dry cough had the highest effectiveness. Approximately 10–20% have concurrent congestion or cold symptoms. I recommend a 10–12 day syrup regimen. No specific preference for dextromethorphan dosage was noted, indicating that further data is needed to establish a conclusive assessment regarding its optimal dosage for effective treatment of cough.

Dr. Vinod Karhana

MBBS, MD, Kerawar Nagar, Delhi

In my practice, coughs often persist beyond 10 days, commonly of the dry type. When prescribing cough syrup, I prioritize tailored ingredients, emphasizing cooling and soothing effects, and ensure a rational combination approved by drug authorities. In addition, I consider the viscosity and taste of the syrup. Relief from ambroxol + guaifenesin + terbutaline + menthol syrup, levosalbutamol + ambroxol + guaifenesin syrup, and dextromethorphan + chlorpheniramine in dry cough had the highest effectiveness and least was phenlephrine + chlorpheniramine maleate dextromethorphan syrup. Approximately 10–20% of my patients experience concurrent congestion or cold symptoms with their cough. In such cases, I recommend a 5–7day regimen of cough syrup. Regarding dextromethorphan dosage, I do not have a specific preference.

Dr. B S Jayakumar

MBBS, MD, Dr. BSJ clinic, Thiruvanantha Puram, Kerala

In my practice, coughs often persist for more than 20 days, primarily of the dry type. When prescribing cough syrup, I prioritize tailored ingredients, ensuring a cooling and soothing effect, and a rational combination approved by drug authorities. In addition, I consider the viscosity and taste of the syrup. Relief from ambroxol + guaifenesin + terbutaline + menthol syrup, levosalbutamol + ambroxol + guaifenesin syrup and dextromethorphan + chlorpheniramine in dry cough and least relief from phenylephrine + chlorpheniramine maleate + dextromethorphan syrup. Approximately 10-20% of my patients experience concurrent congestion or cold symptoms with their cough. In such cases, I recommend a 10-12 days regimen of cough syrup. Regarding dextromethorphan dosage, I prefer 15 mg over 10 mg for more effective cough treatment.

Dr. Naishad Bhatt

MBBS, Dr. Naishadh B Bhatt's Clinic, Mahemdabad, Gujarat

In my practice, coughs often last more than 10 days, frequently of the protective type. When prescribing cough syrup, I prioritize tailored ingredients, ensuring a cooling and soothing effect, and a rational combination approved by drug authorities. I also consider the viscosity and taste of the syrup. Relief from ambroxol + guaifenesin + terbutaline + menthol syrup and relief from levosalbutamol + ambroxol + guaifenesin syrup were highly effective. Relief from dextromethorphan + chlorpheniramine in dry cough was also effective. Approximately more than 20% of my patients experience concurrent congestion or cold symptoms with their cough. For such cases, I recommend a 5–7-day regimen of cough syrup. Regarding dextromethorphan dosage, I prefer 15 mg over 10 mg for more effective cough treatment.

Dr. Malathi Balraj

MBBS, PGDHA, PG DIP diabetalogy Diabetic care center, Mumbai, Maharastra

In my clinical practice, I find that protective coughs often persist for over 10 days. When prescribing cough syrup, I prioritize ingredients tailored to the specific cough type, aiming for a cooling, soothing effect and an approved, rational combination. Ratings for relief on a scale of 1–5 are as follows: ambroxol + guaifenesin + terbutaline + menthol syrup (4), levosalbutamol + ambroxol + guaifenesin syrup (5), and dextromethorphan + chlorpheniramine in dry cough (5). About 10–20% of my patients experience concurrent congestion or cold symptoms, for whom I recommend a 5–7-day cough syrup regimen. As for the dextromethorphan dosage, I do not have a specific preference.

Dr. Mahesh Dhoiphode

MBBS, Sanjeevani clinic, Thane, Maharashtra

In my clinical practice, coughs often persist for more than 10 days, primarily of the dry type. When prescribing cough syrup, I prioritize ingredients tailored to the specific cough type, ensuring a cooling and soothing effect, and using an approved, rational combination. On a scale of 1–5, I rate the relief provided by different cough syrups as follows: ambroxol + guaifenesin + terbutaline + menthol syrup (4), levosalbutamol + ambroxol + guaifenesin syrup (4), and dextromethorphan + chlorpheniramine in dry cough (5). Over 20% of my patients experience concurrent congestion or cold symptoms, for whom I recommend a cough syrup regimen lasting over 15 days. I prefer dextromethorphan dosage at 5 mg.

