



# RETINAL EXAMINATION FORM

ID NUMBER: [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

FORM CODE: [ R ] [ E ] [ X ]

DATE: 06/01/2011  
Version 1.0

## ADMINISTRATIVE INFORMATION

0a. Completion Date: [ ][ ] / [ ][ ] / [ ][ ][ ][ ]  
Month Day Year

0b. Staff ID: [ ][ ][ ]

0c. Eye photographed at visit 3: [ ]

**Instructions:** This form should be completed during the participant's visit. Affix the participant ID label above. Whenever numerical responses are required, enter the number so that the last digit appears in the rightmost box. Enter leading zeroes where necessary to fill all boxes. If a number is entered incorrectly, mark through the incorrect entry with an "X". Code the correct entry clearly above the incorrect entry.

## A. Ophthalmic History

1. Do you have an optometrist or ophthalmologist who examines your eyes periodically?

- Yes..... Y
- No ..... N → **Go to Item 3**
- Refused..... R → **Go to Item 3**

2. When was the last time you saw a doctor, ophthalmologist, or eye specialist concerning your vision?

- Less than 1 year..... A
- At least 1 year but less than 2 years..... B
- At least 2 years but less than 3 years..... C
- 3-10 years ..... D
- Greater than 10 years..... E

3. Has a doctor ever told you that you had diabetes or high blood sugar or sugar in your urine?

- Yes-confirmed ..... Y
- Yes-suspected..... S
- No ..... N → **Go to Item 4**
- Refused..... R → **Go to Item 4**
- Don't Know..... D → **Go to Item 4**

3a. Has a doctor ever told you that you have eye problems as a result of diabetes?

Yes..... Y

No ..... N→

**Go to Item 4**

Don't remember..... R→

**Go to Item 4**

3b. Which eye or eyes were affected?

Right..... R

Left..... L

Both..... B

Don't remember..... D

3c. Have you ever had treatment (laser or injection) applied to the retina, the back of your eye, because of diabetic retinopathy?

Yes..... Y

No ..... N→

**Go to Item 4**

Refused..... R→

**Go to Item 4**

Don't Know..... D →

**Go to Item 4**

3d. On which eye or eyes?

Right..... R

Left..... L

Both..... B

Don't remember..... D

4. Has a doctor ever told you that you have glaucoma?

Yes..... Y

No ..... N→

**Go to Item 5**

Don't remember..... D→

**Go to Item 5**

4a. Which eye or eyes were affected?

Right..... R

Left..... L

Both..... B

Don't remember..... D

5. Has a doctor ever told you that you have age-related macular degeneration?

Yes..... Y

No ..... N→

**Go to Item 6**

Don't remember..... D→

**Go to Item 6**

5a. Which eye or eyes were affected?

- Right..... R
- Left..... L
- Both..... B
- Don't remember..... D

5b. Have you ever had treatments (laser, IV or injection) on your eyes for macular degeneration?

- Yes..... Y
- No ..... N→
- Don't remember..... D→

**Go to Item 6**

**Go to Item 6**

5c. On which eye or eyes?

- Right..... R
- Left..... L
- Both..... B
- Don't remember..... D

6. Has a doctor ever told you that you have cataracts?

- Yes..... Y
- No ..... N→
- Don't remember..... D→

**Go to Item 7**

**Go to Item 7**

6a. Which eye or eyes were affected?

- Right..... R
- Left..... L
- Both..... B
- Don't remember..... D

6b. Have you ever had eye surgery because of cataracts?

- Yes..... Y
- No ..... N→
- Don't remember..... D→

**Go to Item 7**

**Go to Item 7**

6c. On which eye or eyes?

- Right..... R
- Left..... L
- Both..... B
- Don't remember..... D

7. Has a doctor ever told you that you have blockage of an artery or vein in one or both of your eyes?

Yes..... Y

No ..... N→

**Go to Item 8**

Don't remember..... D→

**Go to Item 8**

7a. Which eye or eyes were affected?

Right..... R

Left..... L

Both..... B

Don't remember..... D

7b. Have you ever had laser treatments on your eyes for this blockage?

Yes..... Y

No ..... N→

**Go to Item 8**

Don't remember..... D→

**Go to Item 8**

7c. On which eye or eyes?

Right..... R

Left..... L

Both..... B

Don't remember..... D

8. Have you ever had eye surgery for another condition?

Yes..... Y

No ..... N→

**Go to Item 9**

Don't remember..... D→

**Go to Item 9**

8a. What was the condition?  
\_\_\_\_\_

8b. On which eye or eyes?

Right..... R

Left..... L

Both..... B

Don't remember..... D

9. Have you ever had laser treatments on your eyes for another condition?

- Yes..... Y
- No ..... N→ **Go to Item 10**
- Don't remember..... D→ **Go to Item 10**

9a. What was the condition?

\_\_\_\_\_

9b. On which eye or eyes?

- Right..... R
- Left..... L
- Both..... B
- Don't remember..... D

10. Have you ever experienced trauma or injury to your eyes that required a doctor's care?

- Yes..... Y
- No ..... N→ **Go to Item 11**
- Don't remember..... D→ **Go to Item 11**

10a. What was the trauma/injury?

