

Development and analysis of the guidelines for identification and guidance on the signs and symptoms of presbyphagia

Desenvolvimento e análise de guia de
identificação e orientação sobre sinais e
sintomas da presbifagia

Desarrollo y análisis de guía
de identificación y orientación sobre
los signos y síntomas de presbifagia

*Raquel Gama Fernandes**
*Paulo Eduardo Damasceno Melo**

Abstract

Introduction: The elderly population is progressively increasing, so the physiological changes gain attention, and one of them is swallowing. The knowledge of the elderly, family members, caregivers and health professionals about the physiological issues of aging, orientation and identification of the first signs and symptoms of deterioration of chewing and swallowing functionality is a way of promoting health. Health professionals often use printed materials in patient education. It makes necessary the elaboration of a guide of orientation and identification on the signs and symptoms of the presbifagia, a material that does not exist in national Literature, directed to the elderly population, relatives, caregivers and health professionals. **Objectives:** To prepare a guide for identification and guidance on the signs and symptoms of presbyphagia, to be submitted to the evaluation of the elderly, caregivers, family members and health professionals. **Method:** The identification and guidance guide on the signs and symptoms of presbyphagia was elaborated, which was evaluated by community health agents, companions of the elderly and the elderly. After the evaluation, the researchers made the probable modifications of the guide.

* Faculdade de Ciências Médicas da Santa Casa de São Paulo, São Paulo, SP, Brazil

Authors' contribution:

RGF: Conceived the study, designed the method, collected the data, drafted the paper, provided critical revision. PEDM: Conceived the study, designed the method, drafted the paper, provided critical revision, supervised the study.

Correspondence e-mail: Raquel Gama Fernandes - quelgfernandes@gmail.com

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Results: The study resulted in a printed guide for identification and guidance on the signs and symptoms of presbyphagia. The evaluation of the guide by community health agents, companions of the elderly and the elderly mentioned the existence of this guide of great importance for the elderly. **Conclusion:** A guide for identification and guidance on the signs and symptoms of presbyphagia was developed, including the assessment of health professionals and the elderly.

Keywords: Speech, Language and Hearing Sciences; Deglutition; Signs and Symptoms; Aged; Resource Guide; Orientation.

Resumo

Introdução: A população idosa tem aumentado progressivamente; portanto, as mudanças fisiológicas ganham atenção, em particular, a deglutição. O conhecimento de idosos, familiares, cuidadores e profissionais de saúde sobre as questões fisiológicas do envelhecimento, a orientação e a identificação dos primeiros sinais e sintomas de deterioração da funcionalidade da mastigação e deglutição são uma forma de promoção do bem-estar. Profissionais de saúde costumam usar materiais impressos na educação do paciente. Faz-se necessário elaborar um guia de orientação e identificação de sinais e sintomas da presbifagia, um conteúdo inexistente em literatura nacional, voltado à população idosa, familiares, cuidadores e profissionais de saúde. **Objetivos:** Elaborar um guia de identificação e orientação sobre os sinais e sintomas da presbifagia e submetê-lo à avaliação dos idosos, cuidadores, familiares e profissionais da saúde. **Método:** Desenvolveu-se o guia de identificação e orientação sobre os sinais e sintomas da presbifagia, avaliado por agentes comunitários de saúde, acompanhantes de idosos e idosos. Em seguida, os pesquisadores fizeram as modificações necessárias. **Resultado:** O estudo resultou em um manual impresso de identificação e orientação sobre os sinais e sintomas da presbifagia. Agentes comunitários de saúde, acompanhantes de idosos e idosos referiram-no como muito importante. **Conclusão:** Criou-se o guia de identificação e orientação sobre os sinais e sintomas da presbifagia, avaliado por profissionais de saúde e idosos.

Palavras-chave: Fonoaudiologia; Deglutição; Sinais e Sintomas; Idoso; Guia Informativo; Orientação.