Dr. Vikram Shekatkar

MBBS, Clinic, Mumbai, Maharashtra

In my clinical practice, coughs often persist for over 20 days, primarily of the dry type. When prescribing cough syrup, I prioritize a rational combination approved by drug authorities. On a scale of 1 to 5, I rate the relief provided by different cough syrups as 3. Over 20% of my patients experience concurrent congestion or cold symptoms, for whom I recommend a 5–7-day regimen of cough syrup. Regarding dextromethorphan dosage, I need more data to make a conclusive assessment.

Dr. Vijay Kumar

MBBS, MD, Clinic, Muzaffarpur, Bihar

In my clinical practice, coughs, primarily of the productive type, often persist for more than 10 days. When prescribing cough syrup, I prioritize tailored ingredients for the specific cough type, emphasizing a cooling and soothing effect, and ensuring a rational combination approved by drug authorities. I also consider the viscosity and taste of the syrup. Levosalbutamol + ambroxol + guaifenesin syrup was highly effective and dextromethorphan + chlorpheniramine was effective in Dry Cough: ambroxol + guaifenesin + terbutaline + menthol syrup was not so effective compared to other both. Over 20% of my patients experience concurrent congestion or cold symptoms with their cough. For such cases, I recommend a 5–7day cough syrup regimen. Regarding dextromethorphan dosage, further data is needed to make a conclusive assessment.

Dr. Dhurjati Mukherjee

MBBS, Clinic, Jharkhand

In my clinical practice, I there was no significant changes in cough duration; typically, it lasts 5-7 days, with the most common type being productive. When prescribing cough syrup, I emphasize tailored ingredients for the specific cough type, ensuring a cooling, soothing effect, and using a rational, approved combination. I also consider syrup viscosity and taste. I rate the effectiveness of different cough syrups on a scale of 1-5. Ambroxol + guaifenesin + terbutaline + menthol syrup: 4. levosalbutamol + ambroxol + guaifenesin syrup: 5, dextromethorphan + chlorpheniramine in dry cough: 5. Over 20% of my patients experience concurrent congestion or cold symptoms with their cough. In such cases, I recommend a 5-7 day cough syrup regimen. Regarding Dextromethorphan dosage, no specific preference for Dextromethorphan dosage was noted, indicating that further data are needed to establish a conclusive assessment regarding its optimal dosage for effective treatment of cough.

Dr. S S Nandi

MD, PhD, Nandi Polyclinic, Samastipon, Bihar

In my practice, cough durations often exceed 10 days, with the most common type being productive. When prescribing cough syrup, I prioritize tailored ingredients for the specific cough type, ensuring a soothing effect. I emphasize approved combinations and consider viscosity and taste. I rate ambroxol + guaifenesin + terbutaline + menthol and levosalbutamol + ambroxol + guaifenesin syrups as highly effective. Approximately 5-7% of patients have concurrent cold or congestion symptoms. I recommend 5–7 days of cough syrup for such cases. The cough syrup containing phenylephrine + chlorpheniramine maleate + dextromethorphan hydrobromide provides moderate relief. No specific preference for Dextromethorphan dosage was noted, indicating that further data is needed to establish a conclusive assessment regarding its optimal dosage for effective treatment of cough.

Dr. Vijay Shankar Upadhayay

MD medicine, Ashadeep hospital, Jaunpur, Uttar Pradesh

In my clinical practice, coughs often persist for more than 20 days, primarily of the productive type. When prescribing

cough syrup, I prioritize the presence of appropriate ingredients tailored to the specific cough type, ensuring a cooling and soothing effect, and using a rational combination approved by drug authorities. I also consider the viscosity and taste of the syrup. On a scale of 1–5, I rate the relief provided by different cough syrups as 5. Approximately 10–20% of my patients experience concurrent congestion or cold symptoms with their cough. In such cases, I recommend a 10–12day regimen of cough syrup. Regarding dextromethorphan dosage, I do not have a specific preference.

