

Fertility Labs & Optimal Values Guide

Have you been told your labs are normal?

@FertilitybyErika



Hello, I'm Erika

I'm a woman's hormone health practitioner, fertility awareness instructor and reproductive biologist with a passion for helping individuals and couples optimize their fertility and hormones to take charge of their reproductive health.

This guide will provide you with essential information on your TTC journey when it comes to lab testing. It includes which labs should be tested, when and how they should be tested but also optimal values for interpretation.

In case you would still feel overwhelmed and unsure about your testing I offer my free **Root Cause & Cycle Mapping Session**: 45 minutes to identify the 2-3 most likely root causes in your case, and map your next steps.

APPLY FOR ROOT CAUSE &
CYCLE MAPPING SESSION



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Fertility Labs Checklist

- ☐ Full blood count
- ☐ Basic Hormone panel - LH, FSH, Estradiol, Progesterone
- ☐ Thyroid full panel (TSH, T3, T4, antibodies)
- ☐ Prolactin
- ☐ Androgen panel (free testosterone, FAI, SHBG, DHEA-S)
- ☐ Blood sugar (fasting glucose, fasting insulin, HbA1c)
- ☐ Vitamin D (25-hydroxy-vitamin D)
- ☐ Serum Folate, Zinc, B12
- ☐ Iron tests (serum iron, TIBC, UIBC, ferritin)
- ☐ STI screening
- ☐ Cervical Pap smear test
- ☐ Infectious diseases testing

Optimal values cheatsheet (additional tests included)

Basic Hormones

for unit conversion use : <https://unitslab.com/>

Test	Optimal range	When? How? Why?
Estradiol (E2)	Follicular 100- 200 pmol/L Luteal 300-700 pmol/L	test on cycle day 3 for follicular test on 7dpo for luteal
LH (luteinizing hormone)	2-8 mIU/mL	test on cycle day 3 (if LH 2-3x higher than FSH is an indicator of PCOS)
FSH	3-5 mIU/mL - excellent 6-9 mIU/mL - good	test on cycle day 3
Progesterone	10-25 ng/mL, ideally above 15 ng/mL	test approx. 7 days post ovulation not on CD 14
Prolactin	Under 300 mIU/L	test on cycle day 3, high prolactin can suppress ovulation
AMH	above 1 ng/mL - normal above 3 ng/ mL - could indicate PCOS less than 0.3 ng/ mL - very low	predicts ovarian response to IVF stimulation but does not reflect fertility or ability to conceive naturally
Total testosterone	0.8- 1.7 nmol/L	test on cycle day 3, high can be an indicator of PCOS
Free testosterone	3.8-7.6 pmol/L	test on cycle day 3, high can be an indicator of high androgens or PCOS
SHBG	55-75 nmol/L	test on cycle day 3, low SHBG means high free hormones
DHEA-S	2-7 µmol/L	test on cycle day 3, declines with age so ranges differ
Vitamin D	75-125 nmol/L	test any day, essential for better fertility outcomes

Optimal values cheatsheet (additional tests included)

Thyroid panel

Test	Optimal range	When? How? Why?
TSH	0.5 to 2.5 mIU/mL	TSH levels do not always determine the function of thyroid, so full thyroid panel is needed
T3	3.5–6.5 pmol/L	active thyroid hormone
T4	12–20 pmol/L	thyroid hormone converted to T3
TPO Antibody	0–15 IU/mL	high levels can indicate autoimmune condition
TG Antibody	0–4 IU/mL	high levels can indicate autoimmune condition

Blood Sugar Tests

Test	Optimal range	When? How? Why?
Fasting blood glucose	75–85 mg/dL	test fasted, higher indicates blood sugar dysregulation
Fasting insulin	Below 8 mIU/L	test fasted, higher indicates insulin resistance
HbA1c	27–34 mmol/mol	shows your average level of blood glucose over past months
Glucose tolerance test (1h–2h)	<140 mg/dL (1h) <199 mg/dL (2h)	shows how your body processes sugar upon having sugary liquid

Optimal values cheatsheet (additional tests included)

Iron tests

Test	Optimal range	When? How? Why?
Serum iron	40–135 µg/dL	measure of current iron levels in blood
Total iron-binding capacity (TIBC)	275–425 µg/dL	ability to carry iron in blood, high signals iron deficiency
Unsaturated iron-binding capacity (UIBC)	175–350 µg/dL	high can mean low iron
Ferritin	30–100 ng/mL, ideal above 70	measure of iron stores

General health & Vitamins

Test	Optimal range	When? How? Why?
Total cholesterol	4–6 mmol/L	test fasted
LDL cholesterol	1–3.5 mmol/L	test fasted
HDL cholesterol	1.5–2.2 mmol/L	test fasted
Vitamin B12	at a minimum over 550 pg/L	essential for ovulation, implantation, embryo growth
Folate	over 20 nmol/L	test fasted, important for prevention of birth defects
Zinc	15 - 20 µmol/L	essential for egg and embryo development
Homocysteine	Under 10 µmol/L	high can signal deficiency in B vitamins

So what's the next step?

If you are feeling overwhelmed by this list and don't know where to start - I get you and I've been there!

You don't have to figure out your fertility bloodwork or optimization of lifestyle based on your results on your own.

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