LIVING WITH THE FEMALE CYCLE

Challenges and opportunities

About the team and me

- Physiotherapist (B.Sc.)
- Dance teacher (BA) (currently studying in Finland)
- The university women's representatives







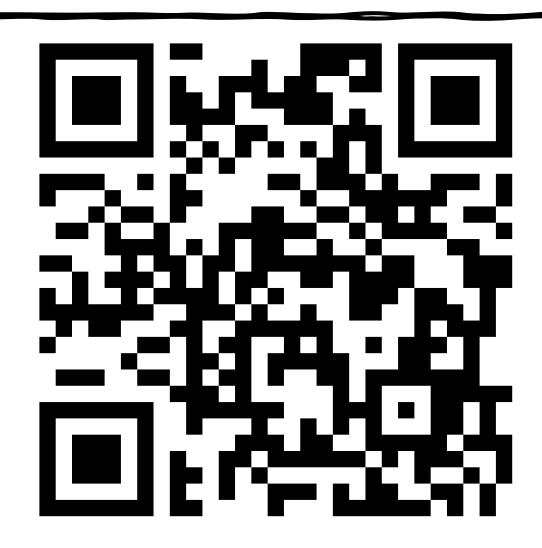




O Sarah Andersen

Image 1: Cartoon Sarah Andersen

Our communication about our cycle



How well informed do you feel about the female cycle?

Not at all

I read/learned something about it

Theoretically I know something, but I can't apply it to myself

Very good

How well do you know your own cycle?

Not at all

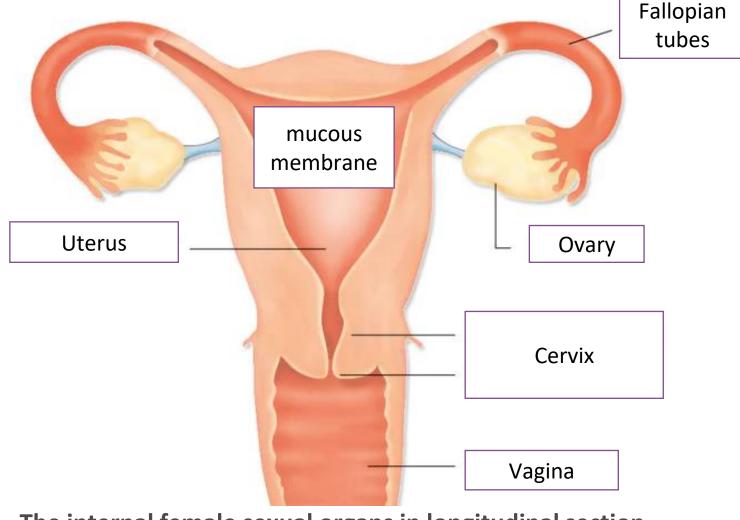
Well, either I have my period or not

All mood swings are definitely hormonal

Very good

Female anatomy

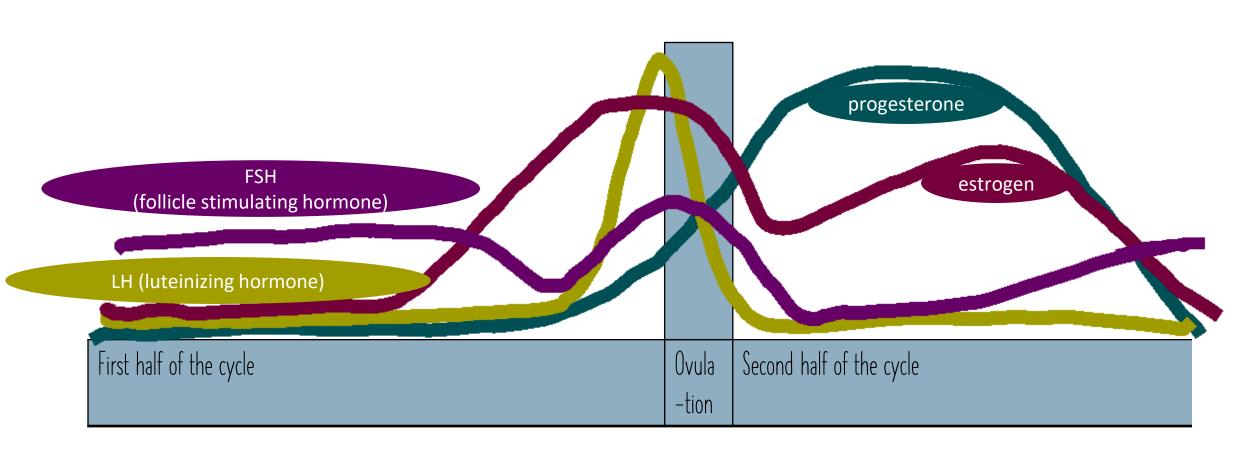
- →Implantation of a fertilized egg into the mucous membrane
- → Fallopian tube = place of fertilization of the egg
- →Egg cells in the ovary
 - = follicles (before
 ovulation)



