

Fluid balance and its management

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What is fluid balance?

The balance of fluids within the body- facilitating it to function properly.

The balance of intake and output to maintain homeostasis

What goes in must come out and vice versa.

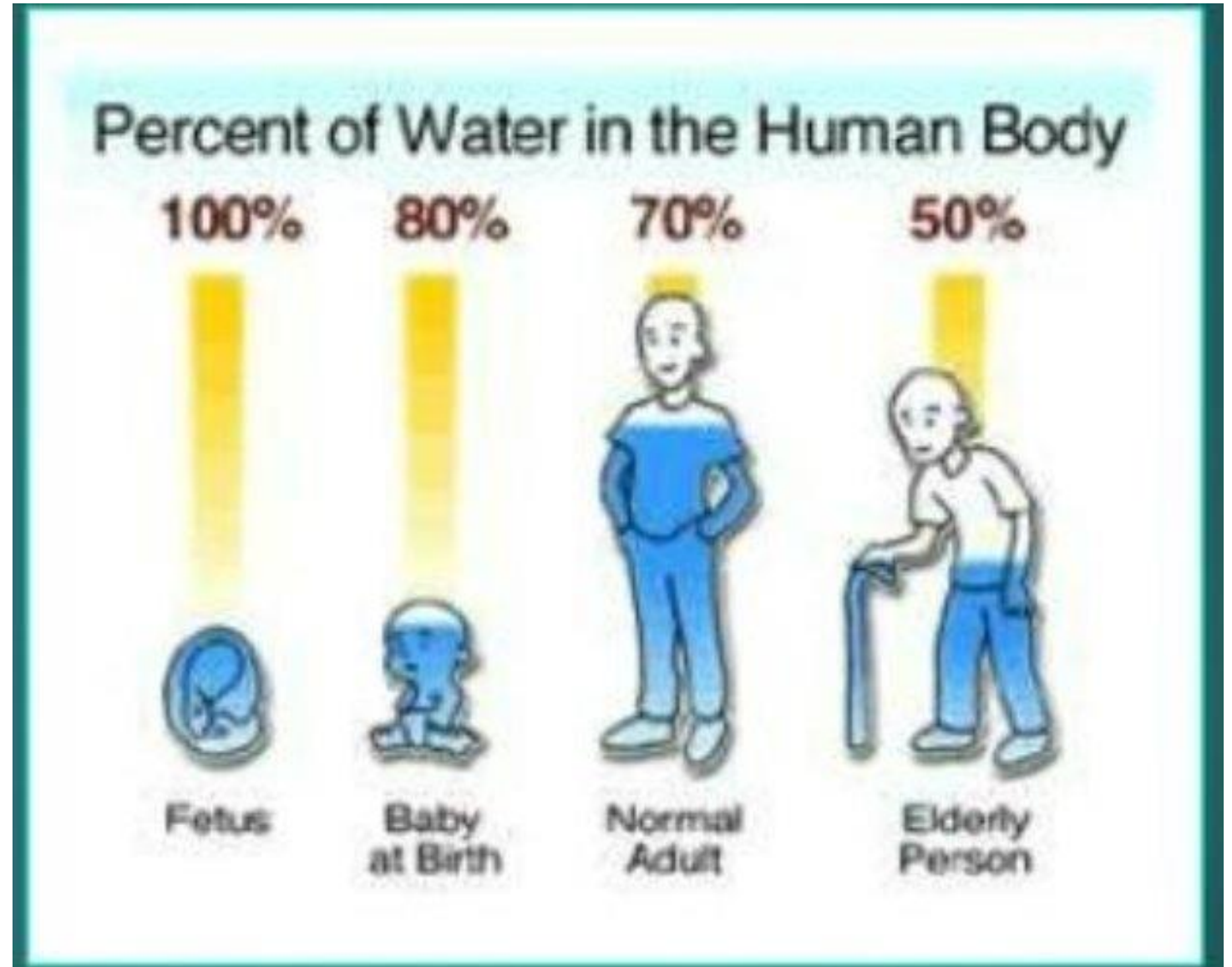


How is fluid distributed in the body?

Age + body mass + body fat = total body water

More in men (60%) than women (50%)

Declines as we age.