Resumen

Introducción: La población de edad avanzada ha aumentado progresivamente; por lo tanto, los cambios fisiológicos ganan atención, en particular, la deglución. El conocimiento de ancianos, familiares, cuidadores y profesionales de la salud sobre las cuestiones fisiológicas del envejecimiento, la orientación y la identificación de los primeros signos y síntomas de deterioro de la funcionalidad de la masticación y la deglución son una forma de promoción del bienestar. Los profesionales de la salud suelen utilizar materiales impresos en la educación del paciente. Se hace necesario elaborar una guía de orientación e identificación de signos y síntomas de la presbifagia, un contenido inexistente en literatura nacional, orientado a la población anciana, familiares, cuidadores y profesionales de salud. **Objetivos:** Elaborar una guía de identificación y orientación sobre los signos y síntomas de la presbifagia, someterlo a la evaluación de los ancianos, cuidadores, familiares y profesionales de la salud. **Método:** Se desarrolló la guía de identificación y orientación sobre los signos y síntomas de la presbifagia, evaluado por agentes comunitarios de salud, acompañantes de ancianos y ancianos. A continuación, los investigadores hicieron las modificaciones necesarias. **Resultado:** El estudio resultó en un manual impreso de identificación y orientación sobre los signos y síntomas de la presbifagia. Agentes comunitarios de salud, acompañantes de ancianos y ancianos lo refirieron como muy importante. **Conclusión:** Se creó la guía de identificación y orientación sobre los signos y síntomas de la presbifagia, evaluado por profesionales de salud y ancianos.

Palabras claves: Fonoaudiología; Deglución; Signos y Síntomas; Anciano; Guía de Recursos; Orientación.

Introduction

The changes resulting from the demographic and epidemiologic transition have led to the aging of the population, due to a decline in fertility and technological developments, especially regarding treatment of chronic illnesses. This global phenomenon possesses traits that are inherent to developing countries, given that these changes take place later and quickly, making it difficult to adapt and restructure policies and services that cater efficiently to this growing segment of the population^{1,2}.

Aging is the natural process of progressive decrease in functional reserve³, and involves structural, functional and neural changes that may compromise organs and functions, demanding the adaptation of previously acquired patterns. One of the functions likely to change is swallowing, an action that requires the integrity of interdependent structures in voluntary and involuntary neuromuscular contractions which depend on a dynamic and synchronic system to conduct the food from the oral cavity to the stomach while preventing it from entering the airway⁴.

With aging, anatomophysiological changes influence the functionality of the stomatognathic system. In the elderly, factors such as a decrease in saliva production, commonly associated with the use of potentially xerostomic drugs; a slowing of the chewing and swallowing process, as well as of the bolus transit in the oral cavity, and the lack of teeth, added to a decrease in masticatory strength, all affect food selection and/or the way in which it is consumed. Consequently, once the food is chewed, it is common for residues to remain in the piriform sinus (piriform fossa)^{5,6,7}.

Aging, being a natural process, leads to a decrease in the chewing and swallowing functions, which in turn may lead to limited food choices, resulting in malnutrition, dehydration and an unbalanced diet^{8,9}.

Therefore, as a health prevention and promotion measure, it is important that the elderly, their families, caregivers and/or health care professionals know and understand the physiological issues resulting from aging and their impact on chewing. Brazilian instruments, guides and/or books approach deglutition associated with dysphagia^{10,11}, without, however, addressing deglutition changes resulting from the aging process.

The purpose of this study was, thus, to develop a guide to identification and orientation on the signs and symptoms of presbyphagia, and subsequently submit it for evaluation by the community health care agents, elderly citizens and caregivers of a UBS - *Unidade Básica de Saúde* (Basic Health Care Unit).

Methods

This study was approved by the Research Ethics Committee of the institution where it was conducted (Opinion n. 1,391,012 and CAAE: 48466115.6.0000.5479).

The development of the guide, as to its content and shape, being one of the objectives of this paper, was conducted through a bibliographic research of Brazilian and foreign publications based on the Portuguese and English keywords, namely: *manual, deglutição, idoso, transtornos de deglutição, orientação*, deglutition, swallowing, elderly, aged, deglutition disorders and guidance. A search on databases was also conducted, having as references: literacy acquisition in the elderly, design of health materials, layout, language, printing, graphic organization and illustration, based on the following keywords: literature, health, elderly, manuals, illiteracy in the elderly, literacy, health, elderly and guides.

