American University of Armenia

Department of Public Health

DETERMINATION OF ATTACK PRECIPITATING FACTORS FOR FAMILIAL MEDITERRANEAN FEVER

Research grant proposal for a case-crossover study

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Yerevan, 2001

Table of content

Acknowledgments

I would like to express my deepest gratefulness to my advisor Dr. Haroutune Armenian for his continuous support, useful comments and commitment to student's interest.

I want to express my gratitude to Michael Thompson for his constructive comments and suggestions. I would like to thank Susan MacMarlin for her enthusiastic support and readiness to help.

I am grateful to all professors of MPH program that share their knowledge and experience with us.

I am also grateful to administration of the Center of Medical Genetics, namely to Tamara Sarkisyan, and especially to Ara Beglaryan for his knowledgeable recommendations and support.

I want to express my gratefulness to all CHSR staff, especially to Anahit Demirchyan for her willingness to help and continuous support.

I am also grateful to MPH students for their useful comments and support.

Executive summary

Background. Familial Mediterranean Fever (FMF) is an inherited disorder characterized by recurrent attacks of fever, peritonitis, pleuritis, arthritis and skin lesions. The disease is restricted primarily to the populations of Mediterranean basin. The prevalence rate varies among Mediterranean populations. The estimated prevalence rate for Armenians is 1 per 400. The frequency of the affected gene is the highest for Armenians living in Armenia.

A typical attack lasts from 1 to 4 days. During the attack free period patients generally appear healthy. The only serious complication of FMF is amyloidosis, which gradually leads to the renal insufficiency. The most effective medication currently used for treatment of FMF is colchicine, which reduces the frequency of attacks.

Research question and objectives. The goal of the proposed research is to determine what factors determine the occurrence of FMF attacks. The objectives are:

- To define the association between occurrence of attacks and high-fat food, physical stress, emotional stress, cold, climate and menstruation.
- To determine the association between different types of genetic mutations and various attack precipitants.

Methods. The fact that attacks of FMF have no periodicity and regularity, leads to the idea of existence of specific extraneous or environmental attack precipitating factors. The most commonly discussed are high-fat food, emotional, excessive physical activity, cold, climate and menstruation. The proposed case-crossover study is aimed to reveal association between occurrence of attacks and possible attack precipitants.

Study instrument is a questionnaire comprising demographic questions and domains on the disease history, hormonal status, general lifestyle and lifestyle regarding the past two-three days period.

Sample size. The proposed sample size is equal to 300 cases and 300 controls. Taking into account that cases and controls are the same people, the total number of participants is 300. The sample will be selected from the database of the Center of Medical Genetics of the National Academy of Sciences of Republic of Armenia.

Analysis. During the analysis the chi-square test will be used for determination of association between occurrence of attack and discussed attack precipitants. It will be used also for detection of associations between different types of mutations and various attack precipitants.

It is expected that the results of the study will allow to prevent development of attacks and to minimize the treatment with Colchicine.

Specific aims

Familial Mediterranean Fever (FMF) is a genetic disorder starting primarily in childhood and characterized by recurrent attacks of fever, peritonitis, pleurisies, arthritis and skin lesions. During the attacks patients are not able to maintain their usual level of social activity and are often in need of caretakers. These conditions create a burden on the health care system and on the society as well. The research question of the proposed study is following: What factors determine the occurrence of FMF attacks? The objectives of this study are:

- To define the association among occurrence of FMF attacks and high-fat food, physical stress, emotional stress, cold, climate and menstruation?
- To determine the association between different types of genetic mutations and various attack precipitants.

Patients for the proposed study will be selected from the database of the Center of Medical Genetics (CMG) of the National Academy of Sciences of Republic of Armenia. The database consists of about 1,500 patients with genetically verified diagnosis of FMF. The initial permission for access to the database was obtained from the administration of the Center of Medical Genetics.

The major aim of this study is to the correlation between the development of attacks and the hypothesized precipitating factors. If the association is determined it will be promising to investigate in future correlation between various types of mutations and environmental factors, namely attack precipitants.

Background

Familial Mediterranean Fever is an inherited disorder characterized by intermittent attacks of fever with sterile peritonitis, pleurisies, or synovitis (1). The words "familial Mediterranean fever" refer to the three classic features of the disease. Another name of this disease is Familial Paroxysmal Polyserositis (FPP), which reflects the clinical and pathological features of the disease.

The disease affects mostly four populations of eastern Mediterranean descent, namely non-Ashkenazi Jews, Armenians, Turks, and Arabs. It has an autosomal recessive mode of inheritance (2). The prevalence rate of FMF varies among the Mediterranean population, being 200 per 100,000 for Non-Ashkenazi Jews, and 2.0-2.5 per 100, 000 for Levant Arabs (3). Data about the prevalence rate for Armenians is controversial. According to Khachadurian and Armenian (4) it is 100 per 100,000 for Armenians in Lebanon compared to 200 per 100,000 for Armenians living in Fresno County, California. The prevalence rate reported in a News release from the US National Institute of Health is 1 per 200 (5). Thus, the prevalence rate among Armenians varies from 1 per 200 [500 per 100, 000] to 1 per 1000 [100 per 100, 000](5,6). This discrepancy could be explained by lack of studies on the epidemiology of FMF. According to the literature, the frequency of the affected gene is the highest for Armenians living in Armenia. (7). The disease occurs more often among males and the sex ratio according to different studies ranges between 1.5-2 per 1 (2,4).

The onset of the disease varies among patients. It starts during the first decade of life in almost 50 % of cases, and only in 5 % of cases it manifests after the age 30 years (8). By the age 20 years about 90 % of patients have already had their first attack (3).

The manifestations of the disease also vary between patients. Usually, the first attack is diagnosed retrospectively regardless of its clinical manifestation. Many patients, especially during the first abdominal manifestation of the disease, undergo surgical treatment as acute appendicitis is suspected. Almost all patients experience abdominal pain during attacks (2,9). About 50 % of Arab, Turkish, and Jewish patients experience chest attacks, which manifests with chest pain and fever; this percentage is even higher for Armenian patients. Less than half of all patients complain about joint pain. The next common manifestation of FMF is skin lesions with the frequency ranging from 3 to 46 % among the different affected populations. Scrotal inflammation, myalgia and certain types of vasculitis are among the uncommon clinical syndromes (2).

In some cases the disease manifests as amyloidosis. It is the only severe complication of FMF that determines the fatal prognosis for FMF. Amyloidosis results from the deposition of amyloid A protein, which infiltrates the various organs. Precipitation of amyloid protein in the kidneys leads to the development of renal insufficiency progressing to the renal failure. Amyloidosis can occur in patients after experiencing typical attacks, or its development can precede typical attacks (10).

