# تأثير عادات الحمية في تطور التهاب الفم القلاعي الناكس

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## الملخص

يهدف هذا البحث الى دراسة العلاقة بين عادات الحمية و تطور التهاب الفم القلاعي الناكس. شملت الدراسة مجموعتان (ثلاثون مريضا بالتهاب الفم القلاعي الناكس و بدون و جود أمراض عامة أو أضطرابات دموية. تكونت المجموعة الشاهدة من 28 شخص ليس لديهم التهاب الفم القلاعي الناكس. Mann Whitney test أظهر ليس هناك فرق بين مجموعة المرضى المصابين بالتهاب الفم القلاعي الناكس و بين المجموعة الشاهدة. أن هذه الدراسة أظهرت أن كلا المجموعتان يتناولون نفس الاغذية مثل الجبنة- حليب الابقار- الشاي- الليمون- القهوة- البرتقال- التفاح- اللبن- البندورة. ان هذه الدراسة أظهرت إن عادات الحمية ليس لها دور في تطور التهاب الفم القلاعي الناكس لكن يمكن إن تلعب دور في التحريض على حدوث مثل هذه الآفة إما من خلال أن تسبب فرط حساسية تجاه بعض الأطعمة أو من خلال الاضطراب لبعض المعادن او الفيتامينات.

الكلمات المفتاحية:عادات الحمية- التهاب الفم القلاعي الناكس.

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# The effect of dietary habits on the development of the recurrent aphthous stomatitis

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**Abstract**
This study is aimed to assess the relationship between the dietary habits and development of recurrent aphthous stomatitis.
Two groups ( 30 patients with RAS who have been following dietary habits and not associated with systemic disease or hematologic abnormalities, and the control group consisted of 28 patients without recurrent aphthous stomatitis). Mann Whitney test ($p > 0.05$) showed that no significant difference was found between the patients with RAS and the control group. Both groups eating similar food such as: cheese, cow's milk, tea, lemon, coffee, orange, apple, yoghurt and tomato, spicy food.
Dietary habits have no important role in development of RAS but can be playing a minor role in the pathogenesis Of RAS either by causing hypersensitivity or by deficiency of some vitamins and minerals.
**Key words**: Dietary habits, Recurrent aphthous stomatitis.
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## Introduction

Recurrent aphthous stomatitis RSA is a common oral disorder occurring in up 25-30 % of population. The etiology of this disease is unknown, therefore many predisposing factors may have a important role in development of RAS such as: heredity, bacteriology, trauma, endocrinology, and nutrition. Also many studies have demonstrated that iron, folate; vitamin B1, B2, B6, B12 deficiencies and sensitivity to some foods in patients with RAS (Natah et al, 2004).

## Clinical features:

There are three clinical presentations of RAS: minor recurrent aphthous stomatitis, major recurrent aphthous stomatitis, and herpetiform ulceration (Natah et al, 2004).

**Minor recurrent aphthous stomatitis**: It is the most common form of recurrent aphthous stomatitis and approximately 85 % of patients have lesions

of this type. Minor RAS usually appears as single or clusters of painful ulcers with a surrounding erythematous halo. Minor aphthous can involve the nonkeratinized mucosa of the oral cavity (the labial and buccal mucosa, the floor of the mouth and the ventral or lateral surface of the tongue, Natah et al, 2004). Moreover, the ulcers are usually concentrated in the anterior part of the mouth. The ulcers are superficial, usually less than 1 cm in diameter, their size is approximately 4 to 5 mm in diameter. The classification of minor recurrent aphthous stomatitis does not depend on the dimensions of the lesions alone, but on a number of clinical features. Ulcer shape varies somewhat according to the location of the lesion, more rounded on the labial or buccal mucosa and elongated in the buccal sulcus. Minor aphthae do not result in scarring despite years of recurrent ulceration and tend to heal within 10 to 14 days.

**Major recurrent aphthous stomatitis**

is less common than Major RAS lesions (approximately 10% to 15% of all RAS) . These lesions are similar in appearance to those of minor RAS; however, they are larger than 10 mm in diameter, are deeper, often scar, and can last for weeks to months (Safadi, 2009). These lesions have a predilection for lips, tongue, soft palate, and the palatal fauces and cause significant pain and dysphagia. They are frequently found in patients infected with human immunodeficiency virus (HIV) .

**Herpetiform ulceration** Constituting only 5 to 10 percent of all RAS cases (Natah et al, 2004- Safadi, 2009). Herpetiform ulcers are small (1-2 mm) and multiple ulcers (5-100) may be present at the same time. Although any non keratinized oral mucosa may be involved, characteristically the affected sites are the lateral margins and ventral surface of the tongue and the floor of the mouth (Natah et al, 2004- Safadi, 2009). Individual ulcers are grey and without a delineating erythematous border, making them difficult to visualize. These ulcers have small size, and cause pain and may make eating and speaking difficult. A single crope of ulcers may last for approximately 7-14 days, and the period of remisson between attacks is variable. Herpetiform ulcers may coalesce to form larger confluent areas of ulcer, usually with marked erythema. The patients affected are predominantly female and generally those ulcers have a later age onset than the other types of RAS (Natah et al, 2004- Safadi, 2009).