Dr. Vijay Thakur

Tulsi clinic, Rajnangaon, Chhattishgarh

In my clinical practice, coughs often persist for more than 20 days, with both dry and productive types observed. When prescribing cough syrup, I prioritize the presence of appropriate ingredients tailored to the specific cough type, ensuring a cooling and soothing effect. Additionally, I focus on using a rational combination approved by drug authorities, while considering the viscosity and taste of the syrup. On a scale of 1–5 relief provided by different cough syrups. Ambroxol + guaifenesin + terbutaline + menthol syrup: 5, levosalbutamol + ambroxol + guaifenesin syrup: 4, dextromethorphan + chlorpheniramine in dry cough: 5. Over 20% of my patients experience concurrent congestion or cold symptoms with their cough. For such cases, I recommend a 5-7 days regimen of cough syrup. I have a prefer 15 mg dosage of Dextromethorphan for effective treatment of cough.

Dr. Harish Chandra Chechani

MBBS, DTCD, MD (General medicine), Chennai Diagnostic Centre, Sikar, Rajasthan

In my clinical practice, cough durations have been consistently longer, often extending beyond 10 days. The most common type of cough observed is productive. When prescribing cough syrup, I prioritize tailored ingredients for the specific cough type, ensuring a cooling and soothing effect. I also emphasize the use of a rational combination approved by drug authorities, considering the viscosity and taste of the syrup. On a scale of 1–5, I rate the relief provided by different cough syrups as 4. Approximately 10–20% of my patients experience concurrent congestion or cold symptoms with their cough. In such cases, I recommend a 5–7 day regimen of cough syrup. For effective treatment, I prefer 15 mg of dextromethorphan over 10 mg.

Dr. Dilip Modi

MBBS, FCCP, FCGP Clinic, Navsri, Gujarat

In my clinical practice, I have consistently observed that the duration of cough tends to remain within the range of 5-7 days. Among the various types of cough and encounter, the productive variety is the most common. When it comes to prescribing cough syrup, significannce emphasis on selecting formulations that contain ingredients tailored to the specific type of cough, with a focus on delivering a cooling and soothing effect. Moreover, prioritize using combinations that have received approval from drug authorities, taking into consideration factors such as viscosity and taste of the syrup. In my experience, the cough syrup containing Ambroxol + Guaifenesin + Terbutaline + Menthol has consistently provided the highest level of relief, warranting a rating of 5 on a scale of 1-5. For patients experiencing concurrent symptoms such as congestion or cold alongside their cough, which accounts for more than 20% of cases, and typically recommend a 5-7 day regimen of cough syrup. In such instances, I have found that the cough syrup containing Phenylephrine + Chlorpheniramine maleate + dextromethorphan hydrobromide proves to be highly effective, earning a rating of 4 in terms of relief provided. Furthermore, based on my clinical judgment, I generally prefer prescribing a dosage of 15 mg of Dextromethorphan over 10 mg, as it has consistently demonstrated superior efficacy in treating cough.

Dr. Vinayaka

MD (General Surgery), Geeta Hospital, Holiyal, Karnataka

In my clinical practice, I have noted that cough durations can sometimes extend beyond the typical 10-day range, often presenting as a dry cough. When it comes to prescribing cough syrup, my priority is to select formulations with ingredients tailored to the specific type of cough, always aiming for a cooling and soothing effect. In addition, significant emphasis on utilizing rational combinations that have received approval from drug authorities, while also taking into consideration factors such as viscosity and taste of the syrup. In terms of efficacy, I have found that the cough syrup containing Ambroxol+Guaifenesin+Terbutali ne+Menthol provides substantial relief, warranting a rating of 4 on a scale of 1-5. For patients experiencing concurrent symptoms like congestion or cold alongside their cough, which accounts for approximately 5-10% of cases I encounter, I typically recommend a 5-7-day regimen of cough syrup. However, I do not have a specific preference for either 15 mg or 10 mg of Dextromethorphan, as both dosages have shown effectiveness in treating cough.