The frequency of attacks ranges from days to months. In the preceding hours, some patients experience a prodrome. Attacks are characterized by fever, inflammation, and pain, usually in the peritoneum, pleura, joints, or skin. The duration of attacks ranges from 48 to 96 hours. Arthritic attacks unlike peritoneal or pleural attacks may last for weeks (6). During attack free periods patients typically appear healthy, except for those who have protracted arthritis. Protracted synovial attacks may restrict the patients' activity and keep them away from work for long time (10).

Since the 1950s, a number of drugs were prescribed for the treatment and/or prevention of FMF attacks. Among them were various antibiotics, corticosteroids, sex hormones, vitamins, analgesics, salycilates and related compounds (11). Starting in the 1960s, colchicine was introduced for the treatment and prevention of attacks. In 1974 independent randomized placebo-controlled trials demonstrate colchicine's effectiveness (2). Currently it is the treatment of choice for FMF. The daily regimen of 1-2 milligrams of colchicine diminishes the frequency of attacks or even prevents attacks. Colchicine is also recommended for the treatment of amyloidosis. However, it is not a harmless drug because of its side effects, such as gastrointestinal disorders, myopathy and neuropathy (12). Although no prospective studies have been conducted on colchicine's influence on sperm count, there is evidence in the literature that it is undesirable to administer colchicine to young males of reproductive activity (2,13).

During the past decade investigations on the cause of the disease primarily focused on the genetic aspects of the disease. In 1997 the MEVF gene located on chromosome 16 for Familial Mediterranean Fever and its different types of mutations were identified (3). This gene produces a protein called pyrin, or marenostrin, which predetermines the development of the disease. However, it is still unclear what factors trigger the development of attacks and determine their frequency. The fact that attacks of FMF have no periodicity and regularity, leads to the idea for the existence of specific extraneous or environmental factors that may precipitate attack. In the literature various attack precipitants are discussed (3,7,11,14). Among them are foods rich in fat, emotional stress, physical activity, cold, climate and menstruation. Several investigators reported reduction of attack frequency after the restriction of fat food consumption (2,11). However, the data about diet modification and its effectiveness for attack frequency reduction are controversial (9).

Schwartz pointed an example of a woman whose attacks started immediately before menstruation (15). Also case of a woman completely responding to the short-term colchicine treatment before first signs of menstruation was described in the literature (16). In many women the attacks disappear during pregnancy and occur again after delivery (2). Shaar and Armenian provided data on the relation of the severity of attacks to menstruation (17). Hormonal disturbances cannot account fully for the development of attacks as they are described in males, children and menopausal women; however, hormonal fluctuations still should be considered as possible attack precipitants. Many patients reported that prolonged standing or walking leads to the development of joint attacks involving lower extremities, and several patients have associated emotional stress as a precipitating factor (11).

Patients affected with FMF need continuous treatment and are at risk of amyloidotic complications. During the attacks they usually are unable to maintain their normal level of social activity and are in need of care, which creates a burden not only on the health care system but also on a society as whole. The average duration of attacks is 24-96 hours. The protracted arthritic attacks last for weeks or even months. The frequency of attacks ranges from weekly to one per year. Thus, taking into account that Familial Mediterranean Fever is a lifelong disease, manifesting with frequent attacks, which keeps patients from their usual lifestyle for days, or even for weeks, and creates an economic burden on the society, the determination of the precipitants for FPP attacks is essential for prediction and prevention of attacks.

There is evidence that the prevalence rate of FMF for Armenians ranges from 1 per 1,000 to 5 per 1, 000 and the frequency of the affected gene is the highest among Armenians living in Armenia (5,6). These data provide the rational performing the proposed study in Armenia. Most of the studies conducted in Armenia focused on the pathogenesis of the disease. The literature

shows that there is a big gap in the knowledge about the attack precipitating factors for FMF. No studies exploring the possible attack precipitants have been done. This study intends to identify attack-precipitating factors for Familial Mediterranean Fever for further prevention of attacks.

Methods/study design

The case-crossover design, a variation of the case control study design, is proposed. The case-crossover study design facilitates comparison of exposures that vary over time for an individual. It enables the use of the same people as cases and controls. Using the same people in case and control groups allows to have highly matched comparison sets, thus minimizing potential confounding.

Study population

Verification of the FMF diagnosis at the genetic level is available in Armenia only by using the services of the CMG of the National Academy of Sciences of Republic Armenia. Its database includes more than 1,500 patients with genetically verified diagnosis. The database contains not only the results of the genetic test, but also the clinical diagnosis. Patients included in the roster are followed-up by the rheumatologist at the Center of Medical Genetics.

Cases are defined as patients with genetically verified diagnosis of FMF during or immediately after the FMF attack. Controls are the same patients at a random day during an attack free period. Children will also be included since about 50% of the patients comprise children. Mothers will complete the questionnaire instead of children.

Exclusion criteria are:

- Patients with mental disorders

- Refusal to participate

Sample size

The sample size calculation was accomplished using the EpiInfo statistical package. Defining the values for α=0.05 (two-sided), β=0.2, and assuming that the difference in exposure (namely, exposure to the high-fat diet) among cases and controls is 15 percent, the required sample size was calculated as equal to 300 cases and 300 controls. Taking into account that the case-crossover study design employs the same people as cases and controls the total number of participants will be 300.

The sample size of 300 cases and 300 controls will allow determining the presence of association between the development of attacks and possible attack precipitants. For determination of the interactions between the various attack precipitants it is required to increase sample size by the factor of variables included in the analysis.

α = 0.05 (two-sided)

β = 0.2

$d_{(difference\ in\ exposure\ between\ cases\ and\ controls)}=15\%$

$n=300$

$Power = 1-b = 0.8$

Although the calculated sample size is equal to 300 participants, it is proposed to select 350 participants to assure the needed sample size in case of dropouts, or refusals during the study.

Study instrument

The study instrument is a self-administered questionnaire of 53 questions. The self-administered format was chosen for the questionnaire, because it will be not feasible to meet the patient exactly on the day of the attack. The questionnaire will be provided to the cases (patients during or immediately after the attack) and to the controls (the same patients on the random days in attack free period). The instrument consists of demographic questions, questions on the disease history, questions on the hormonal status, questions on the general lifestyle and questions on the lifestyle regarding the past two-three days period. It also contains questions regarding changes in attack frequency during traveling outside of Armenia for a long time.

The aim of the questionnaire is to compare patients' exposure to various factors during the random day in the attack free period (controls) and during the 2-3 day period prior to the attack (cases). That allows the calculation odds ratios and to determine whether there is an association (positive or negative) between exposure to several attack precipitants and attack occurrence. The exploration of patients' lifestyle during preceding 2-3 days period is aimed to reveal some extraneous factors that have adverse effect on patients health and precipitate attacks. The questionnaire has been pre-tested on the patients from the Center of Medical Genetics resulting in minor changes. The average duration of the questionnaire's completion during the pre-test was about 20 minutes.

