



# OSCEs- The Human Development Station



Lea Saliba – Stg3 Yr4  
Tuesday 9<sup>th</sup> April 2024- 5pm.

How confident are we feeling  
about the human development  
station in OSCEs?



# Learning Objectives

- ❑ Understand what a pregnancy entails
- ❑ To learn how to correctly carry out the following skills:
  - ❑ Urinalysis
  - ❑ Pregnancy dating
  - ❑ Fundal height measurements
  - ❑ Growth charts
  - ❑ Paediatric head circumference & height/length
- ❑ To practice the structure of a communication station

# The Purple Guide

<b>Obstetrics</b>	<i>Pregnant abdomen (limited to measuring all related vital signs, urinalysis, pregnancy dating, EDD calculation/estimation and fundal height) Breast examination</i>
<b>Paediatrics</b>	<i>Growth (as in to enable plotting on growth chart)</i>

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# Section 1- Obstetrics

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# What are the stages of pregnancy?

## Pregnancy Weeks, Months and Trimesters

TRIMESTER

1

MONTH	WEEK
1	1-4
2	5-8
3	9-13

TRIMESTER

2

MONTH	WEEK
4	14-17
5	18-22
6	23-27

TRIMESTER

3

MONTH	WEEK
7	28-31
8	32-35
9	36-40

what to expect.

37 weeks  
+ is  
classified  
as TERM

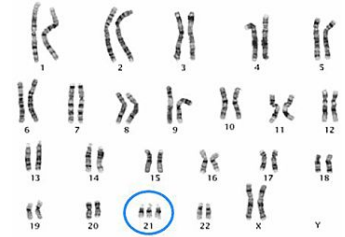
# Important appointments

Height, Weight, BMI,  
Urinalysis, BP, Detailed  
history, blood test (Rhesus  
Status + blood viruses e.g.  
HIV, Hep B, Syphilis)

Dates	Event	Purpose
Before 10 weeks	Booking clinic	Offer a baseline assessment and plan the pregnancy
Between 10 and 13 + 6	Dating scan	An accurate <b>gestational age</b> is calculated from the <b>crown rump length (CRL)</b> , and multiple pregnancies are identified
16 weeks	Antenatal appointment	Discuss results and plan future appointments
Between 18 and 20 + 6	Anomaly scan	An ultrasound to identify any anomalies, such as heart conditions
25, 28, 31, 34, 36, 38, 40, 41 and 42 weeks	Antenatal appointments	Monitor the pregnancy and discuss future plans

Cleft lip, open spina bifida, Edwards, Patau's, diaphragmatic hernia, neural tube defect anencephaly etc. (11 total)

# Down Syndrome Screening



COMBINED TEST	TRIPLE TEST	QUADRUPLE TEST
<ul style="list-style-type: none"><li>• 11-14 weeks</li><li>• US □ nuchal translucency= thickness of the back of the neck □ thicker than 6mm in DS</li><li>• b-HCG is raised in DS</li><li>• PAPP A is lower in DS</li></ul>	<ul style="list-style-type: none"><li>• 14-20 weeks</li><li>• Bloods only</li><li>• B-HCG</li><li>• AFP is lower in DS</li><li>• Serum oestriol is lower in DS</li></ul>	<ul style="list-style-type: none"><li>• 14-20 weeks</li><li>• Triple test + inhibin A (higher in DS)</li></ul>

**SCREENING IS THE PATIENT'S CHOICE!**



## EXTRA READING- POSSIBLE COMMUNICATION STATIONS

MORE DETAIL ABOUT ANTENATAL APPOINTMENTS	EXPLAINING THE PROCEDURE OF AN ULTRASOUND SCAN	VACCINATIONS DURING PREGNANCY
<p><a href="https://geekymedics.com/ro-utine-antenatal-care-and-antenatal-appointments/">https://geekymedics.com/ro-utine-antenatal-care-and-antenatal-appointments/</a></p>	<p><a href="https://www.nhs.uk/pregnancy/your-pregnancy-care/ultrasound-scans/#:~:text=You'll%20be%20asked%20to,appear%20on%20the%20ultrasound%20screen.">https://www.nhs.uk/pregnancy/your-pregnancy-care/ultrasound-scans/#:~:text=You'll%20be%20asked%20to,appear%20on%20the%20ultrasound%20screen.</a></p> <p><a href="https://www.whattoexpect.com/pregnancy/pregnancy-health/prenatal-testing-ultrasound/">https://www.whattoexpect.com/pregnancy/pregnancy-health/prenatal-testing-ultrasound/</a></p>	<p>COVID</p> <p>Whooping cough (pertussis) 16-32 weeks</p> <p>Influenza during flu season</p> <p><b>Avoid</b> live vaccines e.g. MMR, BCG, polio, typhoid, yellow fever</p>