1. Dr. V Muralikrishna

MBBS, MD, Karthikeya Hospital, Siricilla, Telangana

In your practice, you have observed coughs lasting over 10 days, mainly productive. When prescribing cough syrup, you prioritize tailored ingredients for the cough type, emphasizing cooling and soothing effects. You also emphasize approved rational combinations, considering viscosity and taste. You rate ambroxol + guaifenesin + terbutaline + menthol syrup relief as 5 on a scale of 1–5. Approximately 5–10% of patients have concurrent cold or congestion. For them, you recommend a 10–12day cough syrup regimen. Phenylephrine + chlorpheniramine maleate + dextromethorphan syrup provides a relief rating of 4. Your preference between 15 mg and 10 mg of dextromethorphan depends on further data.

Dr. Binay Kumar

MBBS, MD, Tilkamondi, Bhegapur, Bihar

In your practice, you have noticed coughs lasting over 10 days, predominantly dry. When prescribing cough syrup, you prioritize tailored ingredients, emphasizing a cooling and soothing effect. You also prioritize approved rational combinations, considering viscosity and taste. You rate ambroxol + guaifenesin + terbutaline + menthol syrup relief as 4 on a scale of 1–5. Approximately 10–20% of patients experience concurrent congestion or cold symptoms. For them, you recommend a 5–7-day cough syrup regimen. Phenylephrine + Chlorpheniramine maleate + dextromethorphan syrup provides a relief rating of 3. You do not have a specific preference between 15 mg and 10 mg Dextromethorphan.

Dr. Mahabubur Rahman

BAMS, CSD, SCIM, Barpeta road, Assam

In your practice, coughs often last longer, exceeding 20 days, with the majority being productive. When prescribing cough syrup, you prioritize tailored ingredients, ensuring a cooling and soothing effect. You also emphasize a rational combination approved by drug authorities, considering viscosity and taste. On a scale of 1–5, ambroxol + guaifenesin + terbutaline + menthol syrup relief is rated 4. Approximately 10–20% of patients experience concurrent congestion or cold symptoms. For them, you recommend a regimen of over 15 days. The relief provided by phenylephrine + chlorpheniramine maleate + Dextromethorphan syrup is rated 3. You do not have a specific preference between 15 mg and 10 mg Dextromethorphan.

Dr. Rajend Joshi

MBBS, Dr. VN Joshi Memorial Hospital, Bagalkot, Karnataka

In my clinical practice, coughs often persist for over 10 days, mainly of the productive type. When prescribing cough syrup, I prioritize tailored ingredients for the specific cough type, ensuring a soothing effect. I emphasize rational combinations approved by drug authorities, factoring in syrup viscosity and taste. On a scale of 1–5, ambroxol + guaifenesin + terbutaline + menthol rates 3, levosalbutamol + ambroxol + guaifenesin scores 5, and dextromethorphan + chlorpheniramine in dry cough rates 5. Approximately 10–20% of patients experience concurrent cold or congestion symptoms with their cough. For such cases, I recommend a 10–12-day syrup regimen. As for dextromethorphan dosage, I do not hold a specific preference.

Dr. Vivek Dasgupta

MBBS, Joy Guru Medical, Bongagar, Assam

In my clinical practice, cough durations often extend beyond 20 days, primarily of the productive type. When prescribing cough syrup, I prioritize tailored ingredients for the specific cough type, ensuring a cooling and soothing effect. I focus on using a rational combination approved by drug authorities, and consider the viscosity and taste of the syrup. On a scale of 1 least to 5 highly effective Relief from Ambroxol + Guaifenesin + Terbutaline + Menthol Syrup: 4, Levosalbutamol + Ambroxol + Guaifenesin Syrup: 5, Dextromethorphan + Chlorpheniramine in Dry Cough: 4. Approximately 5–10% of my patients experience concurrent symptoms like congestion or cold alongside their cough. For such cases, I recommend a regimen of cough syrup lasting more than 15 days. As for dextromethorphan dosage, I need more data to make a conclusive assessment.