Subsequently, a guide to identification and orientation on the signs and symptoms of presbyphagia was developed, containing theoretical information as well as guidance on the definition of deglutition, deglutition anatomy, deglutition stages, deglutition physiology, functional changes in deglutition due to aging, presbyphagia, signs and symptoms of chewing and swallowing disorders, dentures, saliva, oral hygiene, use of medications, changes in diet and the correct posture for eating, aimed at a literate population group, without any significant vision impairments or evidence of cognitive disorders capable of affecting reading.

In order to make reading and understanding easier, the guide's text was written in simple language, employing current vocabulary, without technical terms, verbs in the active voice, in arial, size 12pt, black, sans-serif font. The headings were written in bold font, with the first word capitalized, left alignment and double spacing. Illustrations were selected to complement and better explain the textual content, with captions, drawn by an

illustrator using simple lines and in high quality pattern for printing^{12, 13, 14, 15}.

Once the guide had been completed, a group of ten volunteers, namely: five caregivers (three community health care agents (CHCA) and two elderly caregivers (EC)) and five elderly citizens from a UBS (E-UBS) received a printed copy to be read and evaluated. Subsequently, in order to check the understanding of the information and conducts described in the guide, the volunteers responded to a questionnaire prepared by the researchers, composed of ten closed-ended questions, which they should answer with a simple “yes” or “no”: The purpose of the guide is clear in the title; The text is clear; The context has new information; The language is appropriate, the terms are clearly understood; The illustrations are appropriate; The font size is appropriate; The font type is appropriate; The font color is appropriate; The information is consistent and in the appropriate sequence; The

illustrations are coherent with the text. There was also one open-ended, optional question: Would you like to contribute with any suggestions for this guide? Aware of the purposes of the study, all the participants signed the Informed Consent Form.

Once the questionnaires had been responded, the results were analyzed qualitatively and considered as references for the corrections to be made to the guide.

Results

The guide to identification and orientation on the signs and symptoms of presbyphagia

The study resulted in a guide to identification and orientation on the signs and symptoms of presbyphagia. The guide’s content and the proposed approaches selected according to the researched information are presented in Chart 1.

Chart 1. Content and proposed approach

Content	Approach
Definition: deglutition	Concept
Deglutition anatomy	Concept
Deglutition stages	Concept
Deglutition physiology	Concept
Functional changes in deglutition due to aging: presbyphagia	Concept
Signs and symptoms of chewing and deglutition issues	Concept
Dentures	Guidance
Saliva	Concept
Oral hygiene	Guidance
Medications	Guidance
Changes in diet	Guidance
Correct posture for eating	Guidance

The text was written in simple language and vocabulary, with double spacing, avoiding the use of technical terms^{12, 14, 15}, as may be seen in the following example:

“The human body structures involved in the deglutition (swallowing) process are: lips, tongue, cheeks, roof of the mouth, teeth, throat (larynx) and esophagus.”

Verbs were used in the active voice^{12, 13, 14, 15}, like in the example below:

“Elderly persons who wear false teeth (dentures) should take them out after each meal, clean them and put them back in.”

Illustrations were inserted to convey and give support to the meaning of the message (Figure 1).



Figure 1. Figure representing a dry mouth (xerostomia)

The voluntary participants

The age and educational level of the voluntary participants are presented in Table 1.

The voluntary participants' evaluation of the guide

The ten voluntary participants' responses to the questionnaire composed of ten closed-ended questions, with options of "yes" or "no" answers, in order to check the understanding of the content and conducts described in the guide, are presented in Table 2.

The only open-ended question, namely: "Would you like to contribute with any suggestions for the guide?" was answered by three CHCAs, two ECs and one E-UBS, presented below according to the population group.

"I would like to congratulate you, as I thought the guide is perfect, it would help me a lot when caring for my elderly patients, and even to help me give better guidance to caregivers and family members. Excellent job! Note: I am looking forward to receiving my guide." (Approval 1 CHCA).

"In my opinion, everything is great! I would like to receive more guides like this one. The work is wonderful. It is very appropriate to give information to patients, as well as their caregivers and families." (Approval 2 - CHCA).