# Gravidity VS Parity

Gravidity: Total number of pregnancies regardless of outcome

Parity: Total number of pregnancies carried over viability threshold (24 weeks in the UK)

## EXAMPLES:

- *Currently pregnant + 2 previous deliveries = G*
- *Not pregnant + 1 previous delivery = G*
- *Currently pregnant + 1 delivery + 1 miscarriage = G3*
- *Not pregnant + 1 live birth + 1 stillbirth = G*
- *Not pregnant + previous twin pregnancy (2 live births) = G1 P1*

# Gravidity VS Parity

Gravidity: Total number of pregnancies regardless of outcome

Parity: Total number of pregnancies carried over viability threshold (24 weeks in the UK)

## EXAMPLES:

- *Currently pregnant + 2 previous deliveries = G3P2*
- *Not pregnant + 1 previous delivery = G1P1*
- *Currently pregnant + 1 delivery + 1 miscarriage = G3  
P1+1*
- *Not pregnant + 1 live birth + 1 stillbirth = G2P2*
- *Not pregnant + previous twin pregnancy (2 live births) =  
G1P1*

# Skill 1- Urinalysis

- Check expiry date of pregnancy stick
- Hold for 10 seconds in urine!



# Skill 2- Pregnancy Dating/EDD

*First day of last menstrual period (LMP) + 40 weeks or 280 days*

OR

*Subtract 3 months from LMP and then + 1 year & 7 days*

# Pregnancy Dating EXAMPLE

- Count 40 weeks from 1st Feb 2024

OR

- If LMP was 1<sup>st</sup> February 2024
- Subtract 3 months = 1<sup>st</sup> November
- Add 1 year & 7 days = 7<sup>th</sup> November

Due date = 7<sup>th</sup> November 2024



# Pregnancy Dating YOUR GO!

- If LMP was 16<sup>th</sup> April 2024
- Due date?

**21st January 2025**

# Pregnancy Dating YOUR GO!

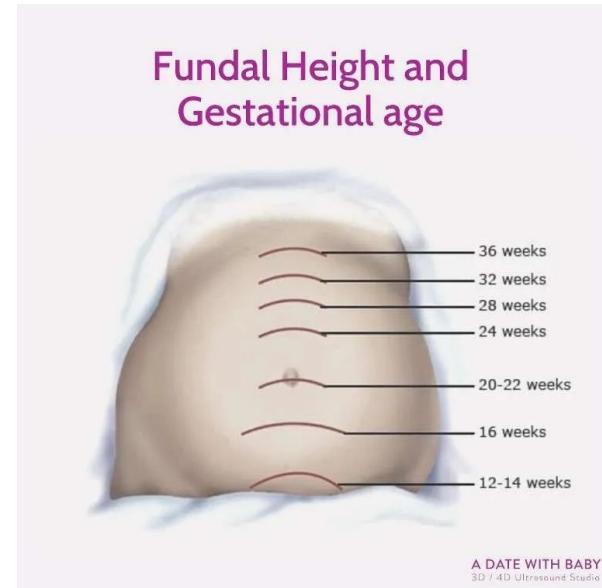
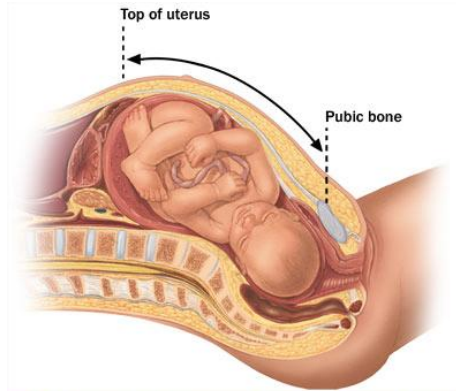
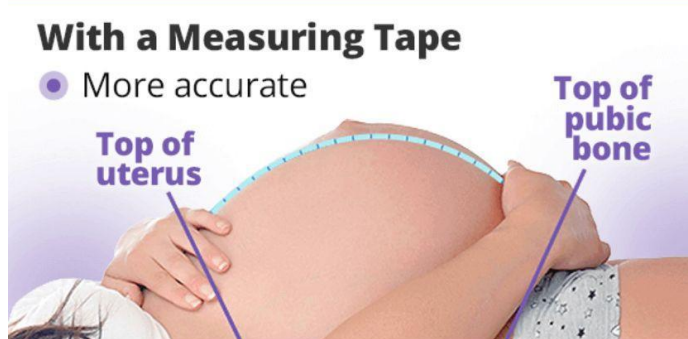
- If LMP was 4<sup>th</sup> June 2024
- Due date?

