

FOOD ALLERGENS AS AN ISSUE OF A “SUCCESSFUL” HOSPITALITY BUSINESS

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ABSTRACT: *Choosing and consuming food in a restaurant, the guest (consumer) also participates in the creation of experience. This experience should be positive and be a pleasure for all senses in order for the guest to return to the same hospitality facility. However, for people who are allergic to foods, the choice and consumption of food in hospitality facilities can turn to negative experience, lead to fear, and even to negative or fatal reactions and consequences. That is exactly what can make successful business difficult for the hospitality facility, given that the number of food allergens is increasing every day as well as the number of guests with such problems. The paper has a task to examine the challenges faced by hospitality facilities in the area of the city of Novi Sad, to which they can respond, and to which they would like to respond when allergens are concerned.*

Keywords: *food, nutrition, allergens, hospitality industry*

INTRODUCTION

Only a satisfied guest can provide a profit to a restaurant. That is exactly what is getting harder every day. The specific requirements they carry with them are becoming more and more numerous every day, and these are due to various factors, which are often unknown to them (Stojanović i Tešanović, 2005; Gagić et al., 2011; Carvalho de Rezende, Silva, 2014; Gagić et al., 2014; Cvetkovic et al., 2016). What surely complicates successful business are allergens (Bailey et al., 2011; Aleksić et al., 2015).

Flour, milk and eggs were until recently the most common food allergens. Today, their range is much larger except for 14 most prevalent. In order to overcome the problem of preparing food for people who are allergic to some of the ingredients, understanding food or knowing its composition requires detailed controls that can reduce the risk, as well as tools that can verify adequate control, which is highly complex (Kim et

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al., 2005). The number of food allergies every day grows and makes it difficult for hospitality staff to look at all segments in preparing food and drink to eliminate their presence. The first step in their overcoming is the knowledge of their composition, that is, compounds that cause allergic reactions, because these are not only proteins.

In food preparation in the hospitality industry, it is necessary to ensure food safety through the whole production chain: supplier - producer - distributor - consumer. Food business operators must further ensure that all phases of production, processing and distribution of food, which are under their control, meet the hygiene requirements laid down in the Act. They must also establish and implement regular controls of hygienic conditions at all stages of production, processing and distribution of food, except for the change of primary production and related activities, in each facility under their control, by implementing a self-regulatory preventive procedure developed in accordance with the principles of hazard analysis and critical control points. Each hospitality facility must be ready for certain modifications of the business mode, that is, food preparation in order to adequately remove the allergen from the food offered to the guest.

The subject of the paper are food allergies faced by the hospitality staff causing them great problems because they are often not sufficiently prepared and educated to respond to the requirements of guests with these problems.

The task of the paper is to investigate the problems associated with allergens faced by the hospitality staff.

The aim of this paper is to determine the most common allergens and the need for education for their overcoming, all for the purpose of a successful business.

LITERATURE REVIEW

ALLERGY AND FOOD ALLERGENS

Allergy-causing substances are called allergens, and by their way of getting into the body, they are grouped into several groups. Although in the hospitality industry, the threat can also be respiratory allergens, contact allergens, and the like, the main problem are nutritional allergens that enter the body through food. It is estimated that about 30% of the population has proneness for allergic diseases, and this number is expected to continue to rise in the future (Lockey, Ledford, 2008; Pawankar, 2013).

For hospitality staff it is important to note that when the body of the hypersensitive person guest comes into contact with an allergen, within minutes or hours, the symptoms of the allergy will be manifested (Mušić, 2009). All symptoms can be manifested in a mild form when they do not disturb work ability, but also in severe forms, and even dramatic forms when they endanger life (in case of choking, anaphylactic shock, etc.). (Hey, Luedemann, 2001; Lockey, Ledford, 2010; Martin, 2014).

