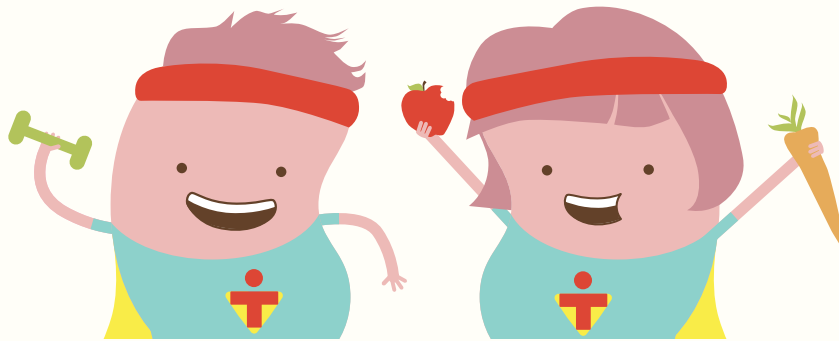
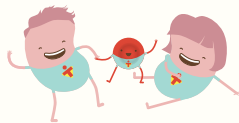


HEALTHY KIDNEYS BALANCE



PRE-SCHOOL LEVEL



SCHOOL AGE LEVEL



ADOLESCENT LEVEL



RESOURCES MENU

1. Your Kidney Health Team
2. Meet Your Kidneys!
- 3. BALANCE**
4. Connections
5. Healthy Eating
6. Being Active
7. Taking Medicines
8. Healthy Blood
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HEALTHY KIDNEYS

The Kidney Health Learning Resource is to help children, parents, families, and caregivers living with kidney disease live well with the disease.

The Kidney Health Learning Resource is also for the health care team. The resource helps open the doors to conversations, learning and relationship-building with children, youth and families about kidney disease by presenting simple, age-appropriate design and medically and clinically accurate information and concepts.

The Kidney Health Learning Resource Advisory Group thanks parents and children who welcomed us into their private experience of living with chronic kidney disease. Children and families shared experiences and took time to let the consultant know what has been - and what would have been - helpful to know as they coped with chronic kidney disease in their families. To the children and families: thank you for sharing so that other families and health care providers can benefit from your wisdom. Your openness, enthusiasm and courage inspires us all.

We thank the members of Pediatric Nephrology, Children's Hospital, Health Sciences Centre Winnipeg who provided input, shared expertise and gave encouragement in the development of the learning resources. We also thank members of CANN-NET for their reviews of materials and their enthusiastic support.