**11<sup>th</sup> March 2025**



# Skill 3-Fundal Height

- From the top of their symphysis pubis (pubic bone) to their uterus (fundus)
- Place measuring tape FACE DOWN



# Questions?

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# Section 2- Pediatrics

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# Skill 1- WHO Growth Charts



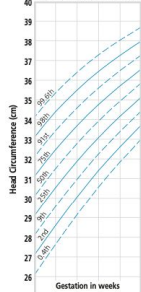
- 2 main types of charts: one for 0-4yo and 2-18yo
- Other charts available for Down Syndrome & those requiring close monitoring
- Female chart: **Pink**
- Male chart: **Blue**
- Plot as a **SINGLE BLACK DOT!**
- Overweight : BMI above the 85th percentile
- Obese: above the 95th percentile

**NOTE:** It's normal for infants to lose up to 10% of their body weight in the first 3-4 days of life, this should return within 3 weeks  if not= REFER TO PAEDS

<https://www.rcpch.ac.uk/resources/growth-charts>

### Preterm

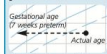
#### Birth Head Circumference



#### Plotting preterm infants

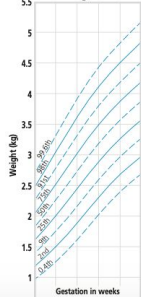
Use the **low birthweight chart** for infants less than 52 weeks gestation and any other infants requiring detailed assessment.

Use **this section** for infants of less than 37 weeks gestation. As with term infants there may be some weight loss in the early days. From 42 weeks, plot on the **0-1 year chart** with gestational correction.



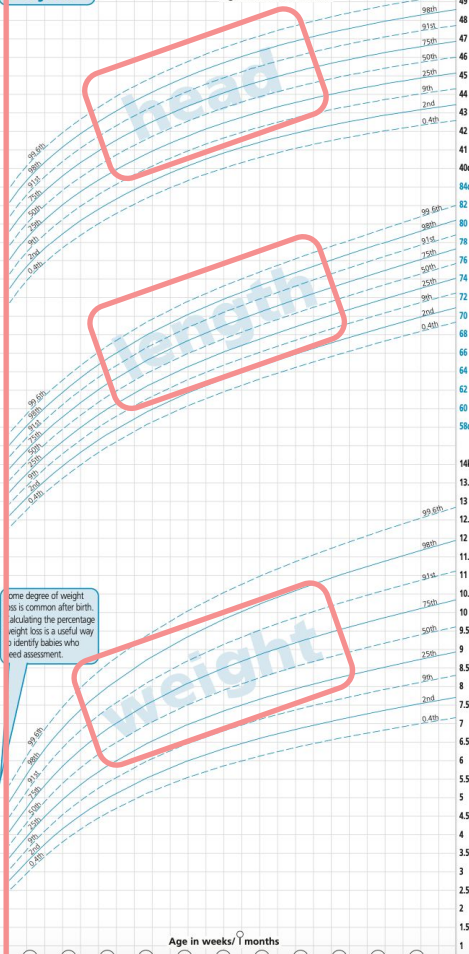
**Gestational correction**  
Plot actual age then draw a line back the number of weeks the infant was preterm and mark the spot with an arrow; this is the gestationally corrected centile.