Data collection

Study participants will be recruited from the roster of patients with genetically verified diagnosis from the Center of Medical Genetics. The systematic random sampling technique will be applied for selection of the sample of 350 patients.

At the random day in attack free period participants will complete the questionnaire and serve as control group and during or immediately after the attack they will fill in the same questionnaire as cases.

The selection of the study population from the roster will be done with assistance of the consultant from the Center of Medical Genetics hired for the project. The questionnaires will be distributed and collected by the project assistant.

The program assistant at the random day in attack free period will get in touch with identified participants, arrange a meeting with them and pay a visit. During the visit s/he will explain the purpose of the study and provide participants with consent form, which includes the information about the goals of the study, who is conducting the study, procedures, risks, benefits, confidentiality and anonymity assurance, voluntariness and whom to contact in case of questions or disrespectful attitude.

Afterwards the participant will complete the questionnaire as a control. The project assistant will leave several copies of the same questionnaire that should be completed during the attacks. After three months the project assistant will again arrange a meeting with participants and collect back completed questionnaires. During these three months the project assistant will call several times to remind the patients to complete the questionnaires during attacks. The project assistant will instruct every tenth patient to contact with him/her during one of the attacks. During the attack the program coordinator along with project assistant will visit patients in order to validate the attack.

The Center of Health Services Research and Development of the American University of Armenia is available to conduct the study in cooperation with the Center of Medical Genetics. The initial agreement for the joint research between two agencies is attained.

Data analysis

The statistical analysis will be carried out by Stata statistical package. The dependent variable is defined as the incidence of attacks and the independent variables are high-fat diet, physical stress, emotional stress, cold, climate and menstruation. It is proposed to use:

- Chi-square test and to determine the odds ratios with 95 % confidence intervals
- Chi-square test for detection of associations between different types of mutations and various attack precipitants
- Conditional logistic regression

In case if the association will be detected it is proposed to increase the sample size by the factor of variables included in the analysis and to conduct logistic regression analysis.

Study limitations

The study limitations are:

- Recall bias – typical for case-control studies. This type of bias is minimized in the study because most of the questions refer to the events during the immediate 2 or 3 days.
- Another concern is that usually people try to be consistent in their responses. As the questionnaire will be given to participants at least two times (one time as case and one time as control), they will, probably, tend to answer the questions in the same way as the first time.
- Instrumental bias – though the questionnaire was pre-tested on 6 patients, it still can be a source of bias.

- The price for the genetic test for verification of the Familial Mediterranean Fever diagnosis is about 30 US dollars, which is expensive for the general Armenian population. The concern is that the roster of patients from the Center of Medical Genetics comprises mostly patients who are in a high-income bracket. This could negatively affect the generalizability of the study results.
- Because only the Center of Medical Genetics has the capabilities for genetic verification of FMF diagnosis in Armenia and it located in Yerevan, patients from the backcountry districts may not able to pass the genetic test, thus the generalizability of the study will be limited.

Time frame

The duration of the study is anticipated to be 8 months. During the first month the project consultant, hired from the Center of Medical Genetics, along with the project assistant will select participants from the roster of the patients. Afterwards, the project assistant will arrange a meeting with participants. Later the participants will be provided with the questionnaire that they will complete as controls. Filled questionnaires will be collected back. Afterwards the program assistant will give to participants few copies of the same questionnaires, which will be filled during or immediately after the attacks. Each meeting will take about one hour including transportation time. It is proposed that during an average day the project assistant will conduct on average 5 visits. Taking into account that the total number of participants is 300 and that not all of them live in Yerevan, the office assistant will perform 300 visits during 3 months period. At the end of the third month the project assistant will start collection of the questionnaires filled during the attack period. S/he will call patients, arrange a meeting with them and collect back the

questionnaire filled during the attack periods. Collection back of the completed questionnaires will last three month in order to provide participants involved in the study at the end of the third month opportunity to fill in the questionnaire during at least one attack. The whole period of data collection will last 6 months.

Taking into account the frequency of attacks varies from patient to patient it is predicted that on the average patients will have at least 3-4 attacks per year. This will allow for a minimum 300 questionnaires to be completed by the cases if every participant will have only one attack during 3 months period. At the end of the sixth month it proposed to complete the data collection. Simultaneously with data collection, data entry will start. The project assistant will do first data entry. After that the data analyst will do the double entry to minimize the data entry bias. The data entry will last until the end of the seventh month. The total number of questionnaires will be at least 600. Assuming that the entry of one questionnaire will take 10 minutes, it is expected that the doubled entry of at least six hundred questionnaires will be completed upon the end of the seventh month.

During the first half of the eighth month the data analysis will be carried out. It is proposed to write the final report during the second half of the eighth month.

After the completion of the study if the positive association between the occurrence of attacks and various attack precipitants will be detected it is proposed to recommend the research using the same study population and the same study instrument. Inclusion of all patients from the roster will allow the investigation of interactions between already established attack precipitants and to create a multiple logistic regression model for prevention of attacks. (See Appendix 1)

Ethical considerations

The proposal has been submitted to the Institutional Review Board/Committee on Human Research of the American University of Armenia and received approval as a grant proposal. It poses minimal risk for the study participants; the information gathered during the study will be useful in defining the triggering mechanisms for the development of attacks.

The unique identifiers given to each participant will the confidentiality of the subjects. Only study investigators, namely co-primary investigators, program coordinator, program assistant, project consultant and data analyst, will have an access to the identification numbers of participants.

Budget

The estimated expenses for implementation of the proposed study are $25,270. Out of this amount about 56 % comprise salaries. The operational costs are covered by 13 % of the total expenses; about 26 percent compose general administrative expenses and the remainder 5 percent of the total budget cover unexpected expenditures. (See appendix 2)

Personnel responsibilities

The program coordinator is responsible for the study conduction, management and administrative duties. The program coordinator will perform the data analysis and will be responsible for the preparation of the final report.

The project assistant will be responsible for data collection and data entry. S/he will assist in ongoing daily activities. S/he will coordinate the driver's activities.

The consultant from the Center of Medical Genetics will assist in the selection of the sample. S/he will participate in data analysis. The accounting consultant will be in charge of account preparation and preparation of financial statements.

The driver/office assistant will be responsible for transportation, maintenance of the office supplies, will perform routine everyday activities under the coordination of the project assistant.