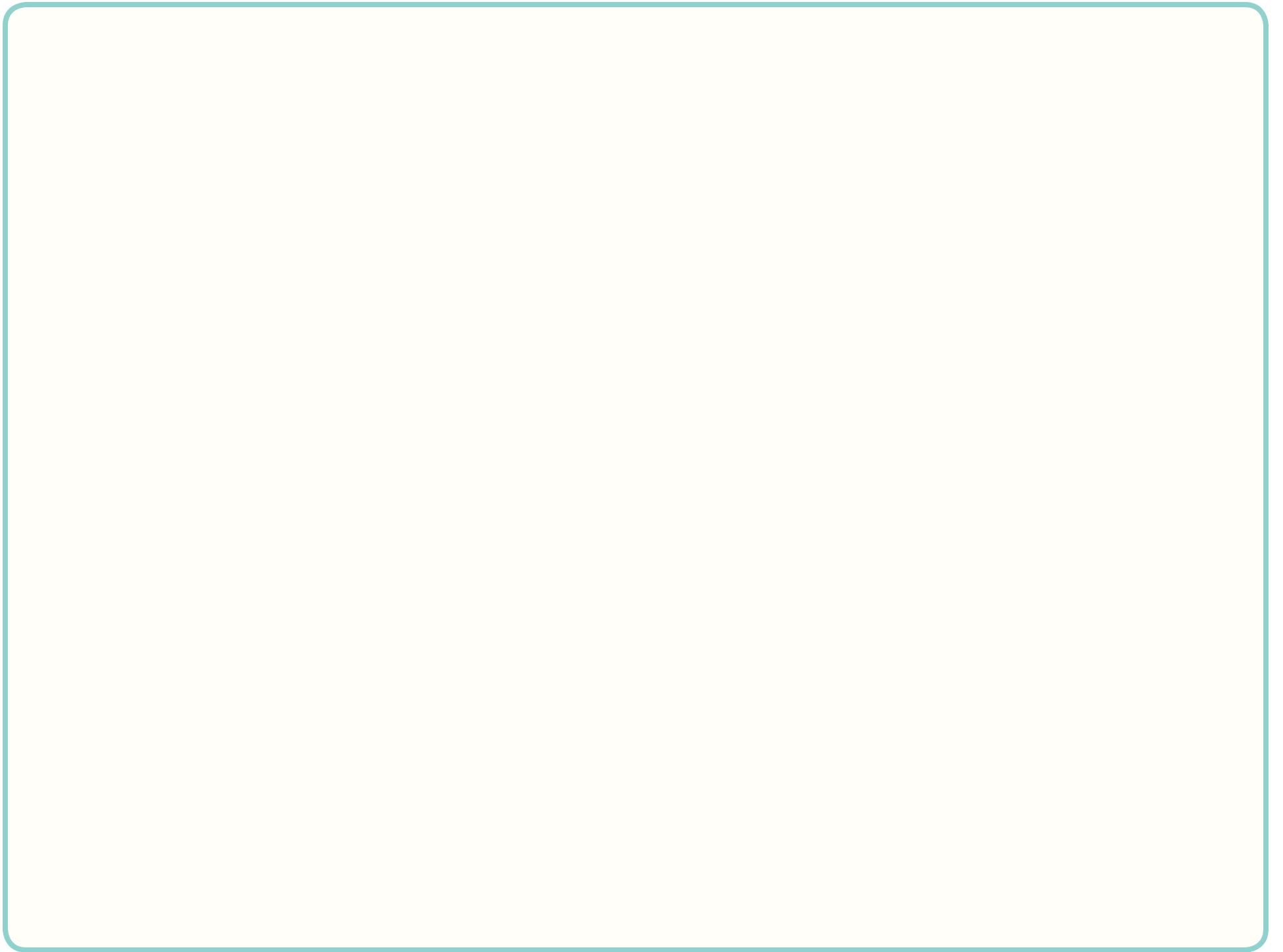
Finally, we thank the Children's Hospital Foundation of Manitoba for their financial support in the development of this resource.

Developmental levels within this resource:

PRE-SCHOOL LEVEL

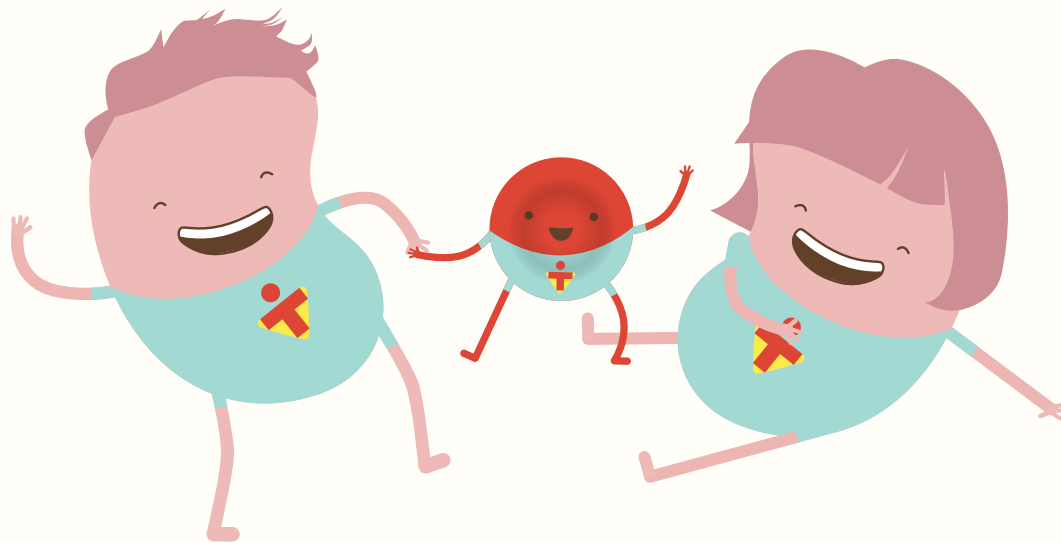
SCHOOL AGE LEVEL

ADOLESCENT LEVEL



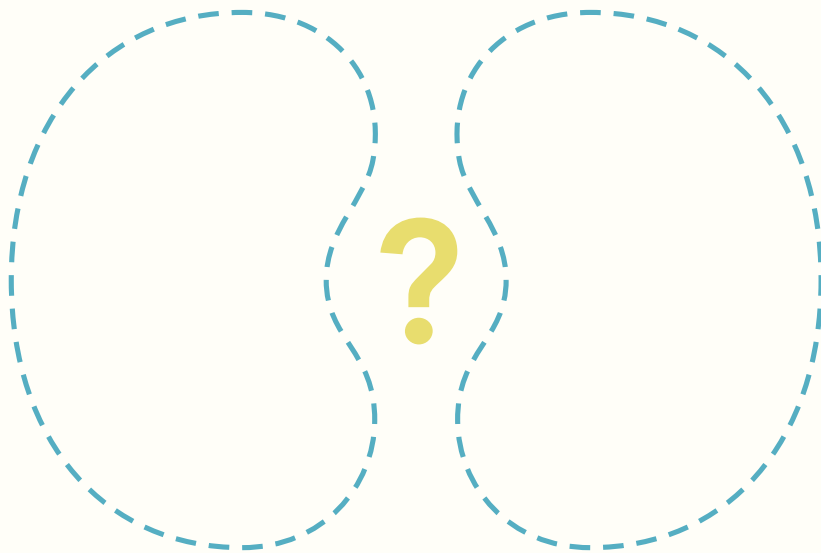
BALANCE

PRE-SCHOOL LEVEL



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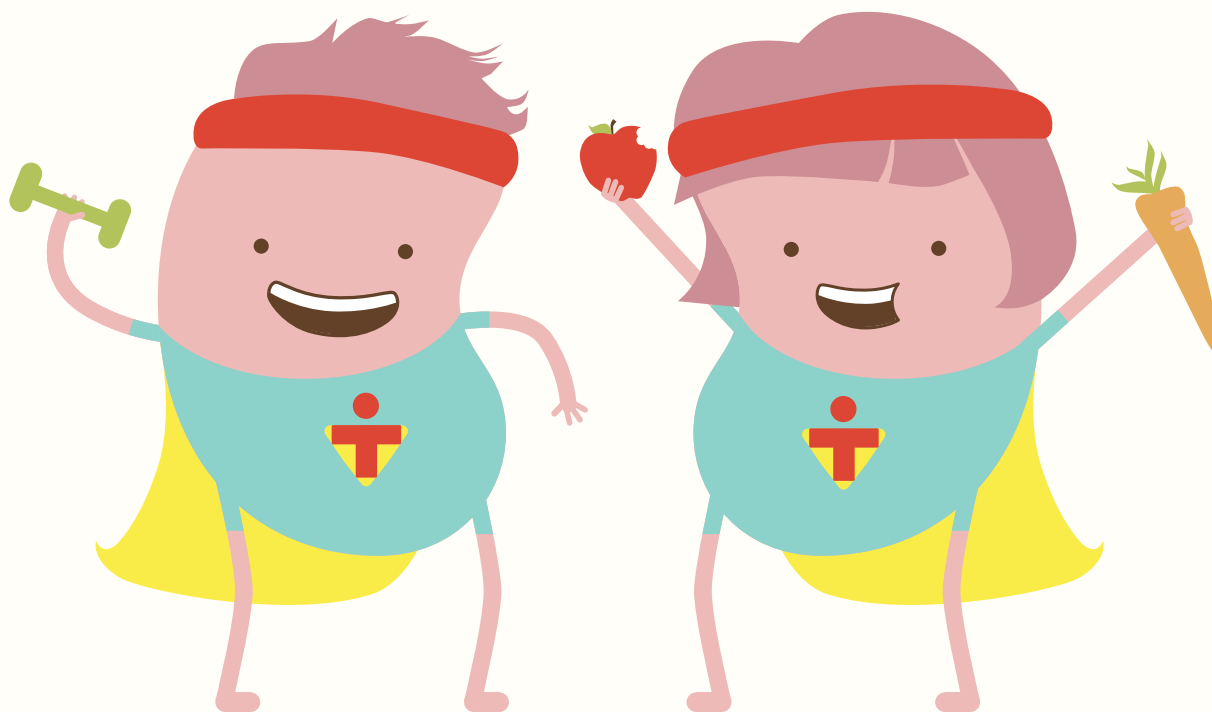