#### Birth Weight



### BOYS -1 year

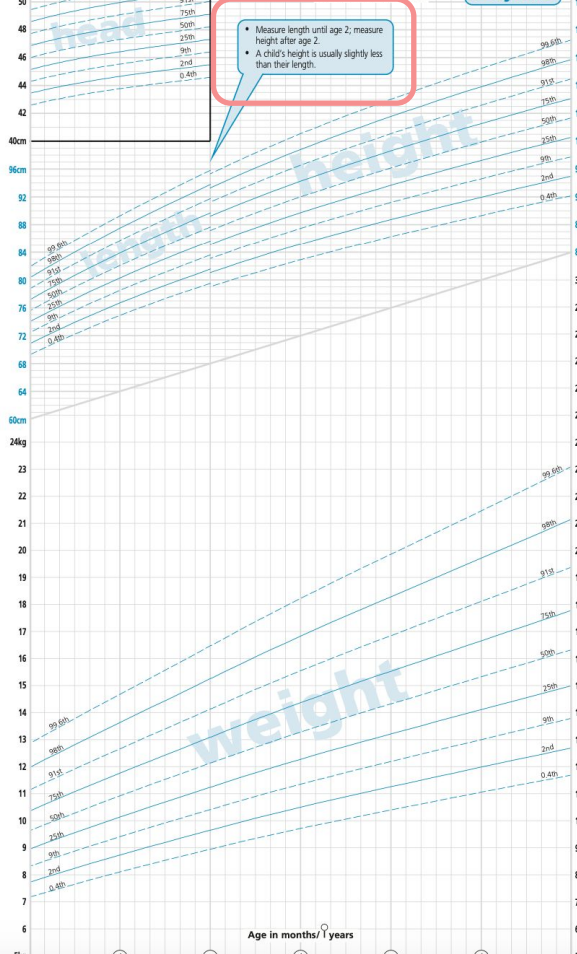
Age in weeks/0 months



Some degree of weight loss is common after birth, calculating the percentage weight loss is a useful way to identify babies who need assessment.

### BOYS 1-4 years

Age in months/0 years



• Measure length until age 2; measure height after age 2.  
• A child's height is usually slightly less than their length.

### Adult Height Prediction



Plot child's height centile on the blue lines above; the black numbers show average male adult height for this centile. 80% of children will be within ±6 cm of this value.

Data Recording	
Birth Measurement	
Recording Date	Weight
Head Circumference	Length/Height
Location	Health worker name
Measurement 2	
Recording Date	Weight
Head Circumference	Length/Height
Location	Health worker name
Measurement 3	
Recording Date	Weight
Head Circumference	Length/Height
Location	Health worker name
Measurement 4	
Recording Date	Weight
Head Circumference	Length/Height
Location	Health worker name
Measurement 5	
Recording Date	Weight
Head Circumference	Length/Height
Location	Health worker name
Measurement 6	
Recording Date	Weight
Head Circumference	Length/Height
Location	Health worker name
Measurement 7	
Recording Date	Weight
Head Circumference	Length/Height
Location	Health worker name
Measurement 8	
Recording Date	Weight
Head Circumference	Length/Height
Location	Health worker name
Measurement 9	
Recording Date	Weight
Head Circumference	Length/Height
Location	Health worker name
Measurement 10	
Recording Date	Weight
Head Circumference	Length/Height
Location	Health worker name

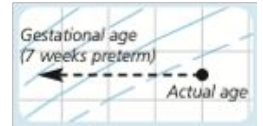


# Pre-term babies!



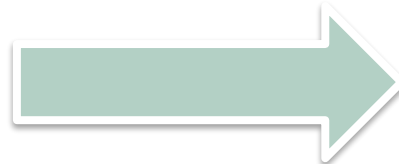
**Plotting pre-terms:** Draw a line back the number of weeks preterm and mark with an arrow (Dot = actual age / Arrow = gestational age)

- Continue drawing the arrow (GA) until at least 1 year of age.



Once a preterm baby has reached an age of EDD plus two weeks measurements can no longer be plotted on the “preterm” section of the chart.