The internal female sexual organs in longitudinal section © W&B/Dr. Ulrike Möhle

Image 2: female sexual organs

Hormonal cycle



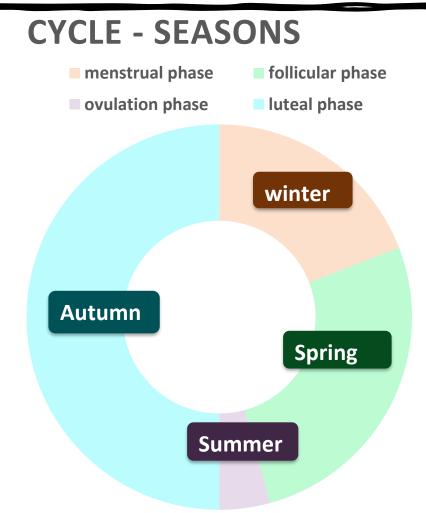
(Cyclotest, 2023a & Einhorn, 2019)

The cycle

CYCLE PHASES

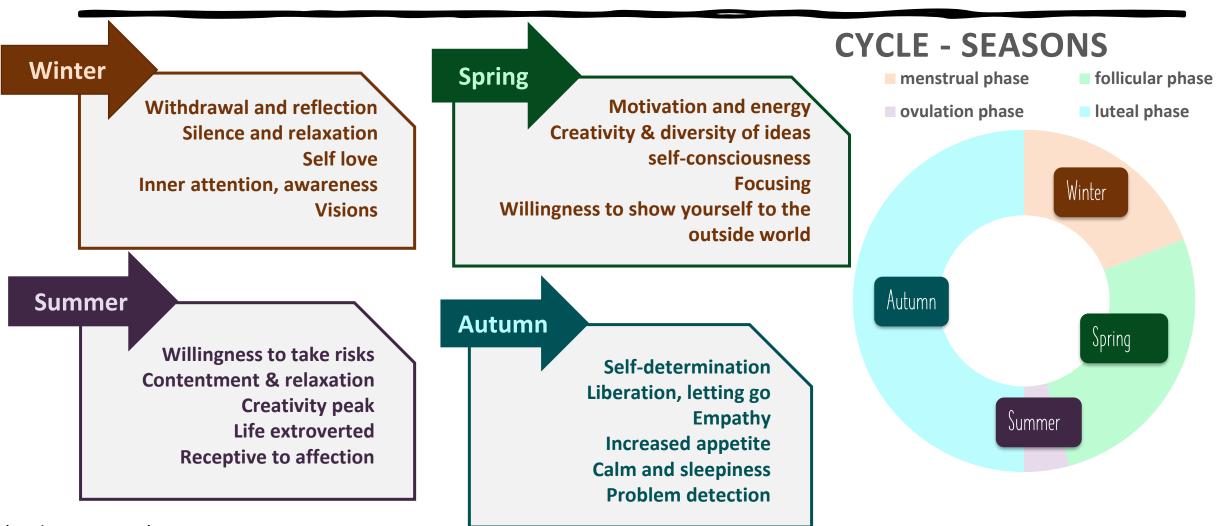
- Menstrual phase
- Follicular phase
- **Ovulation phase**
- Luteal phase