Remember the ***Kidney Twins***?

How big are they?

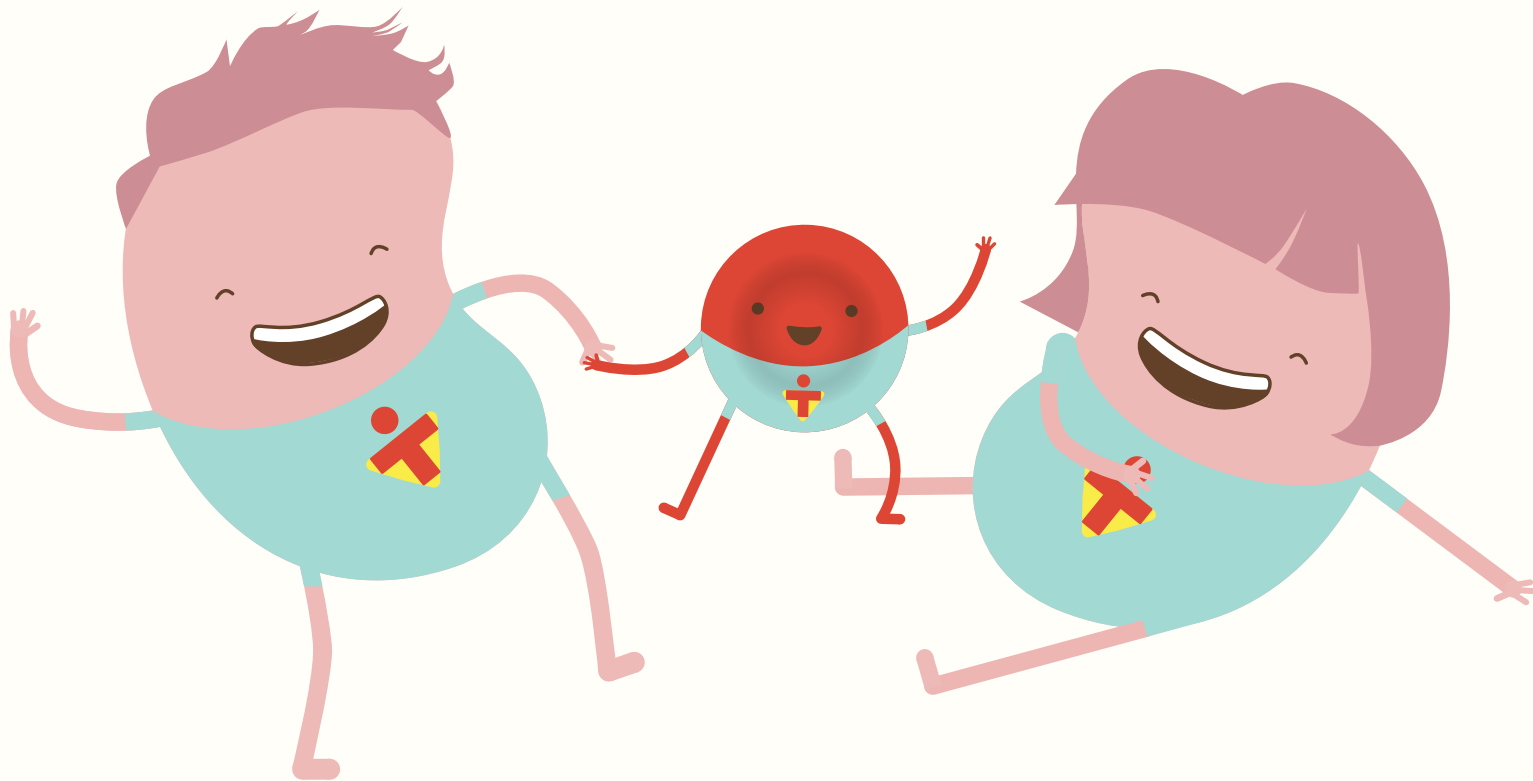
Do you remember where they live in your body?