"In my opinion, the guide to identification and orientation on the signs and symptoms of deglutition in the elderly is very interesting, it would be nice if more elderly citizens were included in this test and their family members were informed on how to teach them, as not all of them are able to read and write." (Approval 3 - CHCA).

"When the research is concluded, I'd like to receive a copy of the guide so I could give guidance to the elderly I provide care to. I think the information is very clear." (Approval 4 - EC).

"The text is clear and objective, and it understands

Table 1. Participants' characteristics

Population group	n	Age	Education level (%)		
		Mean (\pm SD)	Elementary education	High school	University degree
CHCA	3	36.6 (\pm 14.84)	--	4 (80%)	1 (20%)
EC	2				
E-UBS	5	72 (\pm 8.48)	1 (20%)	3 (60%)	1 (20%)

Caption: CHCA (Community Health Care Agent), EC (Elderly Caregiver), E-UBS (Elderly patients of a UBS - Unidade Básica de Saúde (Basic Health Care Unit))

Table 2. Answers to the questionnaire

Question	Answer		Did not answer n (%)
	Yes n (%)	No n (%)	
Is the purpose of the guide clear in the title?	9 (90%)		1 (10%)
Is the text clear?	10 (100%)		
Did it bring new information?	9 (90%)		1 (10%)
Is the language appropriate, are the terms easy to understand?	10 (100%)		
Are the illustrations appropriate?	10 (100%)		
Is the font size appropriate?	10 (100%)		
is the font type appropriate?	10 (100%)		
Is the font color appropriate?	10 (100%)		
Is the structure of the text consistent, with the information in the correct sequence?	10 (100%)		
Are the illustrations in keeping with the text?	10 (100%)		

the difficulties the elderly face and why, that is, what causes swallowing difficulties. Once the family members understand that, they are able to help the elderly person and offer him or her the appropriate meals." (Approval 5 - EC).

"Everything is excellent and easy to understand." (Approval 6 - E-UBS).

The guide is presented here as Appendix 1 and at link: <https://www.prefeitura.sp.gov.br/cidade/secretarias/upload/saude/GuiaDeIdentificacaoeOrientacao05082016.pdf>.

Discussion

The aging of the Brazilian population is evident; therefore, in addition to reorganizing the levels of care given to senior citizens, it is essential to innovate¹⁶. Based on the responses from the CHCA, EC and E-UBS to the only open-ended question, we consider the result of this study, i.e., a guide to identification and orientation on the signs and symptoms of presbyphagia, to have achieved its objective: providing guidance to health care professionals (CHCA), elderly caregivers (EC) and the elderly (E) on how to manage the changes in deglutition caused by aging, including how to make the necessary adjustments in their diets.

The bibliographic research identified that in Brazilian manuals and guides dysphagia is associated with illnesses and is commonly addressed, contrary to presbyphagia, which was the determining factor in developing the guide containing information on the anatomy and physiology of deglutition and their changes due to the natural aging process¹⁷.

The writing of the guide was informed by the following publications: "*O Guia de Deglutição para Profissionais da Saúde e Familiares de Pacientes Disfágicos*" (A Guide to Deglutition for Healthcare Professionals and Families of Dysphagic Patients)¹⁰, "*Ações Educativas para Pacientes Adultos com Disfagia Orofaríngea*" (Educational Actions for Adult Patients with Oropharyngeal Dysphagia)¹¹, "*Swallow Safely. How Swallowing Problems Threaten the Elderly and Others. A Caregiver's Guide to Recognition, Treatment and Prevention*"¹⁸, "*Swallowing Disorders. A Guide to Managing Dysphagia in the Elderly*"¹⁹ e "*Easy-to-Swallow, Easy-to-Chew Cookbook: Over*

150 Tasty and Nutritional Recipes for People Who Have Difficulty Swallowing"²⁰.

Health instructional materials are effective provided they are seen, read and understood²¹. In order to prepare the guide, the relationship between the content, the illustrations and the legibility of information was taken into account, according to the target audience's literacy and cognition levels²².²³. Extra care has to be taken when addressing the elderly, given the likely sensorial and cognitive impairments faced by this population^{24, 25}.