(Fischer, 2021; Kopf & Dr. med. Osthoff, 2021)



- Not clearly defined, blurry transitions!
- Cycles are everywhere in nature
- In the past (without artificial light) the cycle may have been influenced by moon phases:
 - Full moon = ovulation
 - New moon = menstruation

The seasons of the cycle



(Einhorn, 2019)

Use of the seasons



Regeneration, healing, reflection, journaling, walking, yoga,...



Social contacts, fun, sport,...



Salary discussions, Negotiations, job interviews, giving lectures, problem-oriented work, sport, sex, fun,...



Sleep, giving up habits, tidying up and clearing things out, finishing projects, creative activities (singing, dancing, painting), meditation, becoming aware of your own problems (physical and mental),...

What happens in the phases? Here laid out on a 28 day cycle

Menstrual phase (day 1-6)

- The top layer of the uterine lining sheds / disolves.
- The period begins.

Follicular phase (day 6-13)

- Estrogen production
- Egg cells mature
- **Progesterone** is produced
- Mucous membrane
 / lining in the
 uterus is built up

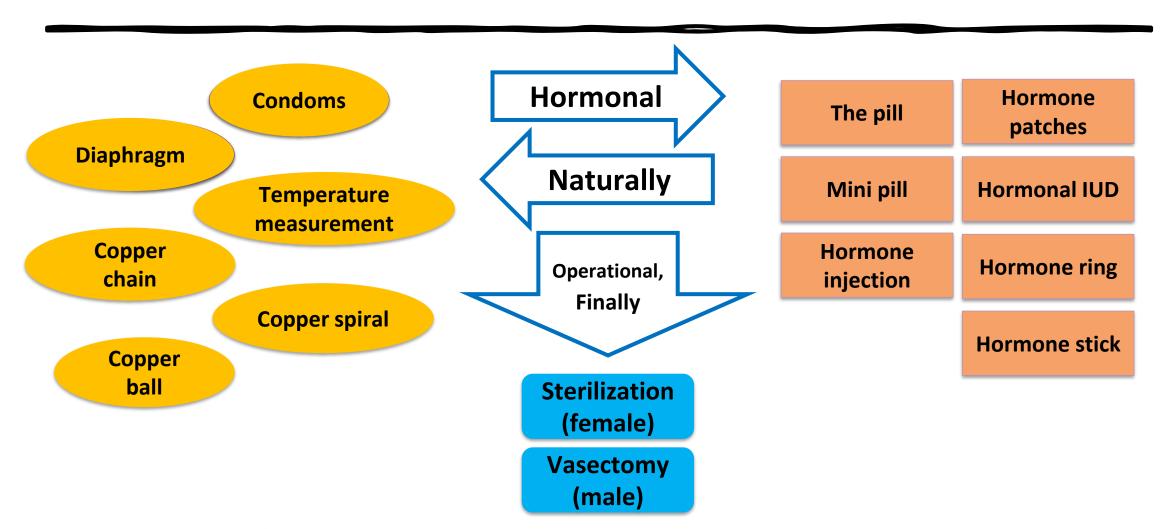
Ovulation phase (approx. 14th day) \rightarrow 12-14 before

- Ovulation (due to the luteinizing hormone triggered)
- Path of the egg into the uterus
- More fluid cervical mucus (permeability for sperm)

Luteal phase (day 15-28)