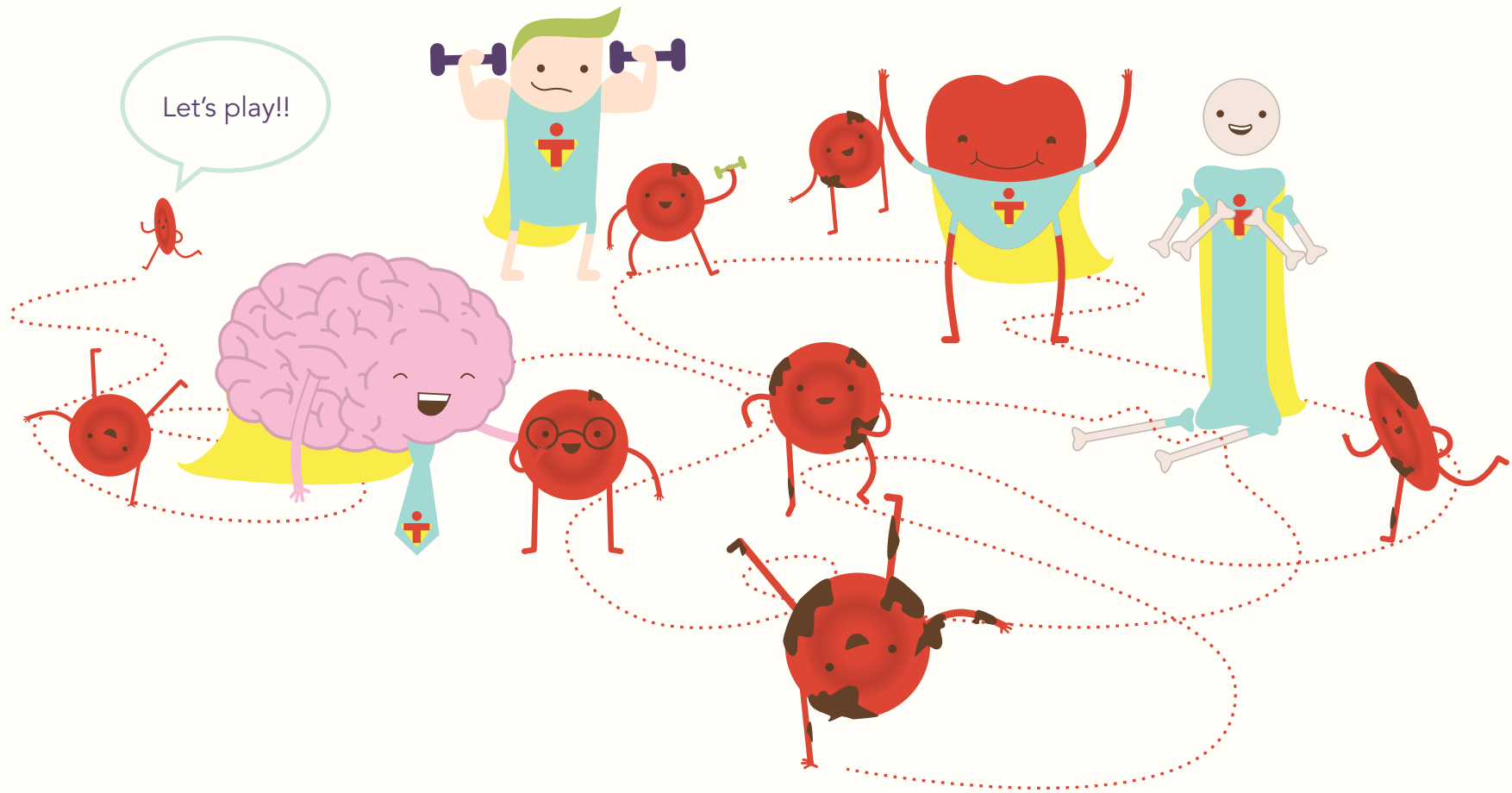
Do you remember what they do?