Thus, simple language was used, with current vocabulary and double spacing to make reading and comprehension easier; sentences were short, and, whenever it was necessary to employ technical terms, these were inserted between brackets to facilitate the reader's understanding, in accordance with the guidelines contained in books and guides for preparing healthcare material^{12, 13, 14, 15}.

In order to make reading easier, regardless of the reader's age and education level, the type and size of the font and the page background color were also considered.

To attract the readers' interest in the guide, help them understand the message and retain the information provided, the guide featured illustrations in keeping with the text, drawn by a designer using simple lines and accompanied by captions representing people from the target audience^{26, 27}.

Once the guide's text had been written, the authors prioritized the printed format in order to make it more accessible to their target audience, in addition to the possibility of reviewing and remembering the information quickly and objectively²⁸. However, one of the CHCAs who assessed the guide mentioned that not all senior citizens and their families know how to read or write, and, consequently, it would be impossible for these people to access the information contained in the guide. In situations like this one, it would be recommended for them to share the guide with a healthcare professional, a community agent, a caregiver, a distant relative or a friend, who could then convey the information to the elderly person and/or his or her close relative^{29, 30}. Another option would be to have the guide recorded as an audiobook.

One limitation of this study was its small sample size in terms of evaluating the guide; as such, the authors recommend that new studies be conducted with a larger sample size.