**Aim of study:**

This study is aimed to evaluate the relationship between dietary habits and RAS.

**Materials and methods**

50 patients have refereed to my clinic complaining of RAS. Only 30 patients out of 50 who have participated in this study. All of those 30 patients (17 male, 13 female, maximum age 45years, minimum age 22 years) have followed dietary habits. The medical history of those patients have demonstrated that RAS

occurred at least more than four times per years. 12 patients out of 50 were not included in this study because some of those patients have hematologic abnormalities or systemic disease. Also eight patients out of 50 were not included in this study because they do not follow any dietary programmers. The control group consist of 28 patients without recurrent aphthous stomatitis. The patients with RAS and the control group were questioned about the daily intake frequencies of some foods which are frequently consumed in Syria, and their effects on RAS.

**Result:**

All the clinical data of the participant patients in this study is shown in table 1.Mann Whitney test ($p > 0.05$) shows that there was no significance difference between the patients with RAS and the control group, moreover, the patients with RAS were found to eat similar foods like cheese, cow's milk, tea, lemon, coffee, orange, yoghurt and tomato, spicy food but the patients with RAS ate specific foods containing (ph) like; oranges and lemons more frequently than the control group.

| Case | Age | Gender | Type of RAS |
|---|---|---|---|
| 1 | 22 | M | Minor |
| 2 | 24 | M | Minor |
| 3 | 25 | M | Minor |
| 4 | 26 | M | Minor |
| 5 | 29 | M | Minor |
| 6 | 37 | M | Minor |
| 7 | 35 | M | Minor |
| 8 | 27 | M | Minor |
| 9 | 33 | M | Minor |
| 10 | 38 | M | Minor |
| 11 | 39 | M | Minor |
| 12 | 34 | M | Minor |
| 13 | 35 | M | Minor |
| 14 | 24 | M | Minor |
| 15 | 28 | M | Minor |
| 16 | 30 | M | Minor |
| 17 | 31 | M | Minor |
| 18 | 34 | F | Minor |
| 19 | 45 | F | Minor |
| 20 | 26 | F | Minor |

| | | | |
|---|---|---|---|
| 21 | 32 | F | Minor |
| 22 | 36 | F | Minor |
| 23 | 41 | F | Minor |
| 24 | 44 | F | Minor |
| 25 | 29 | F | Minor |
| 26 | 25 | F | Minor |
| 27 | 33 | F | Minor |
| 28 | 38 | F | Minor |
| 29 | 32 | F | Minor |
| 30 | 31 | F | Minor |

Table 1: Clinical features of recurrent aphthous stomatitis

**Discussion:**

Safadi (2) has reported that 82% of the participants patients claimed that the RAS interfered with food eating and swallowing. Some researchers have indicated that the development of RAS is associated with the use of some certain foods: cows' milk, gluten, chocolate, nuts, cheese (Thomas et al, 1973; Miller et al, 1979; Wray et al,1982). Eversole et al, (7) found no significant association between RAS and three specific food (tomatoes, strawberries and walnuts). Wilson (8) has noted an increased prevalence of atopy among RAS patients.

Wray (5) has mentioned that there is no significant difference in the incidence of atopy in RAS patients compared with the normal population. Hay and Reade (6) have demonstrated that there is relationship between RAS and consuming some food items such as: (figs, cheese, tomato, tomato sauce, vinegar, lemon, pineapple, milk, cheese, wheat flour). They have concluded that the removal of the dietary habits can reduce the frequency of RAS. Wright et al, (9) reported that the food allergy was a significant factor in the

development of RAS but they did not find a relationship between gluten containing foods and the occurrence of RAS. Ogura et al, (10) have mentioned that the patients with RAS consuming foods containing calcium, iron, vitamin B1 and vitamin C less frequently than the control patients and concluded that the deficiencies of some vitamins and minerals might be playing a role in the pathogenesis of RAS. Kozlak et al, (11) have suggested that the consuming sufficient amounts of the vitamins B12 and folate may be a useful strategy to reduce the number and/or duration of RAS episodes. This study has shown that RAS patients ate acidic ph-containing foods like; oranges and lemons more frequently than controls and this might have initiated RAS lesions as irritation factors. The other patients might have hypersensitivity to specific food such as: yoghurt and tomato, spicy food. Scott et al, (12) have reported that that vitamin B12 and folate were found to be consumed in lower amounts in RAS patients compared to NHANES National Health and Nutrition Examination Survey (NHANES 2001-2002) data.

**Conclusion and recommendation for further research:**

I have concluded that the dietary habits may cause the development of RAS. Although there is no definite evidence to support that issue. The etiology of RAS is unknown yet but the clinician must be ware for all the predisposing factors which induce the development RAS.

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