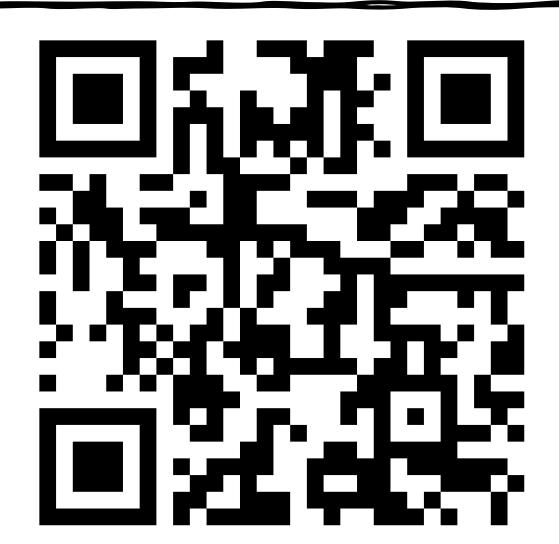
- Production of progesterone by the corpus luteum
- Uterine lining reaches maximum
- Without fertilization: signal to shed the uterine lining

How do you use contraception?

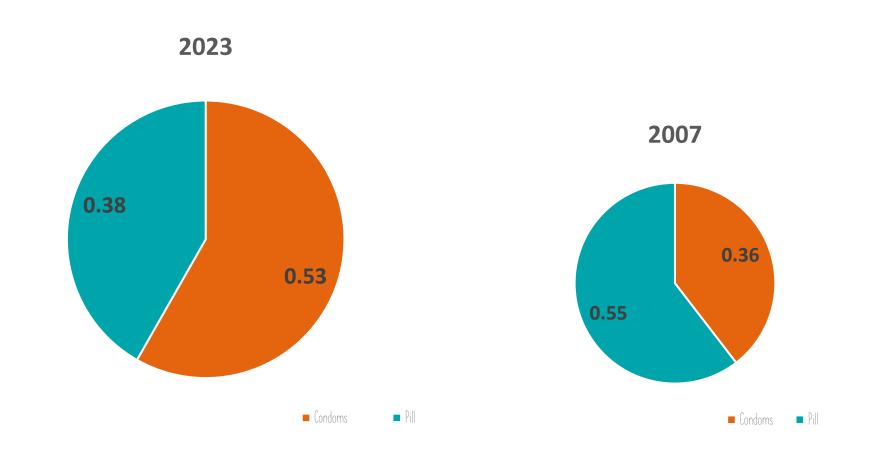


(Gesundheitsmagazin, 2022)

How do you use contraception?



Condom replaces pill as number one contraceptive



What happens with hormonal contraception?

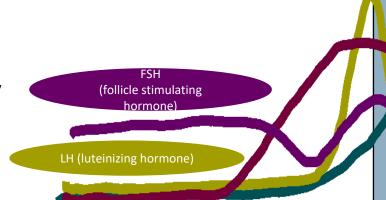
Depending on the composition of the pill preparations, different mechanisms are caused:

• Gestagen (synthesized progesterone) is administered

→ cervical mucus is thickened and the cervix becomes impermeable to germs and sperm

ovulation is prevented

- Estrogen is supplied
 - → maturation of a new egg becomes unlikely



progester

estrog

Apparent "cycle" because stopping the pill causes a so called withdrawal bleeding

What is bleeding when taking the pill / hormonal contraception?

- Hormone intake
 - → Inhibits hormone production, ovulation and egg maturation are hindered & but the mucous membrane is still built up (the body is permanently in the second half of the cycle and does not go through a real cycle)
- Taking a break from hormone intake = lowers the hormone level
 - → signal for mucous membrane shutting / disolving

Bleeding begins

Reason: Hormone levels drop (no ovulation or unfertilized egg)

Hormone withdrawal bleeding / withdrawal bleeding

Stopping hormonal contraception?