It is important to distinguish an allergy from food intolerance, which implies the inability of an organism to digest certain foods, it is mostly lactose (milk sugar) and celiac disease whose frequency is increasing (Sicherer et al., 2010). Allergy to particular foods

requires constant attention in choosing food, which leads to social restrictions and rare visits to restaurants (Wanich et al., 2008). The most common problem is to determine whether the food they order absolutely does not contain the ingredients that cause their reaction (Leftwich et al, 2010). It is important to note that this is about a permanent contact of food with an allergen, not a contamination that can be mitigated by a certain treatment (thermal), such in the case with some microorganisms (Nollet, van Hengel, 2010).

SYMPTOMS OF FOOD ALLERGY

Although allergic reactions may occur to every food, most reactions occur to a small number of foods: milk, eggs, fish, shells, soybeans, wheat flour, walnuts and other nuts and berries (Thurnell-Read, 2005). Allergic reactions occur from a few minutes to a few hours after taking the food that the person is allergic to. In particularly sensitive people, only the smell or touch of food can cause an allergic reaction. The same type of food can lead to different symptoms in different people, but different types of food can lead to similar symptoms in the same child

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THE FOOD THAT USUALLY CAUSES ALLERGY REACTIONS

The most common fourteen types of nutritional allergens that can be found in foods are: peanuts, walnuts, crabs, shells, sea fish, eggs, milk, cereals, soybeans, sesame, celery, mustard, lupine and sulfur dioxide (Raljić, 2016). Increasingly common are allergies to red meat, river fish, special fruits and vegetables, as well as coffee, cocoa and salt.

Allergic reactions to foods are often caused by certain additives, preservatives and colors. Reactions to food additives occur in about 1% of children and in 0.01 to 0.23% of adults. Some of these substances are: sodium benzoate, tartrazine color (yellow colored beverages, sweets, etc.), aspartame sweetener (Pascal 2005; Pascal, 2009; Nollet, van Hengel, 2010).

RESEARCH METHODOLOGY

After reviewing national and foreign literature, the research was conducted by conducting interviews with managers and chiefs of restaurants in Novi Sad. The research will use a descriptive method. The interview is one of the most commonly used research procedures for data collection, but for this type of research it also seemed to be the most suitable because it involves the interaction between the examiners and the respondents, and thus it gives the most reliable data.

A direct interview was conducted in 12 restaurants. The interview consisted of questions about what specific needs have their guests and what needs they can respond to and whether they feel the need for information or training in order to respond to the needs of their guests when allergens are concerned. The obtained results were processed using descriptive statistics and presented in the paper through tables and graphs with the discussion.

RESULTS AND DISCUSSION

ANALYSIS OF THE MOSTCOMMON FOOD ALLERGIES

By conducting research among hospitality facilities through interviews with managers and chiefs of restaurants in the territory of the city of Novi Sad, it has come to the finding that no facility can meet all the requirements of consumers, but that they have faced with all the requirements, as can be seen in the Table 1.

All restaurant managers (100%) have faced with requirements for the omission of foods containing gluten in their dishes, or with the requirements for celiac disease, but only 25% of restaurants can respond to these requirements, and 75% of restaurants would like to have knowledge and conditions. The chiefs stated that cooking staff used rice flour or corn flour as a substitute for wheat flour. As a problem in the preparation of dishes, they emphasize the inability of detailed monitoring of the possibility of food contamination, because flour particles can come to a dish by air.

When it comes to cow's milk, 50% of respondents faced with requirements, of which 33% of restaurants have lactose-free dishes in their offer, and 33% would like to have such dishes, which is not so difficult to perform. To eliminate eggs, 66% of respondents expressed specific needs, while the needs can be satisfied by 50% of restaurants, and 42% of respondents say they would like to be able to respond to the needs of guests, so only one restaurant can not and does not feel the need to respond to the demands of guests.

In 50% of the surveyed restaurants, guests noted the allergy to fish dishes, while only 16% can satisfy their needs, and 66% would like to have the conditions and knowledge to respond to this need. A group of dishes related to fish dishes are dishes including shellfish and crabs, 33% of restaurant managers said that they faced with guests' requests, 50% said they could respond to these requests, and 25% would like to have conditions.

