

WHO 6th vs 5th Edition Semen Analysis

Beginner educational overview

Prepared by Manoj Kumar K, Embryologist



1. INTRODUCTION

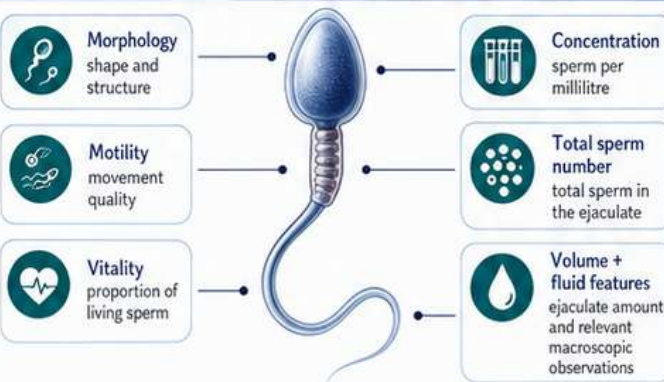
The World Health Organization (WHO) provides guidance that standardises how semen is collected, examined and interpreted in fertility care. Semen analysis is an important part of male fertility assessment and helps guide clinical decisions alongside other findings.



2. LEARNING POINTS

- ✓ Understand what a semen analysis measures.
- ✓ Recognise key differences between the WHO 5th and 6th editions.
- ✓ Identify common types of spermia.
- ✓ Interpret results carefully and in clinical context.

3. WHAT A BASIC SEMEN ANALYSIS DESCRIBES



4. WHO 5TH VS 6TH EDITION: KEY DIFFERENCES

5th edition (2010)

- Evidence-based lower reference limits
- Progressive / non-progressive / immotile motility reporting
- Widely used international standard methods

VS

6th edition (2021)

- Expanded reference dataset
- Greater emphasis on interpretation in context
- Rapid and slow progressive motility reintroduced
- Stronger quality-control guidance
- Basic, extended and advanced examination structure

5. SELECTED LOWER FIFTH-PERCENTILE VALUES

Parameter	5th edition (2010)	6th edition (2021)
Volume	1.5 mL	1.4 mL
Sperm concentration	15 million/mL	16 million/mL
Total motility	40%	42%
Progressive motility	32%	30%
Vitality	58%	54%
Normal morphology	4%	4%

i Reference values support interpretation; they are not a pass/fail fertility diagnosis.

6. TYPES OF SPERMIA

- Normozoospermia — semen parameters are within reference ranges.
- Oligozoospermia — lower sperm concentration than expected.
- Asthenozoospermia — reduced sperm motility.
- Teratozoospermia — lower proportion of sperm with normal morphology.
- Oligoastheno-teratozoospermia (OAT) — combined low count, poor motility and abnormal morphology.
- Azoospermia — no spermatozoa seen in the ejaculate.

7. HOW SEMEN EXAMINATION WORKS

- Preparation
- Collection
- Liquefaction & mixing
- Macroscopic check
- Microscopic check
- Quality review
- Report & interpretation

i Reliable results depend on correct collection, laboratory quality and clinical interpretation.

8. INTERPRET RESULTS CAREFULLY

- May indicate: sperm production or semen quality patterns
- Does not prove: fertility or infertility by itself
- Interpret in context: consider full report, sample quality, history and both partners' findings

9. COMMON MISUNDERSTANDINGS

- Myth:** A normal result guarantees fertility.
- Fact:** Fertility depends on both partners and many factors.
- Myth:** A result below the reference limit means sterility.
- Fact:** It may indicate the need for further assessment, not absolute infertility.
- Myth:** One test is always enough.
- Fact:** Repeat testing may be needed because semen can vary.

11. SCAN TO EXPLORE INSIDE EMBRYO



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10. TAKE-HOME MESSAGE

A reference limit is not a fertility boundary.
Semen analysis is valuable, but it should never be interpreted in isolation.



For educational purposes only. This poster does not replace consultation with a qualified fertility specialist, embryologist or healthcare professional.