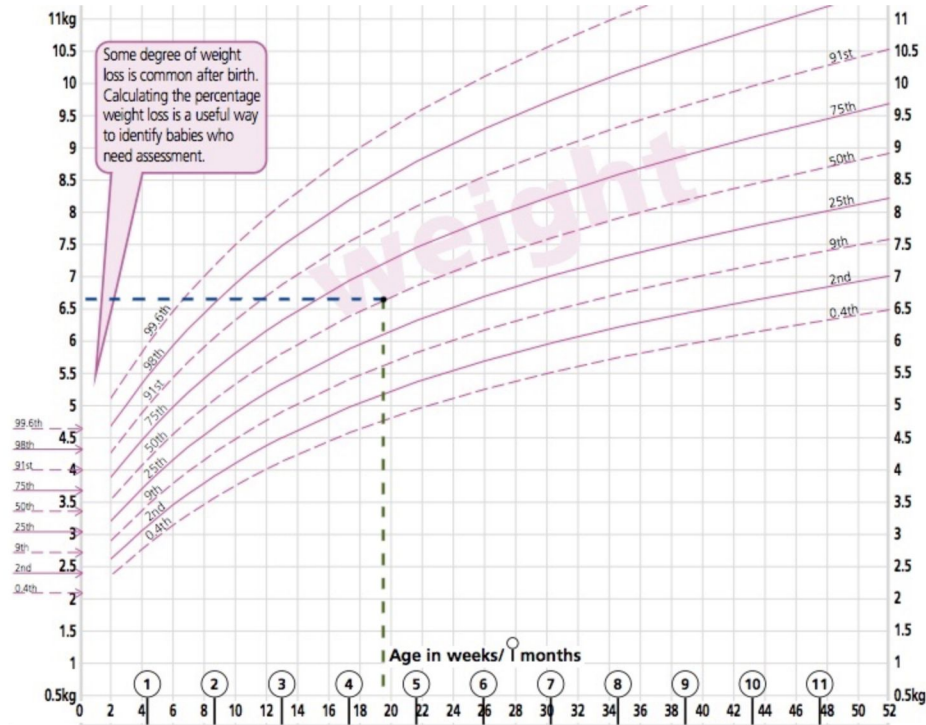
- Plot on 0-1 chart after this using their corrected gestational age!



# Growth Chart EXAMPLE

Plot a 4.5 month old girl that is 6.7kg:

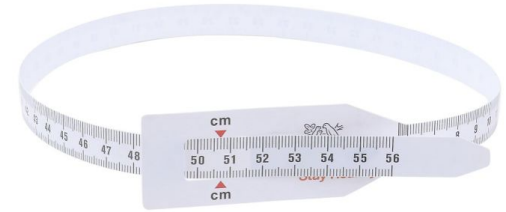
What percentile is this girl on?



<https://geeky-medics.com/paediatric-growth-chart-documentation-osce-guide/>

# Skill 2- Measuring Head Circumference

- *Wrap around the widest head circumference*
- *Measure 3 times*
- *Record/plot the largest number to the mm*



***Lasso-O measuring tape***



**Baby with Typical Head Size**

**Baby with Microcephaly**

**Baby with Severe Microcephaly**

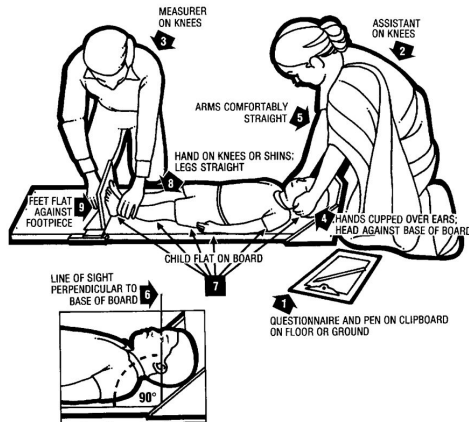
- Use a measuring tape that cannot be stretched
- Securely wrap the tape around the widest possible circumference of the head
  - » Broadest part of the forehead above eyebrow
  - » Above the ears
  - » Most prominent part of the back of the head
- Take the measurement three times and select the largest measurement to the nearest 0.1 cm
- Head circumference measurements should be taken on the first day of life because commonly-used birth head circumference reference charts by age and sex are based on measurements taken before 24 hours of age



# Skill 3- Measuring height or length

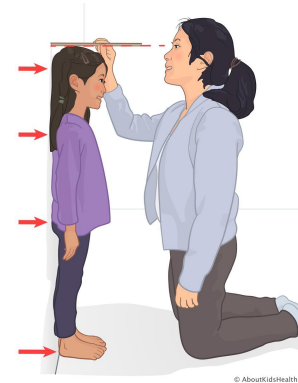
<2 Years Old

- Length measurement
- Remove bulky clothing
- Lie flat
- Measure top of head to soles of feet



>2 Years Old

- Height measurement
- Back of their head, shoulder blades, buttocks, and heels should be against the vertical wall
- Child to look straight ahead



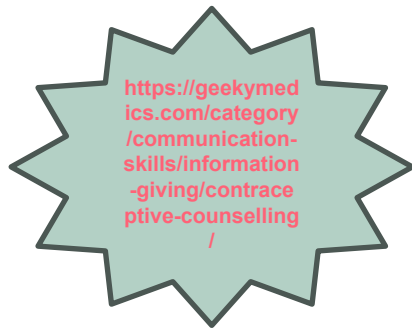
# Questions?