Side effects, especially with on-off contraception, can be dangerous

Always in consultation with a doctor

Pregnancy is usually possible straight away – consider other forms of contraception

- → Hormones from the pill can remain for up to 6 weeks
- → If you want to become pregnant, wait for the first full cycle and the first regular bleeding

(possible complications during pregnancy due to insufficient mucous membrane development)

- → This may vary with other hormonal contraceptives (e.g. hormone injections)
 - → Cycle Awareness: Ovulation occurs 14 days before menstruation

Side effects are normal in the first period:

headaches, cramps, intermenstrual bleeding, hair loss, low mood, irritability, impure skin

(Frauenärzte im Netz, 2022; Köhle, 2023)

Comparison of hormonal & nonhormonal contraceptives

Benefits of hormonal contraception		Benefits of natural contraception	
 → Safest contraceptives (if → Intake errors are lower of medication → Regulated cycle → Fewer menstrual disord → Reduced risk of cancer if and ovaries → Lower risk of fallopian to an eduction → Pain reduction → Improved skin appearance 	depending on the ers n the endometrium ube infections	 → Fewer to no side effects → No hormonal weight fluctuations → Knowledge about your own body and its cyclical symptoms → No influence on later desire to have children → Real cycle present → fertility → Condoms protect against sexually transmitted diseases 	
→ Effect against PMS	Why is weighing up the benefits important to us?		

→ Our quality of life depends on it!

Signs & Symptoms During a Cycle

MENSTRUAL PHASE	FOLLICULAR PHASE	OVULATION PHASE	LUTEAL PHASE	
 Pain in the abdomen due to the contraction of the uterus Radiation of pain to the back Dizziness Nausea Headaches, migraine-like symptoms Nausea, nausea, diarrhea Feeling of tension in the breasts 	 Little research in this area Few complaints Feeling of well-being very common 	 Short stabbing/pulling pain in the abdomen Soft cervix Increased basal temperature (up to 0.6°C) Spinnability of cervical mucus Possibly short bleeding Feeling of tension in the breasts Increased libido 	 PMS symptoms: Feelings of tension in the breasts and abdomen Headache, back, joint or muscle pain Water retention Sleep or digestive problems Skin impurity Cravings for food Tendency to edema 	
Symptoms can yary a lot from norson to norson and transitions can				

Symptoms can vary a lot from person to person and transitions can become blurred!

PMS - Premenstrual Syndrome

Physical Symptoms

Psychic Symptoms

Abdominal pain

Headache

Tight and painful breasts

Impure skin

Cravings

Weight gain through

water retention

Digestive problems

Dizziness/circulatory problems

Back pain

Irritability

Difficulties to

concentrate

Low self-esteem

Aggressions

Anxiety

Crying fits

Depression

Signs & Symptoms During a Cycle

WHY ARE SIGNS SO IMPORTANT FOR US?

Mindfulness

What do these hormones mean for us?

Signs that show what we are able to achieve

Signs that tell us to take time for ourselves.

Fertility
→ Ability to reproduce

What can I do on my own?



Sleep



Sports



Nutrition



Working environment New opportunities, communication



Self-planning



Other

INDIVIDUAL

SLEEP

Sleeping disorders caused by the drop in progesterone (sleep-promoting).



Fixed times for falling asleep and waking up, eating and doing activities



Relaxation exercises and rituals



Activating sport (at least 4 hours before going to bed)



Evening walk,
progressive
muscle
relaxation, yoga,
breathing
exercises

SPORTS

- *Estrogen* anabolic (building) effect shortly before ovulation: protection of the blood vessels, reduction of bone loss, activation of the parasympathetic nervous system (relaxation throughout the body), storage of water and fat
- **Progesterone** catabolic (degrading) effect 2nd half of the cycle: activation of the sympathetic nervous system (tension throughout the body is increased), increase in body temperature
- The interaction between the two hormones varies from individual to individual.
- ① Cardiovascular activity can have a positive effect on mood, endorphins, anxiety, depression and menstrual pain

SPORTS

Natural cycle

instability and exhaustion)

- -First half of the cycle: maximum strength training is better -Mid-cycle (ovulation): greater stretchability and elasticity of the ligaments and tendons (increased risk of injury due to
- -Second half of the cycle: possibly poorer adaptation to the environment, reduced maximum endurance performance, recommendation of stabilization of new training stimuli and more recovery

