

Abnormal lab results:

- Sodium (Na) level is low at 124 mEq/L; normal reference range is 136-145 mEq/L.
- Potassium (K) level is high at 5.8 mEq/L; normal reference range is 3.5-5.1 mEq/L.
 - Glucose level is high at 107 mg/dL; normal reference range is 74-100 mg/dL.
- Hemoglobin (H B/Hgb) level is critically low at 7.0 gm/dL; normal reference range is 14.0-18.0 gm/dL.
- Hematocrit (HCT) level is critically low at 21.1%; normal reference range is 42.0-52.0%.
 - Folate level is low at 3.2 ng/mL; normal reference is >5.4 ng/mL.
- Throat culture tested positive for group A streptococcus; normal is negative for group A streptococcus.

Feedback for the patient:

- Sodium levels are dangerously low, indicating hyponatremia; this may affect fluid balance and nerve function.
 - Increased potassium levels could be indicative of kidney disease or hormonal disorders.
 - Elevated glucose levels may suggest poor blood sugar control, potentially indicative of diabetes.
- Severe anemia is evident from the critically low levels of hemoglobin and hematocrit; this requires urgent medical attention for further investigation.
 - Low levels of folate might point to dietary deficiencies; supplementation could be beneficial.
- The positive test for group A streptococcus in the throat culture requires antibiotics to treat the infection.

Different laboratories generate reports that can vary greatly in appearance and in the order and kind of information included. This is one example of what a lab report may look like. Names and places used have been made up for illustrative purposes only. This report is an example of a cumulative report, which is a report that includes results of several different tests run on different days. The numbered key to the right explains a few of the report elements.

13 Test	Normal	Abnormal	Flag	Units	Reference Range
<u>BASIC METABOLIC PANEL (BMP)</u>					
Sodium (Na)		124	L	mEq/L	136-145
Potassium (K)		5.8	H	mEq/L	3.5-5.1
Carbon Dioxide (CO ₂)	25			mEq/L	23-29
Chloride (Cl)	101			mEq/L	98-107
Glucose		107	H	mg/dL	74-100
Calcium (Ca)	10.1			mg/dL	8.6-10.2
Blood Urea Nitrogen (BUN)	17			mg/dL	8-23
Creatinine	0.9			mg/dL	0.8-1.3

19 Comment: **Critical results Hgb of 7.0 and Hct of 21.1 reported to Dr. J Smith at 15:15 on 2/10/14 by M. Peters

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SPEC #:	223725	Collection Date/Time:	02/11/14	12:30
		Received Date/Time:	02/11/14	13:00
		Reported Date/Time:	02/12/14	16:20
SPECIMEN:	Swab, Throat			
ORDERED:	Throat Culture for Beta Hemolytic Streptococci (Strep Throat Test)			
Test	Results		Reference Range	
Throat Culture for Beta Hemolytic Streptococci	Positive for group A streptococcus		Negative for group A streptococcus	
<p style="text-align: center;">** END OF REPORT **</p>				
Doe, John Q.	Patient ID: 987654321		02/14/2014	16:13

1. Name and address of the lab where the test was performed. Tests may be run in a physician office lab, a lab located in a clinic or hospital, and/or samples may be sent to a reference laboratory for analysis.
2. Date this copy of the report was printed. This date may be different than the date the results were generated, especially on cumulative reports (those that include results of several different tests run on different days).
3. Patient name or identifier. Links results to the correct person.
4. Patient identifier and identification number. Links results to the correct person.
5. Name of doctor. The lab will send the results to the doctor(s) or other health practitioners listed.
6. Listing of medications the patient is currently taking. Some tests results are affected by medications, vitamins and other health supplements, so laboratories may obtain this information from the test request form and transcribe it onto the lab report.
7. Status of the test request, such as Routine or STAT (perform test as rapidly as possible).
8. Unique identification number(s). Number(s) assigned to the sample(s) when it arrives at the laboratory.
9. Specimen source. Some tests can be performed on more than one type of sample (such as blood, serum, plasma, cerebrospinal fluid, etc.).
10. Information about the patient or the sample. Any pertinent information regarding the patient's test preparation or the condition of specimen may be noted here.
11. The date and time of sample collection and the date and time that the sample was received into the laboratory
12. Test report date. This is the date the tests results were generated and reported for this particular sample.
13. A listing of the tests performed on the sample. Test names may be abbreviated on lab reports. You can look for these test names in the pull-down menu on the home page of this site or type the name into the search box to find information on specific tests.
14. A listing of the results that are normal.
15. A listing of the results that are abnormal.
16. An 'H' in this column may mean that the result is higher than the reference range. 'L' may mean 'low.' Either represents a result outside the reference range/value.
17. Units of measurement (for quantitative results). The units of measurement that labs use to report your results can vary from lab to lab. Regardless of the units that the lab uses, your results will be interpreted in relation to the reference ranges supplied by the laboratory.
18. Reference intervals (or reference ranges). These are the ranges in which "normal" values are expected to fall. The ranges that appear on your report are established and supplied by the laboratory that performed your test.
19. Critical results are dangerously abnormal results that must be reported immediately to the responsible person, such as the ordering physician. The laboratory will often draw attention to such results with an asterisk (*) or something similar and will usually note on the report the date and time the responsible person was notified.
20. If a sample was sent to a reference laboratory for testing, the name and address of the lab will often be inserted next to the results or otherwise noted on the report.
21. Interpretation of results. In certain circumstances, the lab may note on the report what certain test results may indicate.