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Timeframe

	Month								
	1st	2nd	3rd	4th	5th	6th	7th	8th	
Activity								1st half	2nd half
Hiring the staff, preparation of supplies, copies of questionnaires, logistics									
Selection of participants from the roster									
Data collection									
Data entry									
Data analysis									
Preparation of the final report									

Budget

	$	Duration	Total
Personnel			
Co-primary investigator (CHSR)	$400 per day	7 days	$2 800
Co-primary investigator (CMG)*	$100 per month	7 days	$700
Program coordinator*	$650 per month	8 months	$4 800
Program assistant*	$450 per month	8 months	$3 200
Project consultant (CMG)*	$300 per month	2 months	$800
Data analyst*	$300 per month	1 month	$300
Accounting consultant*	$15 per day	10 days	$150
Driver/office assistant*	$200 per month	8 months	$1 600
Subtotal			***$14 350***
Operational costs			
Communications	$70	8 months	$560
Office supplies	$40	8 months	$320
Car rental/maintenance	$200	8 months	$1 600
Fuel	$100	8 months	$800
Subtotal			***$3 280***
Total			***$17 630***
Unexpected expenses	5% of the total		$882
Grand Subtotal			***$18 512***
General Administrative Expenses	36,5% of total expenses		$6 757
Grand Total			**$25 270**

*- Salaries include taxes

QUESTIONNAIRE

ID Number: __ __ __ __ __ __ __

Date: __ __ __ __ __ __
D D M M Y Y

Digit 1-2	Code of site
Digit 3-6	Number of interview

Demographic questions

1. First name _____Last name_____
2. Gender: _____ Male _____ Female
3. Date of birth: _ _ _ _ _ _
   DD MM YY
4. What is your ethnical background? _____

5. Are you currently employed?
   a) Yes (please, indicate your major)
   b) No

6. Marital status:
   a) Married
   b) Single
   c) Divorced
   d) Widowed

7. Do you have brother(s) or sister(s)?
   a) Yes
   b) No _____go to Q9

8. Do/Does they/he/she suffer from the Familial Mediterranean Fever?
   a) Yes
   b) No
   c) Don't know

9. Does/did any of your other relatives also suffer from the Familial Mediterranean Fever?
   a) Yes
   b) No
   c) Don't know

10. Do you have children?
    a) Yes
    b) No

Questions on disease history

11. At what age did you have the first attack? _____

12. At what age was your disease first medically diagnosed? _____

13. What type was your first attack?
    a) Abdominal
    b) Pleuritis
    c) Synovitis
    d) Skin manifestations
    e) Amiloidosis first
    f) Mixed (Combination of symptoms)
    g) Other, please describe _____

14. During last two years on the average, how many attacks do you have per year?
    a) Less than 5
    b) 5-10
    c) 10-20
    d) More than 20

15. What kind of attacks have you had during last two years? *(Check all that apply)*
    a) Abdominal
    b) Pleuritis
    c) Synovitis
    d) Skin manifestations
    e) Mixed (Combination of symptoms)
    f) Other, *please describe* _____

16. If you have attacks that affect your joints, which joints are involved?
    a) Knee
    b) Ankle
    c) Hip
    d) Shoulder
    e) Combination of above mentioned
    f) Other, specify _____
    g) Usually I don't have synovial attacks _____go to Q18

17. What kind of joint attacks do you have?
    a) Acute (attacks last from 12 to 72 hours)
    b) Subacute (attacks last up to week)
    c) Protracted (attacks last up to months)

18. Do you receive any treatment?
    a) Yes
    b) No_____ go to Q20

19. What kind of treatment do you receive?
    a) NSAID (like “Voltaren”, “Aspirine”, etc.)
    b) Steroids
    c) Oral contraceptives
    d) Colchicine
    e) Other, specify _____

20. Do you take Colchicine ?
    a) Yes
    b) No _____go to Q23

21. How often do you take Colchicine and at what dose?
    a) I take Colchicine when I have symptoms (specify dose in milligrams_____)
    b) I take Colchicine every day (specify dose in milligrams_____)

22. Does the treatment with Colchicine reduce the frequency of attacks?
    a) Yes
    b) No

23. Have you ever been told that you have protein in your urine (proteinuria)?
    a) Yes
    b) No ----------go to Q25
    c) Don’t know ----------go to Q25

24. At what age did you first have protein in your urine? Specify age: _____

Lifestyle questions

25. How often do you (eat foods rich in fats) use fat food (like pork, lard, sour cream, etc.)?
    a) Every day
    b) 2-3 times per week
    c) 2-3 times per month
    d) Once per month
    e) Don’t know

26. Have you ever smoked cigarettes?
    a) Yes
    b) No

27. Do you smoke currently?
    a) Yes
    b) No ----------go to Q29

28. How many cigarettes do you smoke per day?
    a) Less than 10
    b) 10-20
    c) More than 20

29. Do you do physical exercises regularly?
    a) Yes
    b) No _____ go to Q32

30. When you exercise, how many minutes do you usually engage in the activity?
    a) 5-10
    b) 10-20
    c) 20-30
    d) 30 and more

31. How often do you exercise?
    a) Every day
    b) 2-3 times per week
    c) Several times per month

Lifestyle questions regarding last 2-3 days period

32. During last two days did you consume:

- Sausage a) yes b) no
- Pork a) yes b) no
- Lard a) yes b) no
- Whole milk a) yes b) no
- Butter a) yes b) no
- Sour cream a) yes b) no
- Ice cream a) yes b) no
- Pastry a) yes b) no
- Eggs a) yes b) no

33. Did you consume alcohol during the past two days?
    a) Yes
    b) No _____ go to Q35

34. How much alcohol did you consume?
    a) Less than 100g of vodka, cognac, etc.
    b) 100-200 g of vodka, cognac, etc.
    c) More than 200g of vodka, cognac, etc.
    d) A glass of beer or wine
    e) More than one glass of beer or wine

35. During the past two days did you have positive emotional stress (like anniversaries, wedding, etc.)?
    a) Yes
    b) No

36. During the past two days did you have negative emotional stress (like examinations, personal danger, acute grief, etc.)?
    a) Yes
    b) No

37. During the past two days do you have excessive physical activity?
    c) Yes
    d) No

38. Did you have a cold or flu during past week?
    a) Yes
    b) No

39. Have you ever traveled outside Armenia for a long time (more than 6 months)?
    a) Yes
    b) No ----------go to Q42

40. Have you noticed any changes in the frequency of attacks during these visits?
    a) Yes
    b) No_____ go to Q42

41. The frequency of attacks:
    a) Increased
    b) Decreased

42. Have you noticed any seasonal differences in frequency of attacks?
    a) Yes
    b) No ----------go to Q44

43. When your attacks are more frequent?
    a) Spring
    b) Summer
    c) Autumn
    d) Winter
    e) No seasonal differences

Questions on menstrual cycle (Female only)