Why is fluid balance important



IT NEEDS TO BE JUST RIGHT



CONSEQUENCES IF TOO LITTLE
OR TOO MUCH

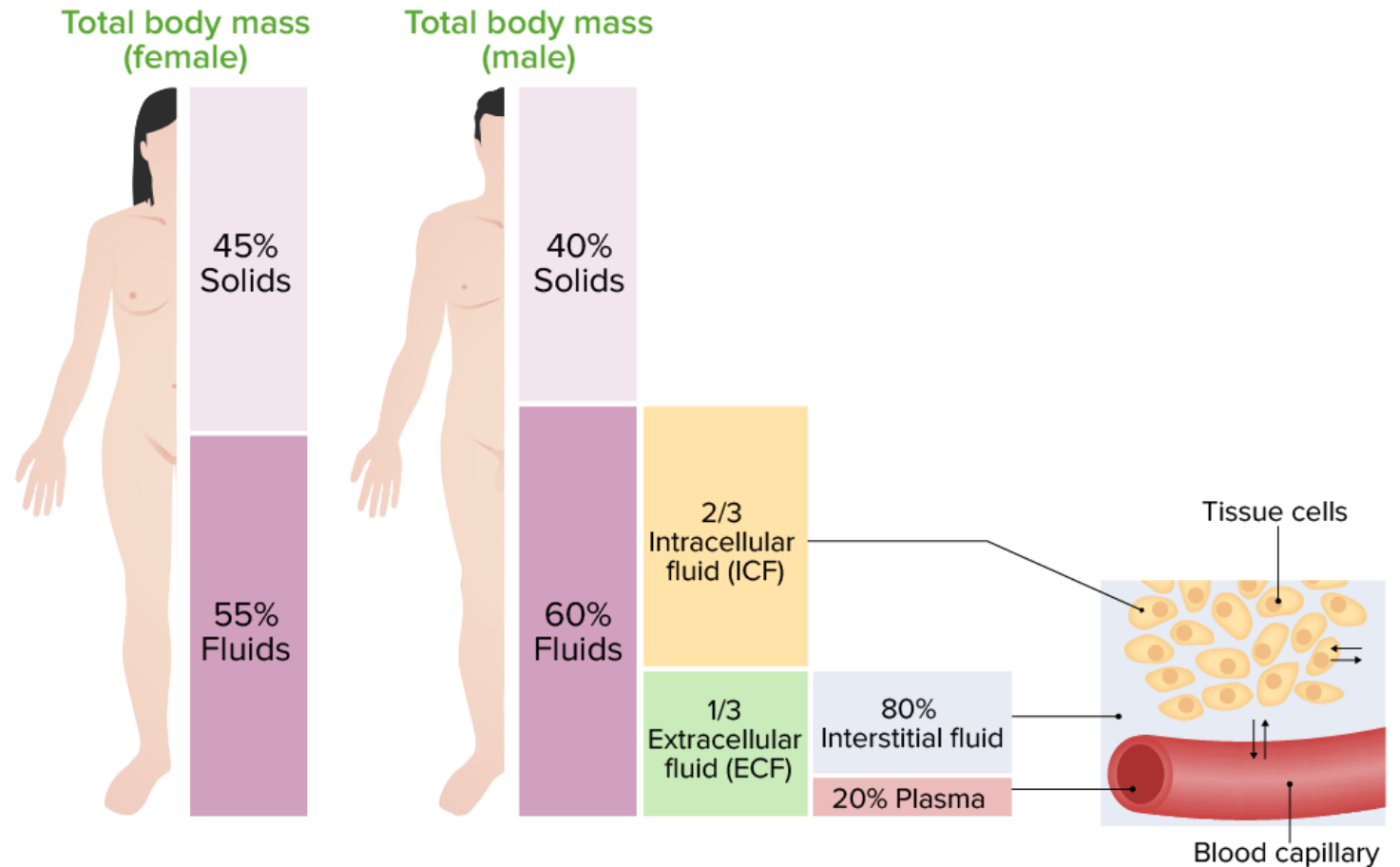


A FLUCTUATION OF 5-10% CAN
HAVE A SERIOUS IMPACT ON
HEALTH.

So how does it work

Two main compartments of fluid in the cell of the body.

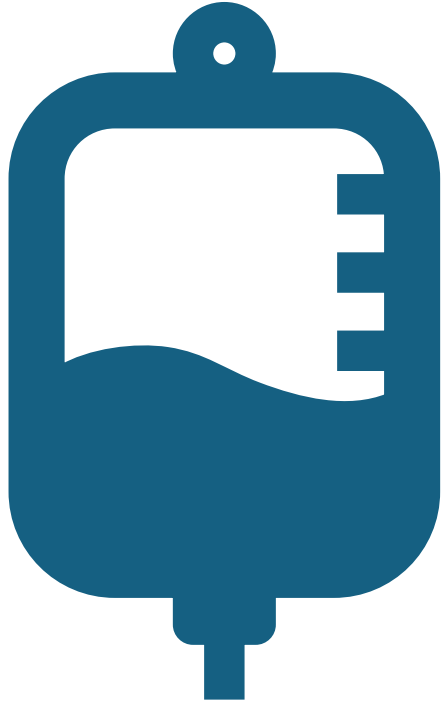
1. Intracellular- has just under 2/3 fluid volume
2. Extracellular- just over 1/3 fluid volume