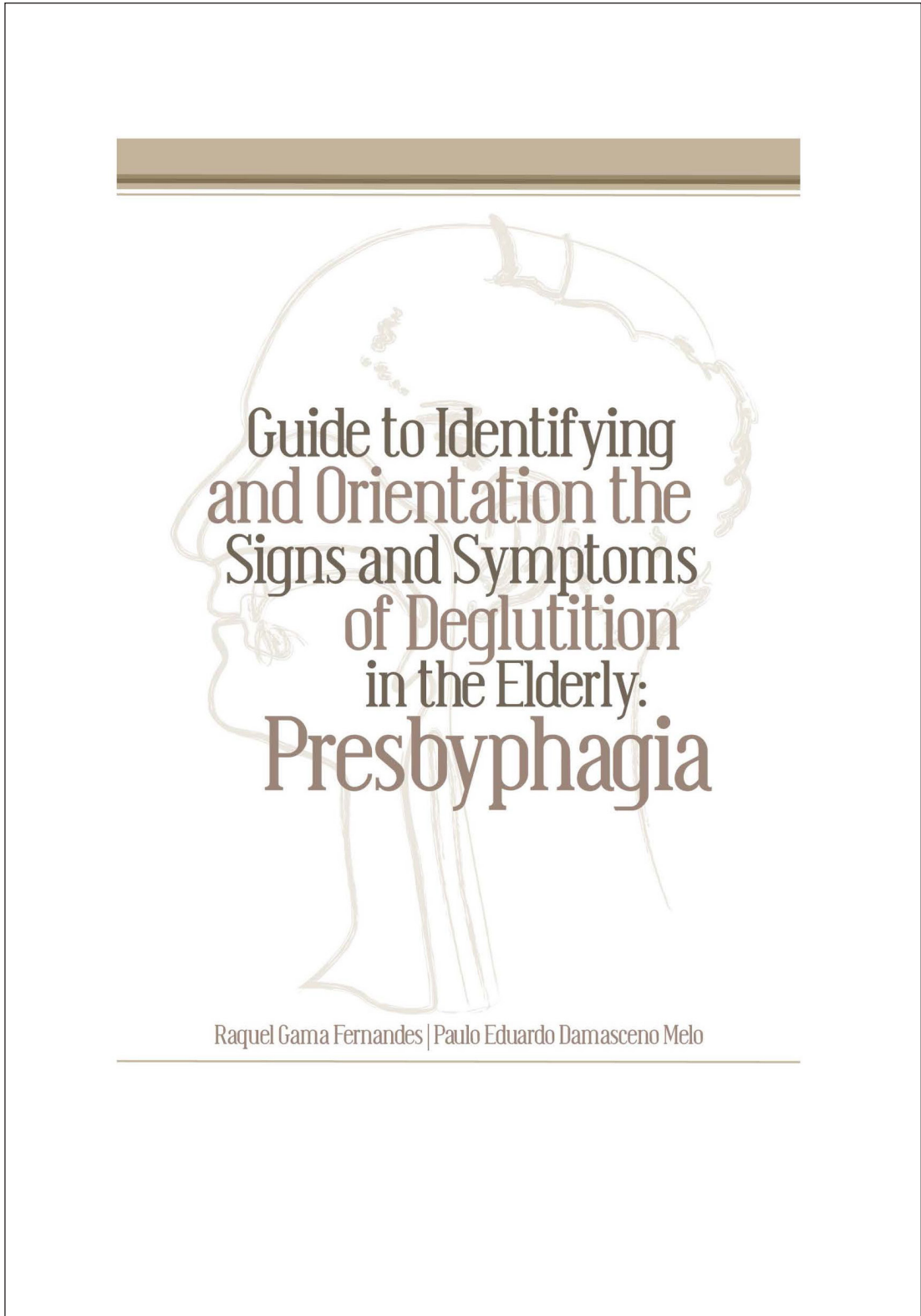
Conclusion

The objectives of the present study were achieved. The guide to identification and orientation on the signs and symptoms of presbyphagia was developed and written. Subsequently, it was submitted for evaluation by three community health care agents (CHCA), two elderly caregivers (EC) and five elderly patients from a UBS - *Unidade Básica de Saúde* (Basic Health Care Unit). Aware of the content of the guide, the evaluators considered it appropriate to provide guidance to the elderly population, recommending its use by health care services.

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Anexo 1





Guide to identification and orientation on the Signs and Symptoms of Deglutition in the Elderly: Presbyphagia

Raquel Gama Fernandes

Speech-Language Pathologist
Master in Human Communication Health from the Santa Casa de São Paulo
Medical Sciences College

Paulo Eduardo Damasceno Melo

Speech-Language Pathologist
Doctor and Professor of the Santa Casa de São Paulo Medical Sciences College

* Dental surgeon **Marcia Bernini** collaborated in the chapter about oral hygiene

Proofreading:
Marisa Cukier

Illustrations:
Milton Toller

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Fernandes, Raquel Gama

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Preface

Ana Luiza Navas

Associate Professor of the Speech, Language and Hearing Sciences program
of the Santa Casa de São Paulo Medical Sciences College

It is with great joy and satisfaction that I present this "Guide to identification and orientation on the Signs and Symptoms of Deglutition in the Elderly: Presbyphagia", written by Raquel Gama Fernandes and Paulo Eduardo Damasceno Melo. The Guide is the result of the research conducted by Raquel Gama Fernandes in partial fulfillment of the requirements to obtain her Master's Degree in Human Communication Health from the Santa Casa de São Paulo Medical Sciences College, under the guidance of Professor Paulo Melo, and shows the authors' concern in meeting the demands of their professional field.

Deglutition disorders among the elderly are increasingly prevalent, as a result of the aging of the structures involved in deglutition, use of medications, not enough water intake, among other factors. Providing guidance on how to prevent these issues from occurring and identify the early signs of deterioration in the chewing and swallowing functionality is crucial so that rehabilitation can be fast and effective.

On the other hand, when considering an educational material aimed at the elderly and their caregivers, we must be mindful of how to present this information. There is no point presenting scientifically proven information if it cannot be conveyed effectively. I am sure that the authors' concern about preparing a guide that could be used by several different agents involved in the care of the elderly has contributed to the result being of excellent quality. In short, this guide contains scientific information conveyed in a simple, illustrative manner, in order to ensure the understanding of the text by the target audience. I hope you can profit from the suggestions and enjoy your reading!