Requests for the omission of peanuts from meals were found in 25% of hospitality facilities, 25% observed these needs and can satisfy them, while 42% would like to have the knowledge and initiative to prepare meals for which they can guarantee that do not contain peanuts not even in traces. When it comes to walnuts, 25% of respondents have faced with requirements, 25% can satisfy needs, and 25% would like to be able to respond to the expressed needs of guests. The allergy caused by the consumption of other nuts, i.e. almonds, hazelnuts and pistachios, was mentioned by 33% of the managers of the facilities as a requirement of their guests, 25% can guarantee the quality of the service through preparing this meal to their guests, and 25% would like to acquire knowledge and conditions.

Table 1. Needs of guests for omission of the food they are allergic to

Types of allergens	Requirements – needs for omission of allergens		The needs of guests to which restaurants can respond		Allergens for which they would like to have the possibilities and knowledge to eliminate them from required dishes	
	Number of restaurants	%	Number of restaurants	%	Number of restaurants	%
Gluten (wheat, rye, barley, oat)	12	100	3	25	9	75
Cow's milk	6	50	4	33	4	33
Eggs	8	66	6	50	5	42
Fish	6	50	2	16	8	66
Shellfish, crabs	4	33	6	50	3	25
Peanuts	3	25	3	25	5	42
Walnuts	3	25	3	25	3	25
Other nuts (almonds, hazelnut, pistachios)	4	33	3	25	3	25
Soybeans	2	16	1	8	4	33
Sesame	3	25	2	16	1	8
Celery	4	33	4	33	2	16
Mustard	2	16	2	16	5	42
Lupine	1	8	1	8	0	0
Sulfur dioxide and sulphites	1	8	0	0	0	0

Source: Research by the author

Soya is often used as a substitute for animal proteins, and is found in the traces of various food products, only two restaurants or 16% of respondents reported the need for omission, one of these restaurants can respond to needs, and 33% would like to, among them, one is the facility with the manager pointing out that he faced the request, but he could not meet the guest's request.

Omission of sesame is requested in 25% of the surveyed facilities, two restaurants are ready to prepare meals, and one restaurant would like to have the knowledge and equipment for it.

Celery would be left out from the food by guests of 33% of the surveyed hospitality facilities, and 33% are willing to help the guest with such a request, while 16% are interested in information on how to help the client if they face this request.

Mustard is widely used as a foodstuff, and in 16% of the facilities there is a demand for the omission of this food from the preparation of meals, and also those respondents

pointed out that they are ready to replace and leave out the mustard from preparation of specialties, 42% of the chiefs pointed out they would like to be prepared if they face this request.

Two causes of allergic reactions encountered at least are lupine and sulfur dioxide. Lupine is known as a plant that can effectively replace soya, due to its high protein content, and is therefore often an integral part of various sausage products. Sulfur dioxide (SO₂) and sulphites are additives from the group E 220, E 221-228 and are used in the conservation of fruits and vegetables, brandy and wine. Requests for the omission of these two ingredients were found in one facility. When it comes to lupine, the manager of the facility where the need for its omission was noted, points out that this is possible, while the manager of the facility where a guest pointed out the sensitivity to sulfur dioxide says that, unfortunately, they can not respond to this need, due to rare requests and knowledge of these foods as allergens; no manager pointed out that they would necessarily like to bother their staff with the knowledge, that is, to spend funds in the procurement of equipment or foodstuffs that would effectively solve the problem. It is important that it is enough to follow only the detailed declarations of products they purchase for the preparation of meals which must indicate ingredients, which is much easier than preparing gluten-free foods.

As a weakness, hospitality professionals cited insufficient information about the most common allergens, as well as a desire for information through a training that would be organized in the form of learning about the most common food allergens and the ways in which they influence, and that it might seem incentive to supplement their restaurant offers with more diversified dishes. When serving guests who are allergic to a particular food, the guest emphasizes their allergens and there is a lot of attention in the transmission of information. However, restaurants often do not have standardized working procedures neither recipes, they do not have any special food preparation facilities, thus, contamination easy happens. Hospitality workers are not enough educated about health needs of certain group of patients, but through clear guidelines of guests they try to meet these requirements, which does not guarantee safety.