44. When was your menarche? _____

45. What is the duration of your menstrual cycle?
    a) Please, specify_____
    b) Not applicable (no menses)

46. How many days past since the first day of your last menstrual bleeding?_____

47. Have you ever noticed the occurrence of attacks immediately before the onset if menses?
    a) Yes
    b) No

48. Did you note any changes in attacks' frequency during pregnancy?
    a) Yes
    b) No _____go to Q50
    c) Not applicable _____go to Q50

49. The frequency of attacks during pregnancy:
    a) Increases
    b) Decreases

Questions on warning signs

50. Usually prior the beginning of the attack do you feel any of the following warning signs? (Check all that apply).
    a) Chills
    b) Local pain in humeral joints
    c) Myalgia
    d) Diarrhea
    e) Constipation
    f) Meteorizm
    g) Mood changes
    h) Other, specify _____
    i) I don't feel any warning signs_____ go to Q53

51. How long before an attack do you feel the warning symptoms?
    a) 2-3 hours
    b) 8-10 hours
    c) 1-2 days
    d) Other, specify _____
    e) Don't have any warning symptoms

52. Do you feel any other warning signs?
    a) Yes, specify _____
    b) No

53. Is there anything you would like to add that has not been mentioned in this questionnaire?
    a) Yes, specify, _____
    _____
    _____
    b) No

Thank you.

Ð²ðò²Â°ðÂÆÎ

ÅàÔàìð¸²¶ð²Î²Ü îì Ú²ÈÜºð (×ÇßïåªïªëËªÝÁí»ñóñ»ùßñçªÝªÏÇÙ»ç)

1. ²½·³ÝáõÝ_____²ÝáõÝ_____
2. ê»é
   1. ²ñ³Ï³Ý
   2. Æ·³Ï³Ý
3. Ò»ñ ÍÝÝ¹Ûª³Ý ÃÇíÁ ___ ___ ___
   ûñ ³ÙÇë ï³ñÇ
4. Üß»ù Ò»ñ ³½·áõÃÛáõÝÁ _____
5. Ü»ñÏ³ÛáõÙë ³ßË³ï áõ±Ù Ï³Ù ëáíáñáõ±Ù »ù.
   1. ²Ûá (Ýß»ù Ù³ëÝ³·Çï áõÃÛáõÝÁ)
   2. àã
6. ÀÝï³Ý»Ï³Ù Ï³ñ·³íÇ×³Ï.
   1. ²ÙáõëÝ³ó³Í
   2. ØÇ³ÛÝ³Ï
   3. ²ÙáõëÝ³ÉáõÍí³Í
   4. ²ÛñÇ
7. øáõÛñ(»ñ), »Õµ³Ûñ(Ý»ñ) áõÝ»±ù.
   1. ²Ûá
   2. àã _____***²Üò°ø Ð³ñó 9***
8. Ü³(Ýñ³Ýù) ï³é³åáõÙ »±Ý å³ñµ»ñ³Ï³Ý ÑÇí³Ý¹õÃÛ³Ùµ.
   1. ²Ûá
   2. àã
   3. â·Çï»Ù
9. Ò»ñ ³½·áõÙ áñ¨¿ ³ÛÉÙ»ÏÁ ï³é³åáõ±Ù¿ å³ñµ»ñ³Ï³Ý ÑÇí³Ý¹áõÃÛ³Ùµ.
   1. ²Ûá
   2. àã
   3. â·Çï»Ù

10. ¸áõù »ñ»Ë ³ (Ý»ñ) áõÝ»±ù.
    1. ²Ûá
    2. àã

Ð²ðòºð ÐÆì²Ü¸àôÂÚ²Ü ä²îØàôÂÚ²Ü ìºð²´ºðÚ²È

11. à±ñ ï³ñÇùáõÙ ï»ÕÇ áõÝ»ó³í ³é³çÇÝ Ýáå³Ý _____
12. àñ ï³ñÇùáõÙ ³é³³çÇÝ ³Ý·³Ù Ò»½ Ùá ï ³Ë ï áñáßí»ó <<å³ñµ»ñ³Ï³Ý ÑÇí³Ý¹áõÃÛáõÝ>>_____
13. Æ±Ýã ï ÇåÇ¿ñ ³é³çÇÝ Ýáå³Ý.
    1. àñáí³ÛÝ³ÛÇÝ ó³í»ñ
    2. Îñíù³í³Ý¹³Ï³ÛÇÝ ó³í»ñ
    3. Ðá¹³ÛÇÝ ó³í»ñ
    4. Ø³ßÏÇ ³Ë ï ³Ñ³ñáõÙ/ó³Ý³íáñáõÙ
    5. ²ÙÇÉáÇ¹á½ (»ñÇÏ³ÙÝ»ñÇ ³Ë ï ³Ñ³ñáõÙ)
    6. Ê³éÁ (³Ë ï ³ÝÇß»ñÇ Ñ³Ù³ÏóáõÃÛ³Ùµ)
    7. ²ÛÉ, Ýß»ù_____
14. ì»ñçÇÝ »ñÏáõ ï³ñí³ ÁÝÃ³óùáõÙ ÙÇçÇÝáõÙ ù³ÝÇ± Ýáå³ »ù áõÝ»ó»É.
    1. 5-Çó ùÇã
    2. 5-10
    3. 10-20
    4. 20-Çó ³í»ÉÇ
15. ì»ñçÇÝ »ñÏáõ ï³ñí³ ÁÝÃ³óùáõÙ **ÑÇÙÝ³ Ï³ Ýáõ Ù** ÇÝã ï ÇåÇ Ýáå³Ý»ñ »±ù áõÝ»ó»É.
    1. àñáí³ÛÝ³ÛÇÝ (ëáõñ ó³í»ñ áñáí³ÛÝÇ ßñç³ÝáõÙ)
    2. Îñíù³í³Ý¹³Ï³ÛÇÝ (ëáõñ ó³í»ñ Ïñíù³í³Ý¹³ÏÇ ßñç³ÝáõÙ)
    3. Ðá¹³ÛÇÝ (ó³í»ñ Ñá¹»ñÇ ßñç³ÝáõÙ)
    4. Ø³ßÏÇ ³Ë ï ³Ñ³ñáõÙ
    5. Ê³éÁ (³Ë ï ³ÝÇßÝ»ñÇ Ñ³Ù³ÏóáõÃÛáõÝ)
    6. ²ÛÉ, Ýß»ù_____