INTRODUCTION

The **Guide to identification and orientation on the Signs and Symptoms of presbyphagia** is the result of the Master's Degree in Human Communication Health from the Santa Casa de São Paulo Medical Sciences College. The authors' professional demands prompted the development of this guide, produced to help the elderly by informing them about the structures and functions associated with the deglutition (swallowing) process. With aging, deglutition (swallowing) issues may occur, and these may lead to social isolation, malnutrition, pneumonia due to food aspiration, asphyxiation (suffocation), and, ultimately, even death. This guide has been carefully designed to provide easily accessible guidance on safe deglutition, aimed at the elderly themselves, their caregivers, families and health care professionals. It gives information about the changes in deglutition that happen with aging, and the signs and symptoms associated with chewing and swallowing issues.





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What is swallowing:

It is the act of taking the food from the mouth to the stomach.

Swallowing structures:

The human body structures involved in the deglutition (swallowing) process are: lips, tongue, cheeks, roof of the mouth, teeth, throat (larynx) and esophagus.

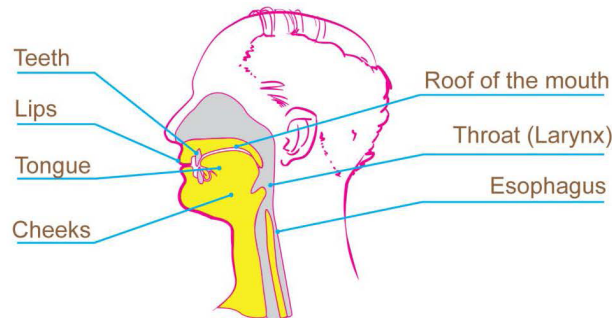


Figure 1: "The Oral Structures"

Stages of deglutition (swallowing):**Anticipatory oral stage:**

When the food is presented to the elderly, being visually attractive and smelling good.

This stage makes the elderly feel like eating.



Figure 2: "Attractive meal"

Oral preparatory and oral stages:

The food is manipulated in the mouth, being chewed and moistened by the saliva.

The tongue pushes back the food, starting the process of deglutition (swallowing).

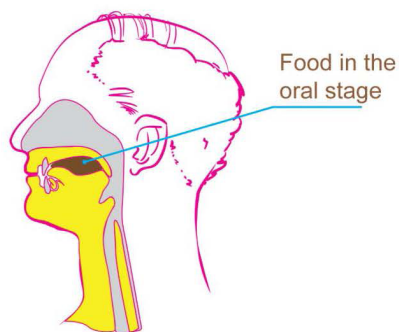


Figure 3: "Food in the oral stage"

Pharyngeal stage:

The throat (larynx) closes and moves upward, protecting the airway so that the food does not enter it, but continues down the pharynx.

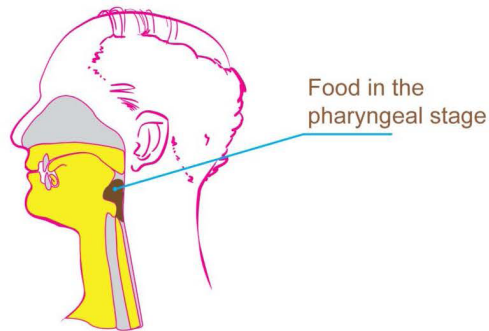


Figure 4: "Food in the pharyngeal stage"

Esophageal stage:

The food is transported from the esophagus to the stomach.

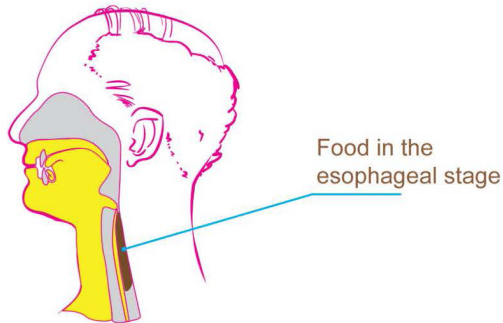


Figure 5: "Food in the esophageal stage"

The swallowing function:

The food is inserted into the mouth, manipulated by the tongue from one side to the other so that the teeth can crush it; during chewing, the food is also moistened by the saliva.

Then, the tongue pushes the food to the back of the tongue, and, at the same time, the roof of the mouth lifts and closes the nose, the throat (larynx) closes and moves upward, protecting the airway so that there is no choking/asphyxiation (suffocation), or food entering the airway. The food continues down the esophagus toward the stomach.