ANALYSIS OF SPECIAL REQUIREMENTS OF CONSUMERS IN TERMS OF ALLERGENS

Observing requirements of consumers presented in Figure 1, it can be concluded that the most common requirements are gluten-free foods (20%), followed by eggs (14%), milk and sea fish, with all other cases encountered much less by hospitality workers.

ANALYSIS OF POSSIBILITIES FOR FOOD PREPARATION WITHOUT ALLERGENS

Taking into account only the word of the manager and the chef as a responsible person, without detailed control, it can be concluded that restaurants mostly can respond to the needs of consumers who are allergic to eggs and sea fish (15%), which together with other possibilities is shown in Figure 2.

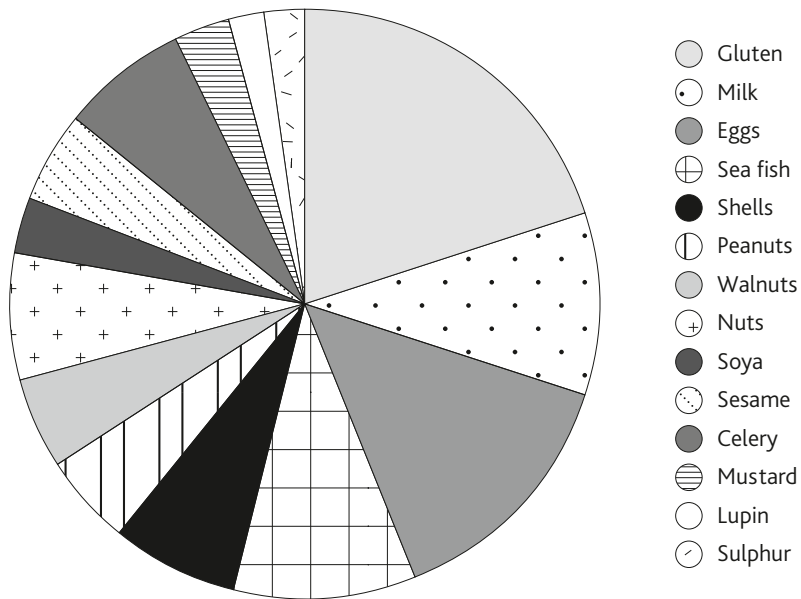


Figure 1. Requirements for the omission of food allergens

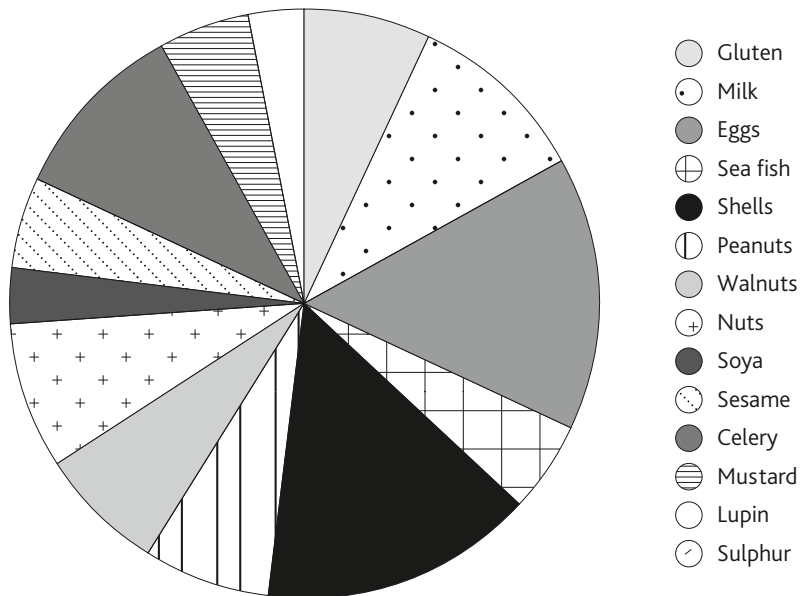


Figure 2. Possibility of preparing meals without certain allergens

ANALYSIS OF THE MANAGEMENT WISHES TO RESPOND TO SPECIAL REQUIREMENTS FOR FOOD WITHOUT ALLERGENS

Looking at the results of the first two figures, it is noticed that managers of facilities that do not have the knowledge and resources to eliminate gluten would like to acquire them, which is commendable. In addition, a large number of respondents are interested in acquiring knowledge and possibilities to eliminate fish and mustard as allergens, both because of their frequent use, and because their replacement is difficult.