# HUMAN DEVELOPEMNT

## THE COMMUNICATION STATION

# Potential communication stations

- Contraception counselling
- Milestones / Growth
- Booking scans
- Explaining procedures e.g. an ultrasound
- Vaccines



# Structure

*NOTE: Structure varies slightly depending on station content*

- Introductions
  - Explain purpose of consultation
  - **ICE !!!**
  - Get a background of events leading up to this current consultation/ decision/ diagnosis
  - Check patients' prior knowledge of the subject
  - Give the information in chunks & check understanding throughout
    - Define
    - Give benefits
    - Give risks
  - Ask for Qs
  - Thanks & offer leaflet/resources
- ✘ AVOID jargon
- ✓ Patient should be doing most of the talking in a comms station !

# OSCE Station Practice- 8 mins

## VIGNETTE

You are a medical student undertaking placement in GP.

A 17-year-old female has presented to the GP requesting emergency contraception after recently having unprotected sexual intercourse. Please elicit a focussed history and answer any questions the patient may have.



# Station Cheat Sheet ;)

- Emergency contraception available:
  1. Copper coil
  2. Ellaone (Ulipristal acetate (UPA) 30mg tablet)
  3. Levonelle (Levonorgestrel (LNG) 1.5mg tablet)
- Coil  Inhibits fertilisation & implantation= insert within 5 days
  - Most effective !
  - Can be left for 5-10 years
  - May make periods longer or heavier
  - Small pelvic infection risk
  - Needs to be inserted in GP or sexual health clinic  possible pain on insertion
- Ellaone  Can be given within 5 days
- Levonelle  Must be given within 3 days
  - Quick & easy (pill)
  - More readily available
  - Not as effective in those with BMI >26



# Emergency Contraception learning points

- Offer confidentiality
- Check safeguarding  Consent? sharing images online?
- Check STI status  Regular partner? Last STI screen?
- Previous & current contraception use  Using condoms? Using coil? Using both?
- All emergency contraception patients must do a pregnancy test 3 weeks post use
- Are they breastfeeding?
  - Copper IUD  safe
  - LNG  do not breastfeed straight after taking
  - UPA  Wait one week after taking before breastfeeding
- Offer long term contraception

# Emergency Contraception Counselling - Mark Scheme

OPENING THE CONSULTATION	
1	Introduce yourself
2	Confirm patient details
3	Check the patient's understanding of the types of emergency contraception available
4	Explore the reasons why the patient wants emergency contraception (including ideas, concerns, expectations)
EXPLANATION	
5	Explain when emergency contraception can be used
6	Explain where emergency contraception can be accessed from (for future reference)
7	Explain that there are 3 types of emergency contraception available (EllaOne, Copper IUD, Levonorgestrel)
8	Explain the advantages of each (or the advantages of the one the patient wants)
9	Explain the disadvantages of each (or the disadvantages of the one the patient wants)
10	Explain the risks associated with each type of emergency contraception
FOLLOW-UP	
11	Explain the need to take a pregnancy test if; the patient feels like they are pregnant, the patient has not had a period within three weeks of having emergency contraception or if a hormonal method of contraception was started soon after using emergency contraception.
12	Explain how the patient's regular contraception should be taken after the emergency contraception (if relevant). If this patient is not on contraception, advise the patient to consider long term contraception options.
CLOSING THE CONSULTATION	
13	Ask if patient has any further questions
14	Check understanding
15	Summarise key points
16	Provide leaflet
17	Thank patient
KEY COMMUNICATION SKILLS	
18	Active listening
19	Summarising
20	Signposting