16. Đá¹ ³ ó ³ í »ñÇ Å ³ Ù ³ Ý ³ Ï á±ñ Ñá¹»ñÝ »Ý ³ Ë ï ³ Ñ ³ ñ í áõÙ.
    1. êñáõÝùÃ ³ Ã ³ ÛÇÝ Ñá¹
    2. Ì ÝÏ ³ Ñá¹
    3. Î áÝù ³ ½¹ñ ³ ÛÇÝ Ñá¹
    4. ´ ³ ½Ï ³ ÛÇÝ Ñá¹
    5. Üß í ³ Í Ñá¹»ñÇ Ñ ³ ÙÏ óáõÃÛáõÝ
    6. ²ÛÉ, *Ýß»ù*_____
    7. ºë ã»Ù áõÝ»ÝáõÙ Ñá¹ ³ ó ³ í »ñ
17. Æ±Ýã ï ÇåÇ Ñá¹ ³ ó ³ í »ñ »ù áõÝ»ÝáõÙ.
    1. êáõñ (12-72 Å ³ Ù ï ¨áÕáõÃÛ ³ Ùµ)
    2. ºÝÃ ³ ëáõñ (ÙÇÝã¨ Ù»Ï ß ³ µ ³ Ã ï ¨áÕáõÃÛ ³ Ùµ)
    3. ºñÏ ³ ñ ³ ï ¨ (ï ¨áõÙ »Ý ³ ÙÇëÝ»ñ)
18. ¸áõù ë ï ³ Ýáõ±Ù »ù µáõÅáõÙ å ³ ñµ»ñ ³ Ï ³ Ý ÑÇí ³ Ý¹áõÃÛ ³ Ý Ï ³ å ³ ÏóáõÃÛ ³ Ùµ.
    1. ²Ûá
    2. àã _____ *²Üò ºø Ð ³ ñó 20*
19. Æ±Ýã µáõÅáõÙ »ù ë ï ³ Ýáõù å ³ ñµ»ñ ³ Ï ³ Ý ÑÇí ³ Ý¹áõÃÛ ³ Ý Ï ³ å ³ ÏóáõÃÛ ³ Ùµ **Ý»ñÏ ³ Ûáõ Ùë**.
    1. àã ÑáñÙáÝ ³ ÛÇÝ Ñ ³ Ï ³ µáñµáù ³ ÛÇÝ ÙÇçáóÝ»ñ (ûñÇÝ ³ Ï³ ³ Ý ³ É · ÇÝ, µñáõý»Ý, ÇÝ¹áÙ» ï ³ óÇÝ, íáÉ ï ³ ñ»Ý)
    2. ÐáñÙáÝ ³ É Ñ ³ Ï ³ µáñµáù ³ ÛÇÝ ÙÇçáóÝ»ñ (ë ï »ñáÇ¹Ý»ñ, ûñÇÝ ³ Ï³ å ñ»¹ÝÇ½áÉáÝ)
    3. Ð ³ Ï ³ µ»ÕÙÝ ³ íáñÇã Ñ ³ µ»ñ
    4. Î áÉËÇóÇÝ
    5. ²ÛÉ, Ýß»ù _____
20. ¸áõù ë ï ³ Ýáõ±Ù »ù ÏáÉËÇóÇÝ.
    1. ²Ûá
    2. àã_____ *²Üò ºø Ð ³ ñó 23*

21. à±ñù³Ý Ñ³×³Ë ¨ Ç±Ýã ¹»Õ³ã³÷áí »ù ë ï ³ÝáõÙ ÏáÉËÇóÇÝÁ
    1. ºë ÁÝ¹áõÝáõÙ »Ù ÏáÉËÇóÇÝ Ýáå ³ÛÇ ëÏ½µáõÙ (Ýß»ù ¹»Õ³ã³÷Á)_____
    2. ºë ÁÝ¹áõÝáõÙ »Ù ÏáÉËÇóÇÝÁ ³Ù»Ý ûñª ³ÝÏ³Ë Ýáå ³ÛÇ ³éÏ³ÛáõÃÛáõÝÇó (Ýß»ù ¹»Õ³ã³÷Á)_____
22. ÎáÉÑÇóÇÝáí µáõÅÙ³Ý ³ñ¹ÛáõÝùáõÙ Ýí ³½»É¿, ³ñ¹Ûáù, Ýáå ³Ý»ñÇ Ñ³×³Ë³Ï³ÝáõÃÛáõÝÁ.
    1. ²Ûá
    2. àã
23. Ò»½ Ùá ï »ñµ¨¿ Ñ³Û ï Ý³µ»ñí»±É¿ ëåÇ ï ³ÏáõóªÇ (µ»ÉáÏ) Ù»½áõÙ (åñá ï »ÇÝáõñÇ³)
    1. ²Ûá
    2. àã _____*²Üò ºø* ***Ð³ñó 25***
    3. â·Ç ï »Ù _____*²Üò ºø* ***Ð³ñó 25***
24. à±ñ ï ³ñÇùáõÙ¿ ***³é³çÇÝ ³Ý· ³Ù*** ³Ë ï áñáßí»É åñá ï »ÇÝáõñÇ³Ý (ëåÇ ï ³ÏáõóÇ/µ»ÉáÏÇ ³éÏ³ÛáõÃÛáõÝÁ Ù»½áõÙ).____

Ð²ðò ºð ²äð ºÈ²È ºðäÆ ì ºð²´ºðÚ²È

25. à±ñù³Ý Ñ³×³Ë »ù û· ï ³·áñÍáõÙ ÛáõÕ³ÉÇ ëÝáõÝ¹ (ûñÇÝ³Ïª Ëá½Ç ÙÇë, ×³ñå, å³Õå³Õ³Ï)
    1. ²Ù»Ý ûñ
    2. Þ³µ³ÃÁ 2-3 ³Ý·³Ù
    3. ²ÙÇëÁ 2-3 ³Ý·³Ù
    4. ²ÙÇëÁ 1 ³Ý·³Ù
    5. â·Ç ï »Ù
26. ºñµ¨¿ ÍË»±É »ù.
    1. ²Ûá
    2. àã

27. Ü»ñÏ ³ÛáõÙë ÍËáõ±Ù »ù.
    1. ²Ûá
    2. à ã_____*²Üò°ø Ð³ñó 29*
28. ØÇçÇÝáõÙ ù³ÝÇ± ëÇ·³ñ»ï »ù ÍËáõÙ ûñí³ ÁÝÃ³óùáõÙ.
    1. 10-Çó å³Ï³ë
    2. 10-20
    3. 20-Çó ³í»ÉÇ
29. ²ñ¹Ûáù ½µ³Õíáõ±Ù »ù Ù³ñÙÝ³Ù³ñ½áõÃÛ³Ùµª **Ï³ÝáÝ³íáñ** Ï»ñåáí.
    1. ²Ûá
    2. àã_____*²Üò°ø Ð³ñó 32*
30. à±ñù³Ý Ñ³×³Ë »ù ½µ³ÕíáõÙ Ù³ñÙÝ³Ù³ñ½áõÃÛ³Ùµ.
    1. ²Ù»Ý ûñ
    2. Þ³µ³ÃÁ 2-3 ³Ý·³Ù
    3. ²ÙÇëÁ 3-4 ³Ý·³Ù