Dr. Sampath Sundaranathan

MD (Physician), Kumaran Clinic, Kumhaxonam, Tamil Nadu

In my clinical practice, I have observed that coughs tend to persist for more than 10 days, primarily manifesting as a dry cough. When prescribing cough syrup, I prioritize the presence of appropriate ingredients tailored to the specific cough type, ensuring a cooling and soothing effect. Additionally, I focus on using a rational combination approved by drug authorities and consider the viscosity and taste of the syrup. On a scale of 1 being least effective and 5 being highly effective, combination of Ambroxol + Guaifenesin + Terbutaline + Menthol syrup has been rated the highest. Whereas, combinations of Levosalbutamol + Ambroxol + Guaifenesin Syrup and combination of Dextromethorphan + Chlorpheniramine are equally efficient in providing relief from dry cough. Approximately 10-20% of my patients experience concurrent symptoms such as congestion or cold alongside their cough. For such cases, I recommend a 5-7-day regimen of cough syrup. Regarding dextromethorphan dosage, I do not have a specific preference.

Dr. Munindra Malakar

MD, Malakar medical, Guwahati, Assam

In my clinical practice, I have observed that coughs tend to persist for more than 10 days, with both dry and productive coughs being common. When prescribing cough syrup, I prioritize the presence of appropriate ingredients tailored to the specific cough type, ensuring a cooling and soothing effect. In addition, I focus on using a rational combination approved by drug authorities and consider the viscosity and taste of the syrup. On a scale of 1 least to 5 highly effective. Relief from ambroxol + guaifenesin + terbutaline + menthol syrup: 4, levosalbutamol + ambroxol + guaifenesin syrup: 4, dextromethorphan + chlorpheniramine in dry cough: 5. Approximately more than 20% of my patients experience concurrent symptoms such as congestion or cold alongside their cough. For such cases, I recommend a 10-12 days regimen of cough syrup. Regarding dextromethorphan dosage, I do not have a specific preference.

Dr. Rahul Kumar Gupta

MBBS, Peddar Opticals, Kolkata, West Bengal

In my clinical practice, I have observed that coughs often persist for more than 10 days, primarily of the protective type. When prescribing cough syrup, I prioritize the presence of appropriate ingredients tailored to the specific cough type, ensuring a cooling and soothing effect. Additionally, I focus on using a rational combination approved by drug authorities. On a scale of 1 least 5 highly effective. Relief from ambroxol + guaifenesin + terbutaline + menthol syrup: 5, levosalbutamol + ambroxol + guaifenesin syrup: 4, dextromethorphan + chlorpheniramine in dry cough: 3. Approximately 10-20% of my patients experience concurrent symptoms such as congestion or cold alongside their cough. For such cases, I recommend a 5-7 days regimen of cough syrup. In terms of Dextromethorphan dosage, I don't have a specific preference.

Dr. Rash Mohan Mondal

MBBS, Chakdah, West Bengal

In my clinical practice, I have observed that coughs often persist for more than 10 days, primarily of the protective type. When prescribing cough syrup, I prioritize the presence of appropriate ingredients tailored to the specific cough type, ensuring a cooling and soothing effect. Additionally, I focus on using a rational combination approved by drug authorities. On a scale of 1 least to 5 highly effective. Relief from ambroxol + guaifenesin + terbutaline + menthol syrup: 5, levosalbutamol + ambroxol + guaifenesin syrup: 4, dextromethorphan + chlorpheniramine in dry cough: 4. Approximately 10–20% of my patients experience concurrent symptoms such as congestion or cold alongside their cough. For such cases, I recommend a 5–7 days regimen of cough syrup. In terms of dextromethorphan dosage, I don't have a specific preference.

Dr. Subhasis Mukherjee

MBBS, DDV, Govt HBA and Private Clinic, Salt Lake City, West Bengal

In my practice, coughs often last for over 20 days, primarily dry. I prioritize appropriate cough syrup ingredients for each type, ensuring a cooling and soothing effect, and favor approved combinations. On a scale of 1 being least effective and 5 being most effective. Ambroxol + guaifenesin + terbutaline + menthol syrup: 4, levosalbutamol + ambroxol + guaifenesin syrup: 3 and dextromethorphan + chlorpheniramine in dry cough: 4. Around 10–20% of patients have concurrent cold symptoms. For them, I recommend a 10–12 days cough syrup regimen. I need more data on Dextromethorphan dosage.