Figure 3 shows the percentage of respondents wanting to have the knowledge and resources to respond to the demands of their guests, where the emphasis is given to gluten and sea fish, as well as preparation of dishes without peanuts, mustard, eggs and milk.

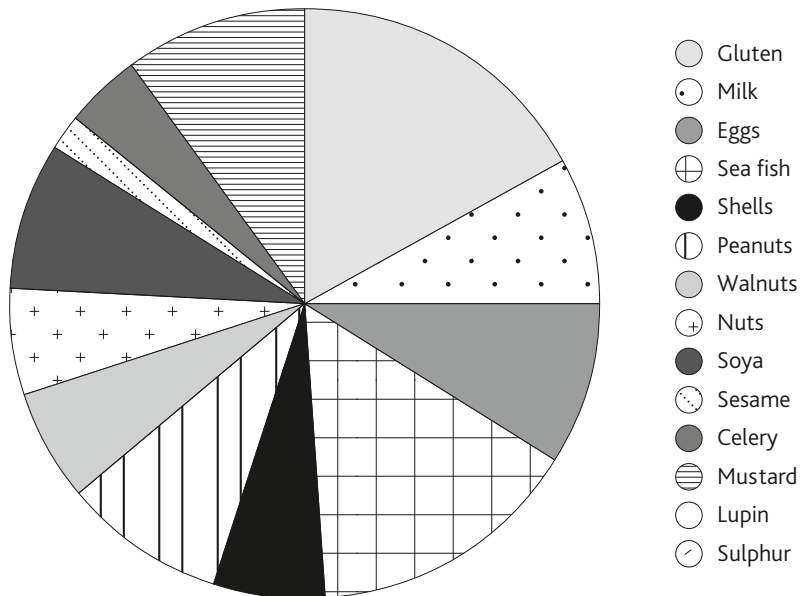


Figure 3. Allergens for which they would like to have the conditions and knowledge to omit

CONCLUSION

Based on the reviewed literature in the field of modern trends in the hospitality industry and allergens as a key issue, the conducted research on the territory of the city of Novi Sad gave the following findings:

- Allergy to gluten is the most common problem of successful business in 100% of surveyed facilities, while allergy to eggs (66% of respondents), and allergy to cow's milk and fish (50% of those surveyed) fall into quite often problems, unlike allergies to lupine or sulfur dioxide which are barely known to hospitality workers.
- What is commendable is that most of those who reported requests could respond to them. This, however, is not the case with gluten, which due to the fact that it can

be found in the air constitutes an allergen difficult to avoid, so only 25% of the respondents can respond with the omission of gluten. However, in the case of other allergens, only some respondents pointed out that they were unable to satisfy the needs of the guests, or for some types of allergens, all who faced with them, they also could omit them for the needs of the particular guest.

- It is also commendable that a large number of hospitality facilities that have not faced with the requirements for omission of certain allergens would like to be ready for such a situation if it happens. There is also a desire to acquire knowledge and possibilities to meet those requests of guests that could not be previously met. All 75% of those who are not able to respond to gluten-free needs would want to. And with most other allergens, managers and chiefs have shown their interest in responding to the requirements of guests in the most efficient way. However, there is still not enough information among managers and chiefs, and especially among staff about what allergens are, which are the most common allergens and how to replace or omit them. Solutions for such situations were known to managers or certain experienced individuals, while most were rather uninformed and unprepared. For this reason, it is necessary to work with the staff as well as with managers, to transfer information to them because the health for an individual is the most important and the hospitality facility as a place of enjoyment should not be a source of harm to health.

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