\_\_\_\_\_

10b. Which eye or eyes were injured or had trauma?

- Right..... R
- Left..... L
- Both..... B
- Don't remember..... D

11. At the present time, would you say your eyesight, with glasses or contacts if you wear them, is...:

- Excellent..... A→ **Go to Item 12**
- Good ..... B→ **Go to Item 12**
- Fair..... C→ **Go to Item 12**
- Poor ..... D
- Very poor..... E
- Don't know ..... F→ **Go to Item 12**

11a. When would you say your eyesight first became poor or very poor  
(with glasses or contacts if you wore them)?

- Childhood ..... A
- Teenage years ..... B
- Twenties or thirties ..... C
- Forties or fifties ..... D
- Sixty or older ..... E
- Don't remember ..... F

**B. Photographic Section**

12. Which eyes were photographed?

- Right ..... R
- Left ..... L →
- Both ..... B
- None ..... N →

**Go to Item 17**

**Go to Item 21**

13. Right eye flash setting (1-9)

14. Right eye pupil measurement (mm)

15. Right eye field 1 taken:

- Yes ..... Y
- No ..... N

16. Right eye field 2 taken:

- Yes ..... Y
- No ..... N

17. Left eye flash setting (1-9)

18. Left eye pupil measurement (mm)

19. Left eye field 1 taken:

- Yes ..... Y
- No ..... N

20. Left eye field 2 taken:

- Yes ..... Y
- No ..... N

21. If neither eye was photographed, specify reason.

- Equipment failure ..... A
- Participant refusal..... B
- Biologically not feasible ..... C
- Other ..... D

22. Comments:

Comments
----------

23. Photographer ID:.....



## INSTRUCTIONS FOR THE RETINAL EXAMINATION (REXD) FORM

### I. General Instructions

The Retinal Examination (REX) Form is administered to all ARIC participants. Its primary purpose is to obtain information about the participant's general ophthalmic history. The technician taking the retinal photograph also uses the form to record which eye will be photographed, or if the photography cannot be performed, the reason(s).

The questionnaire is to be completed immediately prior to taking the retinal photograph. If clinic flow permits, it is administered after the subject is seated at the camera in the darkened room, while the technician is waiting for the pupil to dilate through dark adaptation.

The interviewer must be certified in general clinic interviewing and be familiar with the "General Instructions for Completing Paper Forms" prior to administering this form. Items in BRACKETS and/or CAPITAL LETTERS are instructions to the interviewer and are not read to the participant.

### II. Detailed Instructions for each Item

- 0c. This field is filled automatically by the Data Management System (DMS). The DMS screen will indicate which eye was photographed at Visit 3. Should a field center choose to collect data on paper first, this answer would need to be obtained from the DES before doing the photographing. See also Q12, below.

#### READ INTRODUCTORY SCRIPT:

*"These questions ask about the status of your eyes and any medical history we should know about when we evaluate the photographs of the blood vessels in the back of your eyes. Some of the questions need a direct answer from you and some require you to choose an answer from a series of responses. I will let you know which type of response is necessary for each question."*

1. This question asks if the participant has an optometrist (non-medical doctor who prescribes eye glasses) or ophthalmologist ("eye specialist") who examines his/her eyes periodically. (If 'No' or 'Refused' skip to Item 3).
2. This question asks about recent visits to a physician ("doctor") or ophthalmologist ("eye specialist") or optometrist (non-medical doctor who prescribes eye glasses).
3. A positive answer for diabetes requires an explicit statement by a physician using the term "diabetes", or "high blood sugar" for which treatment was prescribed. Gestational Diabetes is not included in this question. (If 'N' skip to Item 4).
- 3a. This question asks only if the doctor (physician) said the participant had/has an eye problem as a result of diabetes. (If 'N' or 'Don't Remember' skip to Item 4).
- 3b. This question refers to a previous diagnosis of an eye problem due to diabetes such as; diabetic retinopathy (Item 2b=YES) at any time during the participant's life, and may include one or both eyes. Select 'D' 'Don't Remember' if the participant is unsure which eye(s) was/is affected.
- 3c. Laser treatment to the eye for diabetes is often called laser photocoagulation, and refers to the use of a focused beam of light to seal off areas of bleeding or leakage in the retina, the light sensitive layer at the back of the eye. Other or unknown types of