31. ø³ÝÇ± ñáå»»ù ï ñ³Ù³¹ñáõÙ Ù³ñÙÝ³Ù³ñ½áõÃÛ³ÝÁ.
    1. 5-10 ñáå»
    2. 10-20 ñáå»
    3. 20-30 ñáå»
    4. 30 ñáå»Çó ¨³í»ÉÇ

Ð²ðò°ð ì°ðæÆÜ 2-3 úðì² ²äð°È²Î°ðäÆ ì°ð²´°ðÚ²È

32. ì»ñçÝ 2-3 ûñí³ÁÝÃ³óùáõÙ û·³ï áñÍ»É»±ù, ³ñ¹Ûáù, Ñ»ï¨Û³É ëÝÝ¹³ÙÃ»ñùÝ»ñÁ.

a)	°ñßÇÏ	1. ²Ûá	2. àã
b)	Êá½Ç ÙÇë	1. ²Ûá	2. àã
c)	Ö³ñå	1. ²Ûá	2. àã
d)	Î³Ã	1. ²Ûá	2. àã
e)	Î³ñ³·	1. ²Ûá	2. àã
f)	ÂÃí³ë»ñ	1. ²Ûá	2. àã
g)	ÊÙáñáÕáÝ	1. ²Ûá	2. àã
h)	Òáõ	1. ²Ûá	2. Àã

33. ì»ñçÇÝ 2-3 ûñí³ ÁÝÃ³óùáõÙ û·³ ï áñÍ»É»±ù, ³ñ¹Ûáù, ³ÉÏáÑáÉ.
    1. ²Ûá
    2. àã _____ *²Üò°ø* ***Ð³ñó 35***
34. Æ±Ýã ù³Ý³ ÏáõÃÛ³Ùµ ³ÉÏáÑûÉ»ù û·ï³·áñÍ»É.
    1. 100 ·ñ³ÙÇó å³Ï³ë (ûÕÇ, ÏáÝÛ³Ï)
    2. 100-200 ·ñ³Ù (ûÕÇ, ÏáÝÛ³Ï)
    3. 200 ·ñ³ÙÇó ³í»ÉÇ (ûÕÇ, ÏáÝÛ³Ï)
    4. Ø»Ï ·³í³Ã·³ñ»çáõñ Ï³Ù·ÇÝÇ
    5. Ø»Ï ·³í³ÃÇó ³í»ÉÇ ·³ñ»çáõñ Ï³Ù·ÇÝÇ
35. ì»ñçÇÝ 2-3 ûñí³ ÁÝÃ³óùáõÙ áõÝ»ó»±É»ù, ³ñ¹Ûáù, ¹ñ³Ï³Ý ÑáõÛ½»ñ (ûñÇÝ³Ï³ Ñáµ»ÉÛ³Ý, Ñ³ñë³ÝÇù)
    1. ²Ûá
    2. àã
36. ì»ñçÇÝ 2-3 ûñí³ ÁÝÃ³óùáõÙ áõÝ»ó»±É»ù, ³ñ¹Ûáù, µ³ó³ë³Ï³Ý ³åñáõÙÝ»ñ(ûñÇÝ³Ï³ ïËáõñ Éáõñ, ùÝÝáõÃÛáõÝÝ»ñ)
    1. ²Ûá
    2. àã
37. ì»ñçÇÝ 2-3 ûñí³ ÁÝÃ³óùáõÙ Ï³ï³ñ»±É»ù, ³ñ¹Ûáù, Í³Ýñ ýÇ½ÇÏ³Ï³Ý ³ßË³ï³Ýù.
    1. ²Ûá
    2. àã
38. ì»ñçÇÝ 2-3 ûñí³ ÁÝÃ³óùáõÙ áõÝ»ó»±É»ù, ³ñ¹Ûáù, Ùñë³ÍáõÃÛáõÝ (·ñÇåá½íÇ×³Ï)
    1. ²Ûá
    2. àã
39. ¸áõù »ñµ¨¿ Ù»ÏÝ»±É»ù Ð³Û³ëï³ÝÇó »ñÏ³ñÅ³Ù³Ý³Ïáí (6 ³ÙëÇó ³í»ÉÇ)
    1. ²Ûá
    2. àã _____ *²Üò°ø* ***Ð³ñó 42***

40. ²Û¹ Å³Ù³Ý³Ï³Ñ³ ï í³ ÍáõÙ ÝÏ³ ï»±É»ù, ³ñ¹Ûáù, Ýáå³Ý»ñÇ Ñ³×³Ë³Ï³ÝáõÃÛ³Ý ÷á÷áËáõÃÛáõÝ

1. ²Ûá
2. àã_____ *²Üò⁰ø* ***Ð³ñó 42***

41. ²Û¹ Å³Ý³Ï³Ñ³ ï í³ ÍáõÙ Ýáå³Ý»ñÇ Ñ³×³Ë³Ï³ÝáõÃÛáõÝÁ

1. ²×»É¿ñ
2. Üí³½»É¿ñ
3. â¿ñ ÷á÷áËí»É

42. ÜÏ³ ï»±É»ù, ³ñ¹Ûáù, Ýáå³Ý»ñÇ Ñ³×³Ë³Ï³ÝáõÃÛ³Ý Ï³ åÁ ï³ñí³ »Õ³Ý³ÏÝ»ñÇ Ñ» ï

1. ²Ûá
2. àã_____ *²Üò⁰ø* ***Ð³ñó 44***

43. î³ñí³ á±ñ»Õ³Ý³ÏÇ ÁÝÃ³óùáõÙ¿ ÝÏ³ ï íáõÙ Ýáå³Ý»ñÇ ³é³í»É³·áõÛÝ Ñ³×³Ë³Ï³ÝáõÃáõÝ.