Hormonal contraception (pill)

→ might result in slightly inferior exercise performance on average when compared to naturally menstruating women

Individually very different – requires individual measurement

NUTRITION - General







Nutrition during menstruation

- **Healthy fats** (unsaturated fatty acids) → walnuts, fish, avocado, olive oil, flax seeds,...
- Vitamin A supports hormone processing in the liver → carrots, spinach, kale, pumpkin, sweet potatoes,...
- Avoiding flatulence → steam/boil vegetables, avoid salt
- Magnesium helps against cramps and migraines → Nuts, legumes, sunflower seeds, pumpkin seeds, whole grain foods
- Iron (e.g. in case of iron deficiency due to heavy bleeding) \rightarrow meat, pulses, seeds, kernels,...
- Vitamin C improves iron absorption; coffee and black/green tea can inhibit absorption

Following this diet a week before your period starts is said to be beneficial.

Nutrition during the follicular phase and ovulation

- Probiotic foods for improved processing of hormones in the first half of the cycle
 - → sprouts and fermented foods, sauerkraut, soy sprouts, kimchi, broccoli sprouts

FROM OVULATION

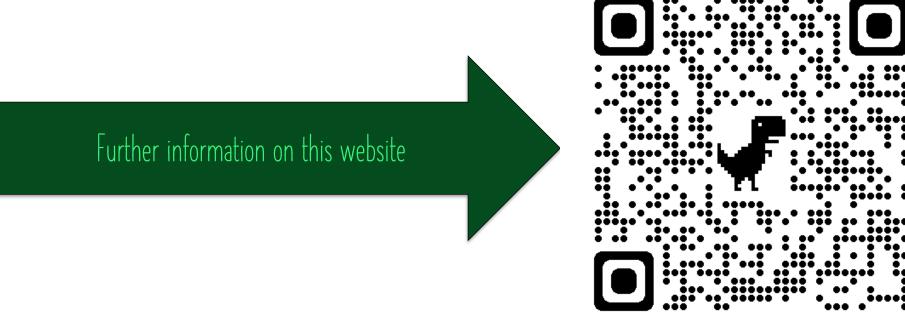
- High-fiber Diet rich in antioxidants and calcium → colorful fruits and vegetables, broccoli, kale, rocket, fennel, poppy seeds, sesame, spices and herbs (highest concentration of antioxidants)
- Avoid red meat and dairy products

Nutrition during the luteal phase

- vitamin B supports the production of serotonin and dopamine and a more positive mood
 oatmeal, rye bread, quinoa, legumes, bananas, green leafy vegetables
- Omega-3 protects against depression and ensures a good mood → lentils, linseed, whole grain pasta, green vegetables
- Avoiding acidic foods → more alkaline diet (fruit and vegetables, nuts, sprouts, seeds)
- Saffron and calcium against PMS symptoms → pumpkin, sesame seeds, almonds, hazelnuts
- Vitamin A for hormonal acne

 carrots, spinach, kale, pumpkin, sweet potatoes
- Monk pepper → Inhibits prolactin release when taken in higher doses
 - → Ready-made preparations are already dosed correctly

Nutrition



https://www.eatbetter.de/ cycle-ernaehrung-das-ist-den-4-phasen-important

Nutrition - diet

Have you ever thought about a diet or gone on a diet?

Does your weight play major role?

Did you know that weight also changes over the course of the female cycle?

Weight fluctuations are normal over the course of the female cycle

- → Hormone fluctuations influence:
- Appetite
- Water retention
- Physical activity

Weight measurement once a month around the same time period might make sense to get reliable numbers.