- treatments are coded as NO or DON'T REMEMBER respectively. (If 'N' or 'Don't Remember' skip to Item 4).
- 3d. Restrict the selection of the eye to the condition described above in Item 3a. Read the question as written; do not read the response categories.
  4. This question is looking for physician-diagnosed glaucoma. Read the question as worded. If asked, glaucoma is defined as increased pressure inside one or both eyes. (If the response is NO or DON'T REMEMBER, skip to item 5).
    - 4a. Restrict the selection of the eye to the condition described above in Item 4. Read the question as written; do not read the response categories.
  5. If asked, define age-related macular degeneration as a loss of vision that could not be corrected with glasses due to changes in your retina caused by aging. This condition used to be called "senile" macular degeneration (or SMD), and is now often abbreviated as ARMD or AMD. (If 'N' or 'Don't Remember' skip to Item 6).
    - 5a. Restrict the selection of the eye to the condition described above in Item 5. Read the question as written; do not read the response categories.
    - 5b. This question is looking for laser therapy on the eyes for correction of macular degeneration. (If 'N' or 'Don't Remember' skip to Item 6).
    - 5c. Restrict the selection of the eye to the condition described above in Item 5b. Read the question as written; do not read the response categories.
  6. This question searches for any physician diagnosis of cataracts, or symptoms of cataracts of the lens of either or both eyes. If asked, cataracts can be described as a cloudiness of the lens in one or both eyes. (If 'N' or 'Don't Remember' skip to Item 7).
    - 6a. Restrict the selection of the eye to the condition described above in Item 6. Read the question as written; do not read the response categories.
    - 6b. This question looks for any history of surgery to correct cataracts of the lens of the eye/s. (If 'N' or 'Don't Remember' skip to Item 7).
    - 6c. Restrict the selection of the eye to the condition described above in Item 6b. Read the question as written; do not read the response categories.
  7. Blockage of an artery or vein in the eye is called an occlusion. Symptoms of occlusion include areas of reduced or lost vision (blind spots) which may be temporary or permanent. (If 'N' or 'Don't Remember' skip to Item 8).
    - 7a. Restrict the selection of the eye to the condition described above in Item 7. Read the question as written; do not read the response categories. Read the question as written; do not read the response categories.
    - 7b. This question asks about any history of laser treatments on the eye/eyes specifically to relieve the blockage of an artery or vein in the eye (or occlusion). If 'N' or 'Don't Remember' skip to Item 8).
    - 7c. Restrict the selection of the eye to the condition described above in Item 7b. Read the question as written; do not read the response categories.
  8. Participants might respond to this question with a wide range of eye surgeries. Of particular interest is any surgery which affects the retina: retinal detachment surgery (including insertion of gas or silicon oil bubbles-tamponades to push the retina back down, buckles-bands that push the retina and the layer underlying it back together, and cryotherapy-cold cauterization to tack the retina to the layer underlying it), or vitrectomy (a microsurgical technique in which instruments are introduced into the eye to cut away

scar tissue and to remove cloudy vitreous humor). Note that 'laser treatments' are not considered 'eye surgery': these procedures are documented in Items 8a-c. (If 'N' or 'Don't Remember' skip to Item 9).

- 8a. This asks for the specific condition from the affirmative answer in Item 8. If more than one condition, specify the most recent eye problem.
- 8b. Restrict the selection of the eye to the condition described above in Item 8. Read the question as written; do not read the response categories.
9. Again, participants may provide different treatments as an answer to this question but of particular interest are laser treatments, specifically those affecting the retina (refer to instructions for Item 7a in this Q x Q). (If 'N' or 'Don't Remember' skip to Item 10).
- 9a. This asks for the specific condition from the affirmative answer in Item 9. If more than one condition, specify the most recent eye problem.
- 9b. Restrict the selection of the eye to the condition described above in Item 9. Read the question as written; do not read the response categories.
10. This question is asking for any accidental injuries or direct trauma that the participant has experienced in the past which affected the eye/s. (If 'N' or 'Don't Remember' skip to Item 11).
- 10a. This asks for the specific condition from the affirmative answer in Item 10. If more than one condition, specify the most recent eye injury.
- 10b. Restrict the selection of the eye to the trauma or injury described in Item 10a. Read the question as written; do not read the response categories.
11. The participant is asked his/her opinion of the current quality of his/her eyesight (with glasses or contacts if applicable). (If 'A', 'B', 'C', or 'F' is selected, skip to Item 12).
- 11a. This question asks the participant for an estimate of when his/her eyesight first started deteriorating in his/her lifetime.
12. The same eye photographed at Visit 3 (from Item 0c) is to be selected if feasible. If both eyes or none of the eyes were photographed at visit 3 (or the information is not available in the DES), select the right eye if the current date (the date this form is administered) is an even number, and select the left eye for odd numbers. For example, on the 20<sup>th</sup> of any month, a right eye will be selected if both eyes or none of the eyes were photographed at visit 3.  
  
If the left eye was photographed, skip to Item 17; if neither eye was photographed, skip to Item 21.
13. If right eye photographed, enter the right eye flash setting
14. If right eye photographed, enter the right eye pupil measurement
15. If right eye photographed, select "Y" or "N" to record whether the right eye field 1 was taken.
16. If right eye photographed, select "Y" or "N" to record whether the right eye field 2 was taken.
17. If left eye photographed, enter the left eye flash setting
18. If left eye photographed, enter the left eye pupil measurement
19. If left eye photographed, select "Y" or "N" to record whether the left eye field 1 was taken.

20. If left eye photographed, select "Y" or "N" to record whether the left eye field 2 was taken.
21. If neither eye was photographed, select the reason from the list of options.
22. Record any comments related to the process of taking the photograph(s).
23. Enter the Photographer ID.