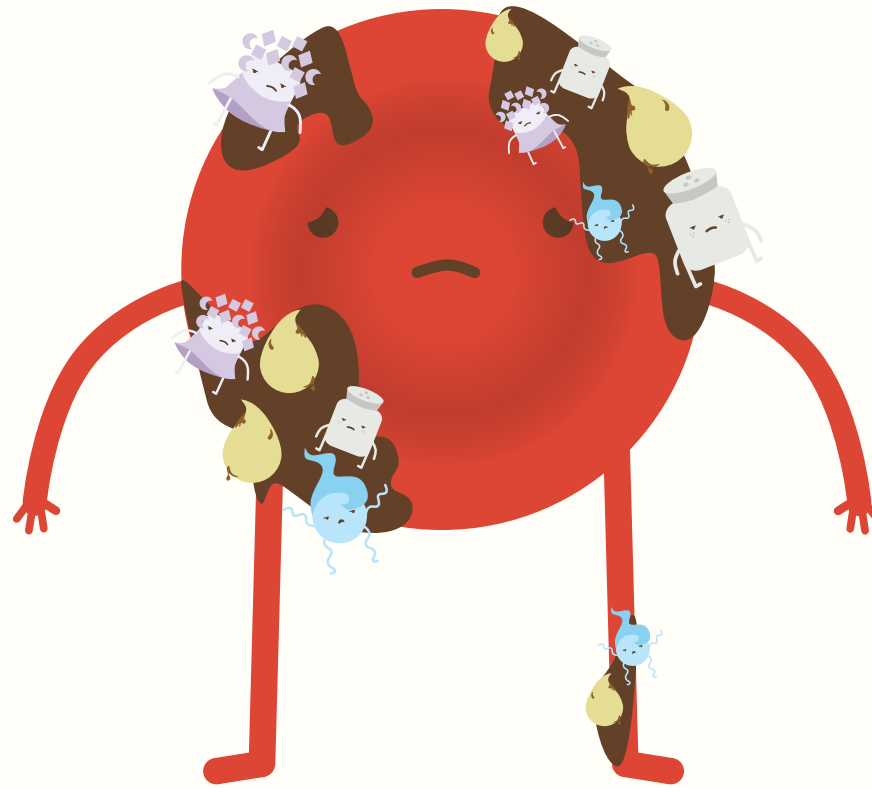
The Kidney Twins really want to keep your body **strong** and **healthy**.

The Kidney Twins are really good friends with **Blood**.
They play together all the time!