**GEEKY MEDICS**  
geekymedics.com

Method	Contraindications	How it works	Treatment course	Side effects/risks/effect on cycle	Positives vs. negatives	Comments
<b>Combined oral contraceptive pill</b> <i>2<sup>nd</sup> gen (Microgynon, Rigevidon), 3<sup>rd</sup> gen (Marvelon, Yasmin, Cilest), 4<sup>th</sup> gen (Qlaira)</i> <b>Combined contraceptive patch</b> <i>Evrä</i> <b>Combined contraceptive vaginal ring</b> <i>NuvaRing</i> <i>&gt;99% effectiveness</i>	Age >50, smoker >35 years, BMI >35, migraine with aura, <21 days postpartum, breast feeding, multiple cardiovascular risks/vascular disease, hypertension, current or past VTE Hx, breast cancer, acute/severe liver disease, enzyme-inducing medications, SLE, AF	<ul style="list-style-type: none"> <li>•Stops ovulation</li> <li>•cervical mucus (i.e. a mechanical barrier to sperm)</li> <li>•Thins endothelium (i.e. reduces chance of implantation)</li> </ul>	Standard: 21 days COCP; 7 days off Shortened: 21 days COCP, 4 days off Extended use: 9 weeks COCP, 4 or 7 days off Flexible extended: continuous COCP then 4 days off when bleed occurs Continuous: COCP	Oestrogen and progesterone SEs* Blood clots Increased risk of breast/cervical cancer Periods may become lighter Patch Local irritation from the patch Ring Pain from the ring during intercourse-can be removed if uncomfortable but only for a maximum of 3 hours	+ controls periods, bleeding and pain + reduced risk of endometrial and ovarian cancer	<ul style="list-style-type: none"> <li>•Start on day 1 of cycle for immediate effect</li> <li>•MISSED PILL → take ASAP (even with next one). If next taken on time, it's fine. If two missed, take one pill immediately and use condoms for 7 days. Further management depends on week:  <i>1<sup>st</sup> week of packet:</i> will need emergency contraception if had sex in pill-free interval or <i>1<sup>st</sup> week of pill packet</i>  <i>2<sup>nd</sup> week:</i> no action  <i>3<sup>rd</sup> week:</i> omit the pill-free week</li> <li>•Use barrier contraception if: having D&amp;V (+7 days after); taking enzyme-inducing drugs (+28 days after stopping)</li> </ul>
<b>Progesterone only pill 'Mini pill'</b> Traditional: <i>Norgeston, Noriday</i> Desogestrel: <i>Cerazette, Cerelle</i> <i>99% effectiveness</i>	Breast cancer, undiagnosed PV bleeding, severe decompensated liver cirrhosis, severe arterial disease	<ul style="list-style-type: none"> <li>•↑cervical mucus</li> <li>•Thins endothelium</li> <li>•Desogestrel progesterone-only pill can also stop ovulation</li> </ul>	Take daily at same time (no breaks)	Progesterone SEs* Periods may stop/become irregular	- must remember to take at an exact time	<ul style="list-style-type: none"> <li>•Start on day 1 of cycle</li> <li>•Must be taken at same time each day</li> <li>•MISSED PILL → take ASAP (even with next one). But if &gt;3 hours late for traditional POP (or &gt;12 hours late for desogestrel POP), use condoms for 2 days, and consider emergency contraception if had sex in the 2-3 days before missed pill, or had sex since the missed pill.</li> </ul>
<b>Intra-uterine device (IUD) Copper coil</b> <i>&gt;99% effectiveness</i>	Pelvic infection, pelvic inflammatory disease <3months ago, gynaecological cancer, small uterine cavity, undiagnosed PV bleeding, fibroids that distort the uterine cavity, long QT, copper allergy (for IUD), ischaemic heart disease (IUS)	Copper acts as spermicide and also causes intra-uterine inflammation	5-10 years	Coil insertion risks* Periods may be heavier Small increase in risk of ectopic pregnancy if become pregnant on it	+ don't need to remember to take pills or go back regularly - heavy periods	<ul style="list-style-type: none"> <li>•Check for string monthly</li> <li>•STI check before inserting</li> <li>•Can insert any time if not had sex since period, or within first 5 days of start of period</li> <li>•If fitted &gt;40 years (IUD)/&gt;45 years (IUS), can stay in place until menopause and IUS may be used as progesterone component of HRT</li> </ul>
<b>Intra-uterine system (IUS) Mirena or Jaydess for younger women</b> <i>&gt;99% effectiveness</i>		<ul style="list-style-type: none"> <li>•Stops ovulation</li> <li>•cervical mucus</li> <li>•Thins endothelium</li> </ul>	Lasts for 5 years (3 years for Jaydess)	Coil insertion risks* Spotting in first 6months then periods may become lighter/stop in some women Small increase in risk of ectopic pregnancy if become pregnant on it	+ don't need to remember to take pills or go back regularly + reduces dysmenorrhoea/ menorrhagia - Some continue to have unpredictable spotting	
<b>Progesterone implant Nexplanon</b> <i>&gt;99% effectiveness</i>	Liver/genital/breast cancer, severe decompensated liver cirrhosis, undiagnosed PV bleeding, on enzyme-inducers (implant only), ischaemic heart disease		Lasts for 3 years	Progesterone SEs* Insertion risks (bruising, infection, scarring, nerve/vessel damage) Periods may become infrequent/prolonged/stop (1/3 each)	+ don't need to remember to take pills or go back regularly - some continue to have unpredictable spotting	<ul style="list-style-type: none"> <li>•Placed under skin of inner upper arm (4cm long) under local anaesthetic</li> <li>•Can feel it</li> </ul>
<b>Progesterone injection Depo-Provera</b> <i>&gt;99% effectiveness</i>			Lasts for 3 months	Progesterone SEs* Periods may stop (most)/become irregular/last longer Fertility may be slow to return Osteoporosis risk (avoid long term use)	- must remember to come back every 3 months - fertility may be slow to return - cannot remove once administered (despite SEs)	
<b>Vasectomy 1 in 2000 fail</b>	May consider children in future	Vas deferens cut and tied via forceps through skin or 2 x 1cm cuts in scrotum. Local anaesthetic. Takes 20 mins.	Single operation	Failure (1 in 2000), bleeding/bruising, infection Swollen scrotum for a few days Sperm granulomas may form if leaks occur Chronic testicular pain (1-3%)	+ long term - consider as irreversible (50%) - surgical risks	<ul style="list-style-type: none"> <li>•Can take up to 3 months for remaining sperm to be used up so sperm samples are required at 16 weeks and 20 weeks post-vasectomy (both must be -ve prior to having unprotected sex)</li> <li>•Can have sex with a condom while awaiting sperm sample results</li> </ul>
<b>Tubal ligation 1 in 200 fail</b>		Fallopian tubes clipped laparoscopically under general anaesthetic	Single operation	Anaesthetic risk, failure (1 in 200), bleeding/bruising, infection		
<b>Condom 98% effectiveness</b>	Allergy to ingredients (latex-free are available)	Physical barrier	New condom every act of intercourse	Small risk of allergy May slip off/break	+ stops STI transmission - interrupts sex	<ul style="list-style-type: none"> <li>•Only method which stops STI transmission</li> <li>•Oil-based products damage latex</li> </ul>