Changes in deglutition (swallowing) that may occur with aging: presbyphagia

- The strength of the orofacial structure muscles decreases.
- There are changes in the palate.
- The muscles that give support to the throat under the jaws get weaker.
- Saliva production decreases.
- The saliva gets thicker.
- The chewing and swallowing process slows down.

- There is a preference for softer food (due to dental issues and to the decrease in masticatory muscle strength).
- Sometimes there is coughing.
- There is a higher likelihood of food coming back up into the esophagus (gastroesophageal reflux).
- The cough reflex (a reflex that protects the airway) may be reduced.



Figure 6: “Dry mouth”

Signs and symptoms of chewing and deglutition (swallowing) issues

- Needing extra time to eat or chew.
- Swallowing each portion of food more than once.
- Coughing when eating solid food (e.g., rice, meat, bread).
- Coughing when drinking.
- Increased coughing when drinking from a straw.



- Difficulty swallowing pills.
- During meals, complaining that the food “gets stuck in the throat”.
- Sensation of having a chunk of food stuck in the throat.
- Tearing up while eating.
- Avoidance of certain types of food because they are difficult to swallow.
- Feeling asphyxiated (suffocated) when eating.
- Constantly clearing the throat while eating.
- “Wet sounding voice”, when speaking during meals.
- Temperature peaks, usually following meals, going back to normal soon afterwards.
- Vomiting/ nausea.
- Choking.
- Weight loss.
- A considerable amount of food residue left in the mouth after swallowing.



Figure 7: "An elderly person choking"

False teeth (dentures)

False teeth (dentures) must always fit well, as they play an important role in chewing the food.

Saliva

Saliva moistens the food, making it easier for the bolus to be chewed and swallowed.

Oral hygiene

Oral hygiene is important in order to clean any food residue that may have remained in the mouth after deglutition (swallowing), which grows bacteria, harming the teeth.

Without proper oral hygiene, if saliva gets in the airway it can lead to a lung infection or pneumonia.

Elderly persons who wear false teeth (dentures) should take them out after each meal, clean them and put them back in.

It is important that the elderly take out the false teeth (dentures) before going to bed, place them in a glass with water and a few drops of bleach, and in the morning clean them very carefully with running water and a toothbrush before putting them back in.

If the false teeth (dentures) don't fit well, it's best to see a dentist.



Figure 8: "Toothbrush and false teeth (dentures)"

Medications

Medications save lives and help maintain our quality of life, but, on the other hand, they may cause swallowing issues.

Some medications may reduce saliva production, causing dryness in the mouth, decrease appetite, and slow down motor response due to drowsiness or lack of attention.

Some other medications may increase saliva, cause irritation in the throat and allow food to come back up into the esophagus (gastroesophageal reflux).

It is best to see a doctor if these signs and symptoms affect the swallowing process.

Food changes

Food must be nutritional and moist, in order to avoid the risk of ending up in the airway.

Wetter food is easier to be swallowed, particularly in the elderly who have a dry mouth.

Softer, well cooked food makes chewing easier.

Avoid dry food, as it is more difficult to form a bolus due to decreased saliva.

Do not consume two different food consistencies (solid and liquid) at the same time; in case that happens, pay extra attention, given that liquid must be swallowed while chewing the solid food, as it happens with some types of soup, like chicken soup (which has a broth with solid pieces of meat and vegetables), as well as certain types of fruit containing a lot of liquid, namely: watermelon and melon, among others.

Make sure to eat food in small pieces.

Correct posture for eating

The elderly must always be seated in a quiet place without distractions; the head should be slightly bent downwards, which will make it easier for the airway to close.

Avoid laughing and talking during meals.

After meals, it is recommended that the elderly remain seated in an upright position with the head up, to prevent the food from coming back up into the esophagus (gastroesophageal reflux).

Meals must be eaten slowly.



Figure 9: “An elderly man sitting at the table with his head bent downwards, in the correct position for eating”



Figure 10: “An elderly man sitting at the table with his head bent upwards, in the wrong position for eating”

Should the signs and symptoms appear and be persistent, it will be necessary to see a doctor or a speech-language pathologist specializing in deglutition (swallowing).

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