Dr. Satyajit Maity

MD, Medicine, West Bengal

In my practice, coughs often last over 10 days, mainly dry. I prioritize tailored ingredients for each cough type, emphasizing a soothing effect. I ensure rational, approved combinations and consider syrup viscosity and taste. Ratings (1–5) for effectiveness. Ambroxol + guaifenesin + terbutaline + menthol: 3, levosalbutamol + ambroxol + guaifenesin: 2 and dextromethorphan chlorpheniramine in dry cough: 4. Around 20% have cold symptoms with cough. I suggest 10–12 days of syrup. For dextromethorphan dosage, more data is needed.

Dr. Jiban Krishna Chatterjee

MBBS, City clinic, Durgapur, West Bengal

In my clinical practice, I often encounter cough durations exceeding 10 days, with protective cough being the most common. When choosing a cough syrup, I prioritize tailored ingredients, emphasizing cooling, soothing effects, and adherence to approved combinations. I rate the effectiveness of different syrups on a scale of 1–5, with ambroxol + guaifenesin + terbutaline + menthol and phenylephrine + chlorpheniramine maleate + dextromethorphan scoring highest. Approximately 5–10% of patients experience concurrent congestion or cold symptoms, warranting a 5–7-day syrup regimen. For cough treatment, I find 15 mg of dextromethorphan more effective than 10 mg. This encapsulates my clinical approach to managing coughs.

Dr. Mayank Mishra

Barilly, Uttar Pradesh

In my clinical practice, coughs typically last 5–7 days, with dry cough being most common. When prescribing cough syrup, I prioritize tailored ingredients for specific cough types, emphasizing cooling and soothing effects, and adherence to approved combinations. I rate the effectiveness of different syrups on a scale of 1–5, with ambroxol + guaifenesin + terbutaline + menthol and phenylephrine + chlorpheniramine maleate + dextromethorphan scoring highest. Approximately 10–20% of patients experience concurrent congestion or cold symptoms, warranting a 5–7-day syrup regimen. For cough treatment, I find 15 mg of dextromethorphan more effective than 10 mg. This encapsulates my clinical approach to managing coughs. If you have further questions, please feel free to ask.

Dr. Patanjali Kumar Kehsri

Garhwa, Jharkhand

In my practice, I have observed that coughs typically last 5–7 days without significant changes. The most common type is dry cough. I prioritize suitable ingredients, cooling effects, and rational combinations in cough syrup prescriptions. Ambroxol + guaifenesin + terbutaline + menthol syrup is rated 5, levosalbutamol + ambroxol + guaifenesin syrup is rated 4, and dextromethorphan + chlorpheniramine in dry cough is rated 5 for relief. Around 10–20% of my patients experience concurrent symptoms. For them, a 10–12-day regimen of cough syrup is recommended. I do not have a specific dosage preference for dextromethorphan.

Dr. KVN Prasad

MBBS, Bajaj clinic, Visakhapatnam, Andra Pradesh

In my practice, I have not observed any changes; cough typically lasts 5–7 days. The most common type is productive cough. When prescribing cough syrup, I consider suitable ingredients, cooling and soothing effects, and use a rational combination approved by drug authorities. I also consider the viscosity and taste of the syrup. The relief provided by Ambroxol + guaifenesin + terbutaline + menthol syrup is rated 4. About 10–20% of my patients experience concurrent symptoms. For them, I recommend a 5–7-day regimen of cough syrup. As for dextromethorphan dosage, I need more data to make a conclusive assessment.

Dr. Subir Kumar Nandi

MBBS, Palash Medical Stores, Alipurduar, West Bengal

In my practice, cough duration remains consistent at 5–7 days with no observed changes. The most common type is productive. When prescribing cough syrup, I prioritize appropriate ingredients and rational combinations approved by drug authorities. Ambroxol + guaifenesin + terbutaline + menthol syrup is rated 4, levosalbutamol + ambroxol

+ guaifenesin syrup is rated 3, and dextromethorphan + chlorpheniramine in dry cough is rated 2. About 10–20% of patients have concurrent cold or congestion symptoms, and I recommend a 5–7 days regimen of cough syrup. For dextromethorphan dosage, I need further data.

Dr. Ekramul Haque

MBBS, REHAN Medical stores, Tufomgarj Coochbehen, West Bengal

In my practice, coughs typically last 5–7 days, with productive cough being most common. When prescribing cough syrup, I prioritize suitable ingredients, a soothing effect, and consider drug-approved combinations. Ratings for relief provided by different syrups: ambroxol + guaifenesin + terbutaline + menthol (4), levosalbutamol + ambroxol + guaifenesin (5), dextromethorphan + chlorpheniramine (5). About 10–20% of patients have concurrent congestion or cold symptoms; I recommend a 5–7-day regimen. No specific dosage preference for dextromethorphan.