\*Oestrogen SEs: menorrhagia, ectropion, breast fullness, migraines, fluid retention, tiredness, nausea

\*Progesterone SEs: scanty menses, breast tenderness, dull headache, premenstrual tension, acne, greasy hair, vaginal dryness, low mood

\*Coil insertion risks: infection in first 3 weeks, bleeding, perforation 1 in 1000, expulsion 5%, vasovagal 1 in 10

# Questions?

# Top tips !

- ★ Remember to breathe
- ★ READ THE VIGNETTE CAREFULLY
- ★ Plan your response during the 2 minutes outside
- ★ Read NHS websites during revision → delivers information in a patient friendly manner
- ★ Let the patient guide you – especially during communication stations (Explain + Explore!)
- ★ If you're unsure → refer to seniors

How confident are we feeling  
about the human development  
station in OSCEs now?





**NEXT SESSION:** ECG Interpretation,  
Friday 12<sup>th</sup> April, 6pm



[https://docs.google.com/forms/d/1\\_s4wqL5qTUU4HICRE5VM6huChwIA-GsYUlp362VBKf4/viewform?edit\\_requested=true](https://docs.google.com/forms/d/1_s4wqL5qTUU4HICRE5VM6huChwIA-GsYUlp362VBKf4/viewform?edit_requested=true)

**Contact:**

tanzim.shahid@kcl.ac.uk

[msa@kcl.ac.uk](mailto:msa@kcl.ac.uk)

**GKT MSA:**

<https://www.gktmsa.org/>

Instagram: @gktmsa

Facebook: [www.facebook.com/gktmsa](https://www.facebook.com/gktmsa)

Tik Tok: @gktmedics

Twitter: @gktmsa

**Thank  
you**