

**Modification of Diet in Renal Disease Study**  
**CENTRAL LAB EKG FORM**

This form will be completed by the Central EKG Lab personnel. It will be completed for each patient at Baseline 2 and annually at F11, F23, etc...

The form will be completed independently by two readers for each patient. The form will be entered by DCC personnel and a copy of the final report (the form) will be sent to the Clinical Center.

QUESTION #INSTRUCTIONS

- 1.-4. Complete in the usual manner. Copy visit information from Form #18 accompanying EKG tracing.
5. If the EKG tracing is technically satisfactory, enter a 1 and continue to complete the form. Similarly, if it is a borderline tracing, enter a 3 continue. If the tracing is technically unsatisfactory, enter a 2 and skip to item 18. The DCC will report this to the Clinical Center, and the tracing will be repeated at the next monthly visit.
6. Enter the number of beats per minute. Must be averaged with irregular rhythms.
7. If the R wave + S wave is less than 0.6 millivolts in any limb leads, enter a 1. If not, enter a 2.
8. Calculate R wave - Q wave (or S wave if Q<S<R) in millivolts in the AVL lead. Multiply this result by 2 and record the value to the nearest whole number. Record as zero if the R wave and S wave are equal or if the S wave is greater than R. This is the Lewis Index.
9. Sum the S wave in V1 or V2, whichever is greater with the R wave in V5 or V6, which is greater. This is known as the Sokolow Index.
10. Record the height in millimeters of the tallest R wave in leads V5 or V6, whichever is greater.
11. QRS angle. Enter a 1 if angle read is normal ( $-15-90^{\circ}$ ). Otherwise enter a 2 if abnormal.
12. If the rhythm of the heart is sinus, enter a 1. If it is atrial fibrillation, enter a 2. If there is any other type of rhythm, enter a 3 and specify the rhythm.

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- | <u>QUESTION #</u> | <u>INSTRUCTIONS</u>   |
|-------------------|---|
| 13.               | Calculate the QT constant by using Bazett's Formula:<br>$QT \text{ interval (secs)} / \sqrt{R-R \text{ interval (secs)}}$   |
| 14.               | a. Record the number best associated with the intraventricular defect read on the EKG.<br><br>b. Enter the duration of QRS in seconds.  |
| 15.               | If there is evidence in the EKG tracing of a prior M.I., enter a<br>1. Evidence includes the following:<br>AVF or AVL<br>Q 0.04 seconds or greater duration<br>Q 0.03 seconds or greater duration and $Q \geq .25 * R$<br>Precordial Leads<br>Absent R in any lead V3 to V6 inclusive<br>$Q > 0.25 * R$<br>Q 0.04 seconds or greater duration<br>If no such evidence is found, enter a 2.<br>If questionable, enter a 3.<br>AVF or AVL<br>Q 0.035 seconds duration but less than 0.04<br>AND Q less than $0.25 * R$<br>Precordial Leads<br>Q 0.035 seconds duration but less than 0.04<br>Regressive R in lead other than V4 or V6<br>Q in V1, V2, V3, if R less than 0.30 millivolts |
| 16.               | Enter the number best associated with any repolarization indicated on the EKG.<br><br>1 = Normal<br><br>ST isoelectric or slightly elevated in all leads except AVR<br>T upright in all leads except diphasic or inverted T acceptable in AVR, V1, V2, and in V3 in women and in those less than 20 years of age; T may also be diphasic or inverted in AVL and in AVF if R is less than 0.6 millivolts.<br><br>2 = Non-specific<br><br>other than numbers 3 through 9 inclusive.<br><br>3 = Suggesting LVH<br><br>ST depressed and descending limb of T upwardly convex with T diphasic or inverted in V5 or V6. May be associated with late intrinsicoid deflection.                |