Dr. Yogesh Kumar

MBBS, Madurai, Tamil Nadu

In my practice, coughs typically last 5–7 days, with productive cough being most common. When prescribing cough syrup, I prioritize suitable ingredients, a soothing effect, and consider drug-approved combinations. Ratings for relief provided by different syrups: Ambroxol + guaifenesin + terbutaline + menthol (4), levosalbutamol + ambroxol + guaifenesin (5). About 10–20% of patients have concurrent congestion or cold symptoms; I recommend a 10–12 day regimen. The phenylephrine +chlorpheniramine+dextromethorphan syrup is rated 2. As for dextromethorphan dosage, I do not have a specific preference.

Dr. Abhishek Chakraborty

MBBS, MD, Clinic, Bhagalpur, Bihar

In my practice, coughs often last more than 10 days, primarily dry. When prescribing, I focus on suitable ingredients, a soothing effect, rational combinations, and consider syrup properties. Ambroxol + guaiphenesin + terbutaline + menthol rates 5, levosalbutamol + ambroxol + guaiphenesin rates 5, and dextromethorphan + chlorpheniramine in dry cough rates 5. About 10–20% of patients have concurrent symptoms. I recommend 5–7 days of treatment for these cases. Relief from phenylephrine + chlorpheniramine maleate + dextromethorphan rates 2. Prefer 15 mg dextromethorphan.

Dr. Hiran and Wadhwani

MBBS, Paras clinic, Indore, Madhya Pradesh

In my practice, coughs typically last 5–7 days without significant changes. The most common type is a dry cough. When prescribing cough syrup, I prioritize the presence of suitable ingredients for the respective cough type. On a scale of 1–5, I rate the relief provided by different cough syrups as follows: ambroxol + guaifenesin + terbutaline + menthol syrup: 3, levosalbutamol + ambroxol + guaifenesin syrup: 3, dextromethorphan + chlorpheniramine in dry cough: 3. About 5–10% of my patients have concurrent symptoms. For such cases, I recommend a 5–7day regimen of cough syrup.

REFERENCES

- Sharma S, Hashmi MF, Alhajjaj MS. Cough. In: StatPearls. Treasure Island, FL: StatPearls Publishing; 2023.
- Morice AH, McGarvey L, Pavord I, British Thoracic Society Cough Guideline Group. Recommendations for the management of cough in

adults. Thorax 2006;61 Suppl 1:i1-24.

- Desai PP, Thomas PK, Abhyankar N, Vora A, Jaggi V, Jog P, et al. INDIan consensus on the mAnagemenT of cOugh at pRimary care setting (INDICATOR). J Assoc Physicians India 2023;71:11-2.
- Mathew AR, Joseph M, Meera NK, Reema AS. Prescribing trends and rationality of fixed dose combinations in a tertiary care hospital: An observational study. Indian J Pharm Sci 2020;82:542-7.
- IMA Cough. Available from: https://www.ima-india.org/ima/pdfdata/ imahq_initiative_cough_guidelines.pdf [Last accessed on 2023 Oct 18].
- Manuel MD, Timothy V. The role of beta-agonist therapy for chronic obstructive airway disease in patients with coexistent atrial fibrillation. Med Clin Res 2021;6:739-46.
- Kiran MD, Sheikh SN, Pawaskar LJ. Clinical efficacy and safety of combination of terbutaline, Ambroxol and guaiphenesin in Productive cough. Int J Curr Med Pharm Res 2017;5:4005-8.
- Shankar PS, Korukonda K, Bendre S, Behera D, Mirchandani L, Awad NT, et al. Diagnoses and management of adult cough: An Indian Environmental Medical Association (EMA) position paper. Respir Med 2020;168:105949.
- Makwana S, Vaghela J, Panchal R, Barot P. Study of medication adherence pattern in patients with asthma and chronic obstructive pulmonary disease in tertiary care teaching hospital. Int J Toxicol Pharm Res 2023;2:63-9.

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