ENVIRONMENT AND WORK

Spain: 3 (up to 5) sick days per month for menstrual cramps

POSSIBILITIES

Flexible working hours

Rest areas (workplace design)

Open communication

Hygiene products,
office hot water
bottles,
tea, chocolate

Facts:

- 80% of women go to work but are not productive → presenteeism
- The topic is taboo: only 1/5th of women speak openly about the reason for their absence
- Night shift has negative effects on menstruation (risk of endometriosis, irregularities)
- Woman spends more than 2500€ in her life on hygiene products

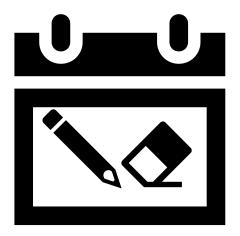
Cycle tracking

Corporate health management→ yoga courses, health days,workshops

Shift planning taking cycles into account

Inclusion → recognizing and respecting

OWN PLANNING



Learn to listen to your own body

→ flexibly adapt your daily schedule to your own needs

AND MORE ...

FEMALE MASTURBATION (taboo topics of sexuality)

stress coping & relaxation strategy

better genital self -image

BENEFITS

higher self-esteem

more sexual pleasure overall

more favorable body image

Considere for yourself again, how you treat yourself and what you can still do.

E.g. time outside in nature

higher emotional

intelligence

(Bakshi, 2021, Kilgore & Layne, 2023)

Everyday life – summary

Everyday working life

→ sick days, taboo
topics, vacation days

Private tensions

circle of friends

Relationship

Self-love

Cycle irregularities

Irregularities are normal and factors such as stress, illness or climate play a role Hormonal system controls the cycle \rightarrow imbalance in hormones leads to irregularities (hormonal contraception)

ALWAYS in case of longer lasting irregularities

Contact a Doctor

Visit the menstrual island once a month

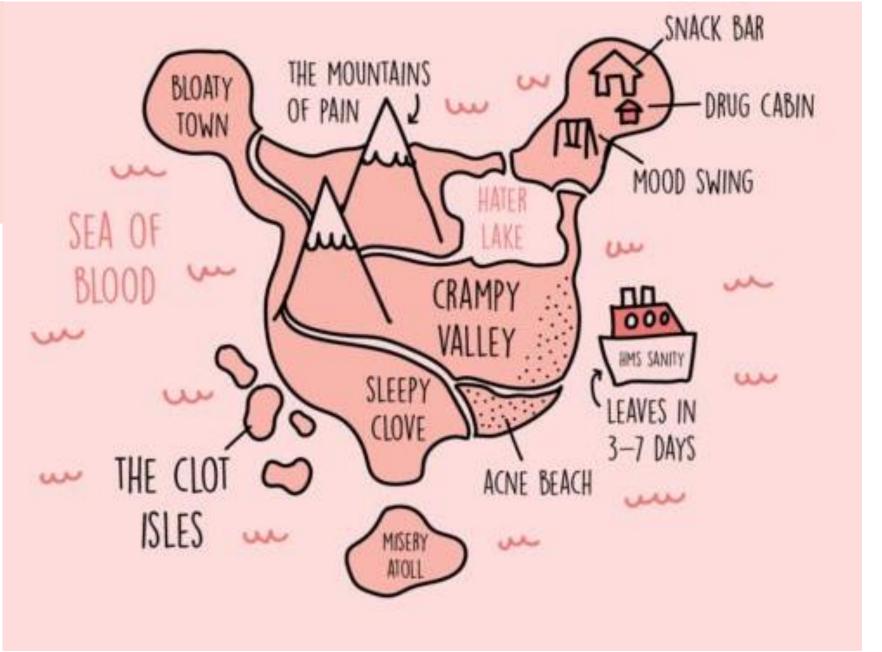


Image 3: menstrual island

How were you educated about the menstrual cycle?

Not at all

By my mother

By my father

By another close relative

By a teacher

By friends

By the internet

By a doctor



Image 5: Stop-sign

Image 6: Guide

Cultural and religious differences

How does your environment deal with your menstrual bleeding?