In's and Outs

Table 1: Approximate daily water balance in health

Intake (ml)		Output (ml)	
Water from beverages	1200	Urine	1500
Water from solid food	1000	Insensible losses from skin and lungs	900
Metabolic water from oxidation	300	Faeces	100



Fluid imbalance- Fluid loss

Dehydration from fluid loss- often happens acutely but not always

Common causes

- Diarrhoea/ Vomiting
- Fluid from wounds
- Having a raised temperature
- Blood loss
- Passing too much urine



Fluid imbalance- Too little in

- Low intake dehydration – occurs over a period of time

Common causes

- Not drinking enough
- Not eating enough

Associated with

- People who can't drink or eat enough
- People who restrict their food/ fluid intake
- People who lose their appetite

Signs of dehydration/ low volume dehydration

Can you use thirst?

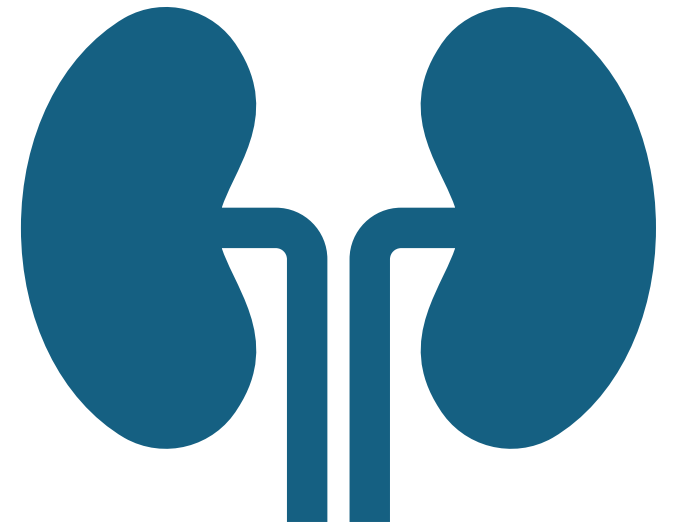
Can you use urine colour?

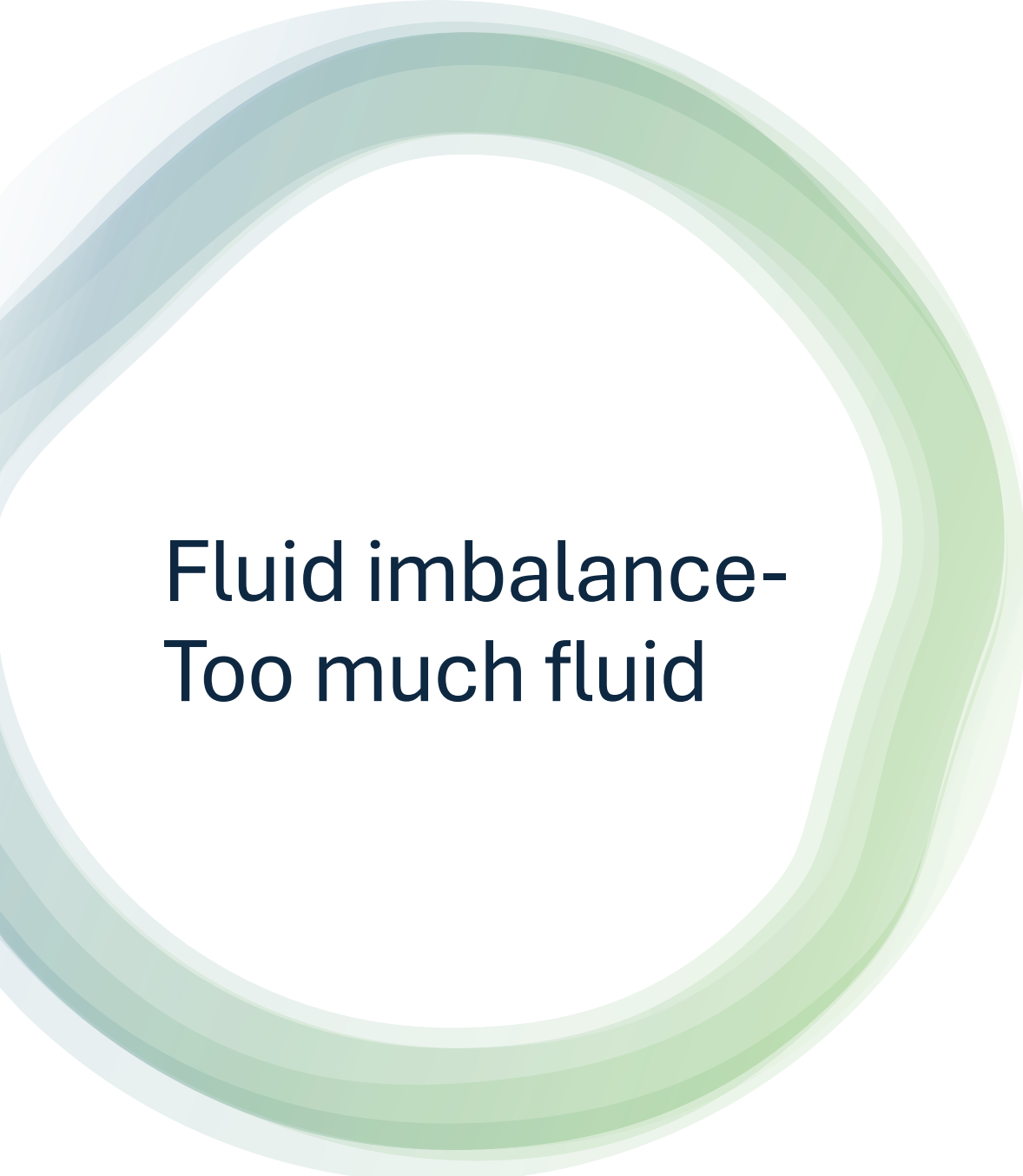
Can you use skin turgor?