1. ¶³ñáõÝ
2. ²Ù³é
3. ²ßáõÝ
4. ÒÙ»é
5. â»Ù ÝÏ³ ï»É ÝÙ³Ý ûñÇÝ³ã³ ÷áõÃÛáõÝ

⁰Â⁰ ¸àôø ²ð²Î²Ü êºèÆ ⁰ø ²Üò⁰ø Ð²ðò 50

Ð²ðò⁰ð ¸²Þî²Ü²ÚÆÜ òÆÎÈÆ ì⁰ð²´⁰ðÚ²È

44. à±ñ ï³ñÇùáõÙ ¿ñ Ò»ñ³é³çÇÝ ¹³ß ï³Ý³ÛÇÝ ³ñÛáõÝ³ÑáëáõÃÛáõÝÁ *Ýß»ù ï³ñÇùÁ ï³ñÇÝ»ñáí* _____

45. ø³ÝÇ± ûñ¿ ï¨áõÙ (ï¨»É) Ò»ñ¹³ß ï³Ý³ÛÇÝ óÇÏÉÁ:

_____ ûñ

46. ø³ÝÇ± ûñ¿ ³Ýó»É Ò»ñ í»ñçÇÝ¹³ß ï³ÝÇ ³é³çÇÝ ûñí³ÝÇó:

1. _____ ûñ
2. ¸³ß ï³Ý³ÛÇÝ óÇÏÉÁ µ³ó³Ï³ÛáõÙ¿ (ÑÕÇáõÃÛáõÝ, ÏÉÇÙ³ùë)

47. ÜÏ ³ ï »±É »ù, ³ ñ¹Ûáù, Ýáå ³ Ý»ñÇ ³ é ³ ç ³ óáõÙ ³ ÝÙÇç ³ å»ë ¹ ³ ß ï ³ ÝÇó ³ é ³ ç Ï ³ Ù ¹ ³ ß ï ³ ÝÇ Å ³ Ù ³ Ý ³ Ï:

1. ²Ûá
2. àã

48. ÜÏ ³ ï »±É »ù ³ ñ¹Ûáù Ýáå ³ Ý»ñÇ Ñ ³ × ³ Ë ³ Ï ³ ÝáõÃÛ ³ Ý ÷á÷áËáõÃÛáõÝ ÑÕÇáõÃÛ ³ Ý Å ³ Ù ³ Ý ³ Ï

1. ²Ûá
2. àã _____ *²Üò ºø* ***Ð ³ ñó 50***
3. ÐÕÇáõÃÛáõÝ ã»Ù áõÝ»ó»É_____ *²Üò ºø* ***Ð ³ ñó 50***

49. Üáå ³ Ý»ñÇ Ñ ³ × ³ Ë ³ Ï ³ ÝáõÃÛáõÝÁ ÑÕÇáõÃÛ ³ Ý Å ³ Ù ³ Ý ³ Ï.

1. ²×»É ¿ñ
2. Üí ³½»É ¿ñ
3. â»ñ ÷áËí»É

Ð²ðò ºð Üàä ²Ü ºðÆ Ü² Ê ²ÜÞ ²ÜÜ ºðÆ ì ºð ² ´ ºðÚ ²È

50. êáíáñ ³ µ ³ ñ áõÝ»Ýáõ±Ù »ù, ³ ñ¹Ûáù, Ñ» ï ¨Û ³ É Ý ³ Ë ³ Ýß ³ ÝÝ»ñÁ Ýáå ³ ÛÇó ³ é ³ ç. *(Ýß»ù ³ ÛÝ ³ Ù»ÝÁ, ÇÝã áõÝ»ÝáõÙ »ù)*

1. ê ³ ñëáõé (¹áÕ)
2. ò ³ í µ ³ ½Ï ³ ÛÇÝ Ñá¹áõÙ
3. ØÏ ³ Ý ³ ÛÇÝ ó ³ í
4. ö áñÉáõÍáõÃÛáõÝ
5. ö áñÏ ³ åáõÃÛáõÝ
6. ì ùÝ ³ ÍáõÃÛáõÝ (áñáí ³ ÛÝÇ ÷ ù í ³ ÍáõÃÛáõÝ)
7. î ñ ³ Ù ³ ¹ñáõÃÛ ³ Ý ÷á÷áËáõÃÛáõÝ
8. ²ÛÉ, *ÝÏ ³ ñ ³ ·ñ»ù*_____
9. Ü ³ Ë ³ Ýß ³ ÝÝ»ñ ã¿Ù áõÝ»ÝáõÙ_____ *²Üò ºø* ***Ð ³ ñó 53***

51. Üáå ³ÛÇ ½ ³ ñ· ³ óáõÙÇó áñù ³ ±Ý Å ³ Ù ³ Ý ³ Ï ³ é ³ ç »ù áõÝ»Ýáõ Ù Ý ³ Ë ³ Ýß ³ ÝÝ»ñÁ

1. 2-3 Å ³ Ù ³ é ³ ç
2. 8-10 Å ³ Ù ³ é ³ ç
3. 1-2 ûñ ³ é ³ ç
4. ²ÛÉ, *Ý Ï ³ ñ ³ · ñ»ù*_____

52. Üßí ³ ÍÝ»ñÇó µ ³ óÇ, áõÝ»Ýáõ±Ù »ù, ³ ñ¹Ûáù, áñ¨¿ ³ ÛÉ Ý ³ Ë ³ Ýß ³ Ý(Ý»ñ)

1. ²Ûá, *Ãí»ù*_____
2. àã

53. Î ó ³ Ý Ï ³ Ý ³ ÛÇ±ù, ³ ñ¹Ûáù, áñ¨¿ µ ³ Ý ³ í»É ³ óÝ»É Ñ ³ ñó ³ ß ³ ñÇÝ

1. ²Ûá

_____

_____

2. àã

ÞÜàðÐ² Î ²ÈàôÂÚàôÜ

American University of Armenia

Institutional Review Board/Committee On Human Research

CONSENT FORM TEMPLATE CHR#

Title of Research Project: Determination of attack precipitating factors for Familial Mediterranean Fever. Case-crossover study.

The Public Health department of the American University of Armenia is conducting a study regarding Familial Mediterranean Fever. The purpose of the study is to obtain the information about factors influencing development of attacks. The interview will take place once in attack free period and once during attack or immediately after it. Every interview will last 20-25 minutes.
We appreciate your participation in this study and your responses are highly valuable to us.
RISKS/DISCOMFORTS:

There is no known risk for the participants of the study. The research possesses risk, discomfort and inconvenience the same as encountered in your daily life.

BENEFITS:

You will not directly benefit from the participation in this study. However, the information provided by you may help to reveal some additional information about factors influencing development of attacks.

CONFIDENTIALITY:

Your name and address or other identifying data will be confidential. Your responses will be accessible only to the Public Health Department of the American University of Armenia.

VOLUNTARINESS:

It is your decision whether participate in the study or not. You have the right to stop providing information at any time you wish or skip any question you consider inappropriate. Your refusal to participate in the study or your decision to withdraw from that at any time will not affect your treatment.

WHOM TO CONTACT:
You should ask the person in charge any questions you may have about this research. You should ask him questions in the future if you do not understand something that is being done. The researchers will tell you anything new they learn that they think will affect you.
If you want to talk to anyone about this research you should call the person in charge of the study, **[Michael Thompson]** at **[phone number: (374 1) 51 25 92 /e-mail: mthompso@aua.am]**.

If you want to talk to anyone about the research study because you feel you have not been treated fairly or think you have been hurt by joining the study you should contact the American University of Armenia at (374 1) 51 25 12

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