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|-------------------|--|
|                   | 4 = Digitalis Effect<br>Straight line sagging of ST segments into diphasic or inverted T waves.  |
|                   | 5 = Suggesting Hyperkalemia<br>Symmetrical upright T waves.  |
|                   | 6 = Suggesting Hypokalemia<br>Prolonged apparent QTc with V fused into T.  |
|                   | 7 = Hypocalcemia<br>QTc prolonged due to increased duration of ST.   |
|                   | 8 = Abnormal due to Intraventricular Conduction Defect<br>ST and/or T changes secondary to intraventricular conduction abnormality.  |
|                   | 9 = Other<br>Abnormalities including pericarditis, not listed above. Specify.  |
| 17.               | If any abnormalities other than those touched on in the form are indicated on the EKG, enter a 1 and comment in the space provided. Enter a 2 if there are no other abnormalities indicated.                     |
| 18.               | Enter a 1 if this is the report from Dr. Proudfit. Enter a 2 if by Dr. Underwood. Enter a 3 if it is the consensus.  |
| 19.               | Enter the date the EKG was read by the physician.  |
| 101.-103.         | THE ELECTROCARDIOGRAPHER SHOULD THEN SIGN PAGE 3 OF THE FORM, COMPLETE HIS CERTIFICATION NUMBER FOR THE STUDY AND ANSWER YES TO THE NEXT ITEM. THE DCC WILL THEN ENTER THE FORM AND COMPLETE THE LAST TWO ITEMS. |

For DCC Use Only  
Rev. 2 12/1/90

E \_\_\_  
V \_\_\_  
T \_\_\_

# MDRD

## Modification of Diet in Renal Disease Study Central Laboratory Electrocardiogram Form

This form is to be completed for baseline at (B2), and annually (starting at F11).

FORM # ..... 35

1. Patient Identification Number.....
2. Patient Name Code.....
3. Clinical Center.....
4. a. Date of EKG Tracing..... / /  
b. Visit Type.....  
c. Visit Number.....
5. Is the EKG tracing technically satisfactory? (1 = yes, 2 = no, 3 = borderline).....

If the tracing is not satisfactory, skip to Item 18.

### Resting EKG

Please review the EKG and answer the following questions:

6. Heart Rate (beats per minute).....
7. Is QRS voltage low? (1 = yes, 2 = no) (< 5 mm all frontal plane leads).....
8. Lewis Index (modified).....
9. Sokolow Index.....
10. What is the height of the tallest R wave in leads V5 or V6? (mm).....

The EKG technician should forward this form to the EKG reader to complete the remainder of the form.

11. QRS Angle (1 = normal (-15 to 90), 2 = abnormal).....
12. Rhythm.....  
1 = Sinus  
2 = Atrial fibrillation  
3 = Other (20 characters maximum).....
13. QT constant.....

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Central Laboratory Electrocardiogram Form**

**QRS**

14. a. Conduction defect (intraventricular).....  
1 = None  
2 = Left anterior hemiblock  
3 = Complete left bundle branch block  
4 = Incomplete left bundle branch block  
5 = Complete right bundle branch block  
6 = Complete RBBB with left anterior hemiblock  
7 = Complete RBBB with left posterior hemiblock  
8 = Incomplete right bundle branch block  
9 = Wolff-Parkinson-White syndrome  
10 = Intraventricular block (non-specific)
- b. Duration of QRS (secs) (1 = < 0.12, 2 = ≥ 0.12) .....
15. Does the present EKG indicate evidence of a prior myocardial infarction? (1 = yes, 2 = no, 3 = questionable).....

**ST-T**

16. Repolarization  
a. First Diagnosis.....  
b. Second Diagnosis.....  
c. Third Diagnosis.....  
1 = Normal  
2 = Non-specific  
3 = Suggesting LVH (left ventricular hypertrophy) in V5 or V6  
4 = Suggesting digitalis effect  
5 = Suggesting hyperkalemia  
6 = Suggesting hypokalemia  
7 = Suggesting hypocalcemia  
8 = Abnormal due to intraventricular conduction defect  
9 = Other abnormality (specify \_\_\_\_\_)
17. Are there any other abnormalities in the EKG other than those described above? (1 = yes, 2 = no) .....
- If so, comment (20 characters maximum): \_\_\_\_\_

18. Which report is this?.....  
1 = Reader 1  
2 = Reader 2  
3 = Consensus reading
19. Date EKG read by physician..... / /
101. Electrocardiographer's signature .....
102. Certification number of electrocardiographer .....
103. Has form been signed by electrocardiographer? (1 = yes, 2 = no) .....
104. Date form entered..... / /
105. Certification number of data entry person .....