Can you use heart rate?

Blood pressure is a good indicator

Urine output





Fluid imbalance- Too much fluid

Commonly associated with people with long term conditions

- Kidney disease
- Heart failure
- Liver failure

Other people who might be affected

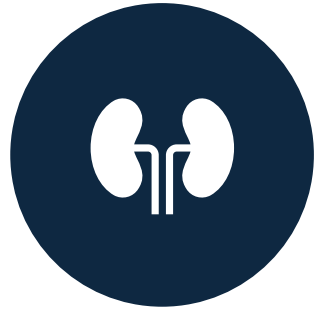
People with head injuries (SIADH)

People with mental health conditions

Signs of fluid overload



BREATHLESSNESS



OEDEMA (FLUID IN
LOWER LIMBS)



CHANGES IN
BLOOD PRESSURE

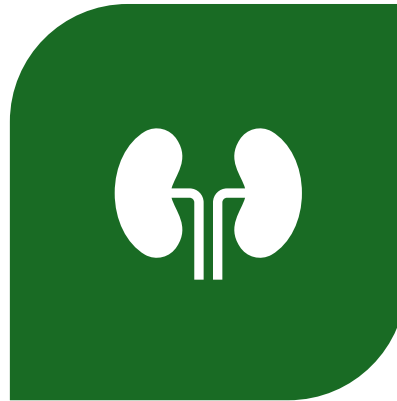


CHANGES IN
URINE OUTPUT

Why is fluid balance monitoring important?



PREVENT DEHYDRATION: RECOGNISE
EARLY SIGNS TO INTERVENE PROMPTLY.



PREVENT OVERHYDRATION: AVOID
COMPLICATIONS LIKE OEDEMA AND
HEART STRAIN.



GUIDE TREATMENT DECISIONS:
ADJUST FLUID THERAPY/ MEDICATIONS
BASED ON REAL-TIME DATA.

Methods of monitoring



Needs to be appropriate to the setting/ patient/ outcome.



Needed for acute changes influencing practice =strict fluid balance chart



Needed for some broad guidance= intake/ output



Needed for something else?



Daily weights- assess changes in fluid status, weight gain/ loss reflective of treatment.



DOCUMENTATION & HANDOVER IS KEY

Case study 1.

- Mr Jones admitted to hospital with decompensated heart failure from home.
 - **Challenge:** Maintaining an appropriate fluid balance to prevent overload whilst avoiding dehydration.
 - **Monitoring Approaches:**
 - strict fluid balance documentation and weight assessments whilst on intravenous diuretics.
 - just daily weights when moved to oral diuretics.
 - **Outcome:** Effective monitoring leads to timely adjustments in diuretic therapy.

Case study 2.

- Jane admitted from hospital to nursing home for end-of-life care. Was on strict fluid balance monitoring in hospital and copies of fluid charts have been sent to nursing home with her.
- **Challenge:** Managing patient and family expectations of monitoring.
- **Monitoring Approaches:** Patient centred & led.
- **Outcome:** High-quality, person-centred care delivered at the end of Jane's life.

Comm



Key takeaways

- Fluid balance monitoring and maintenance is challenging.
- Needs to be person centred.
- Consistency is key- training/ documentation/ handover.

Thanks!

A simple black and white cartoon drawing of a smiling face with a hand pointing upwards. The face has a wide, curved smile and two small dots for eyes. The hand is positioned to the left of the face, with the index finger pointing up. A horizontal line separates the word 'Thanks!' from the drawing. A small signature 'MC' is visible in the bottom right corner of the drawing.