Christianity	Judaism	Islam	Hinduism	Buddhism
Old Testament: bleeding woman is unclean for 7 days Everything that comes into contact with her must be cleansed	Family purity law → Woman is considered ritually impure during menstruation (not hygienic) → 7 days after the bleeding has ended, the woman may go to the Mikwa (ritual bath) and then have physical contact with her husband again → Code of conduct during the period of impurity	Rules/prohibitions for menstruating women: - No ritual prayers - No ritual fasting (will be made up later) - No sexual intercourse - No touching of the Quraan - No retreat to the mosque Bleeding = "suffering"	Menstruation = unclean Tradition: banish woman from family life (e.g. stable) → Limitation / Exclusion for 3 days → No secular activities or religious activities → Partial refusal of professional religious positions	Also impurity of the menstruating woman, partial devaluation of women → similar to other religions

(Berger, 2013; Bertschinger, 2023; Feld, 2009; Islam-Wissen, 2015; Schulthess, 2021 & Süddeutsche Zeitung, 2017)

Cultural and religious differences

Alleged exception among religions: Sikhism

- → Positive approach in the writings
- → Menstruation = a gift from God
- → Consideration as a biological process
- → Strong condemnation of discrimination against menstruating women

Cultural and religious differences & stigmatization

Antique:

Myths and Beliefs

→ Menstruation always "powerful"

Positive: holiness, well-being

Negative: Dangerous, sign of sin

Religious views

- → Largely negative backgrounds
 - → influencing today's perspective
- → Science at the beginning of the 20th century

Menstruation taboo & stigmatization

Unusual topic of conversation

Today's reactions of the man

Commonly associated feelings

Today's behavior of women (hiding)

Recognition in the world of work Advertisements without blood (blue liquid instead)

Hardly any research in science

Conclusion

Find your own way to feel comfortable and be open about it in your private and public life.

How informed do you feel about your female cycle?

Not at all

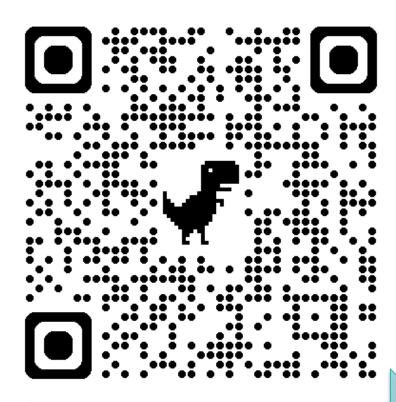
A little better, but still not really enough. Definitely better than before and I feel safer.

Very good

Feedback and slides



Feedback word cloud



QR-Code to our ilearn website for the slides

lmage sources

Image 1: Cartoon Sara Andersen: Accessed from

https://www.watson.ch/imgdb/a78d/Qx,B,0,0,605,917,252,382,100,15 2/862727736236575 on 27/04/24

Picture 2: Female sexual organs: Accessed from

https://www.apotheken-umschau.de/mein-koerper/weiblichegesexorgane/weibliche-gesexorgane-anatomie-708673.html#inneregesexorgane on 27/04/24

Picture 3: Menstrual island: Accessed from

https://www.odoc.life/blog/little-girls-first-period/ on 08/06/24

lmage sources

- Image 4: Hut: Accessed from: https://www.youthkiawaaz.com/2020/06/why-does-hinduism-still-insist-on-impurity-of-menstruation/ on 08.06.24
- Image 5: Stop-sign: Accessed from: https://www.kpbs.org/news/2015/12/12/indian-women-flout-menstrual-taboos-by-saying on 08.06.24
- Image 6: Guide: Accessed from: https://bayanulquran-academy.com/women-in-islam-during-period/ on 08.06.24
- Image 7: Girl in hut: Accessed from:
 https://globalhistorydialogues.org/projects/menstrual-confinement-in-nepal-restrictions-and-taboos/ on 08.06.24
- Image 8: Ritualbath: Accessed from:
 https://www.welt.de/politik/ausland/article135906125/Den-Kopf-unter-Wasser-dem-Himmel-ganz-nah.html#cs-lazy-picture-placeholder-01c4eedaca.png on 08.06.24

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