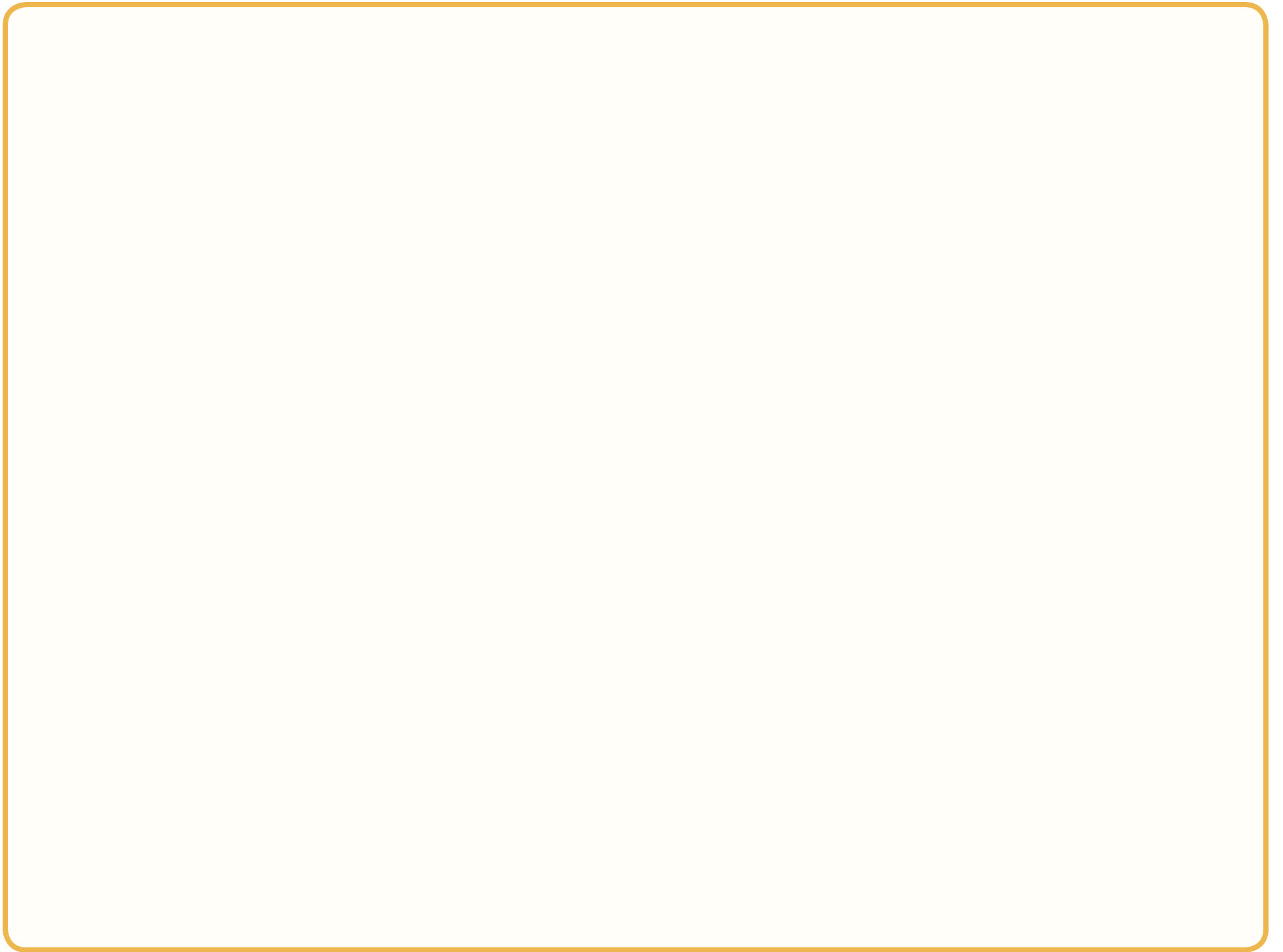
When Blood goes to play with his friends - **Heart, Muscles, Bones** and **Brain** - he gets dirty!



The Kidney Twins clean Blood!



UP NEXT: SCHOOL AGE LEVEL



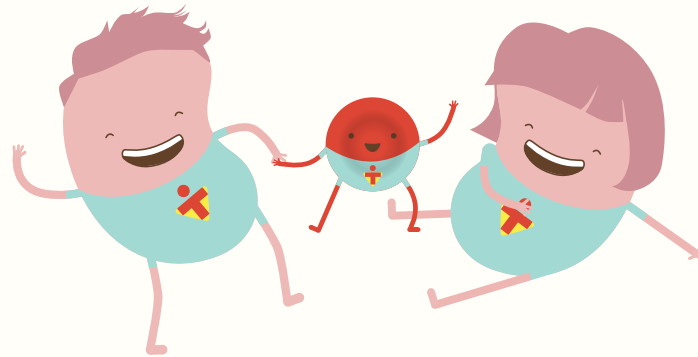
BALANCE

SCHOOL-AGE LEVEL

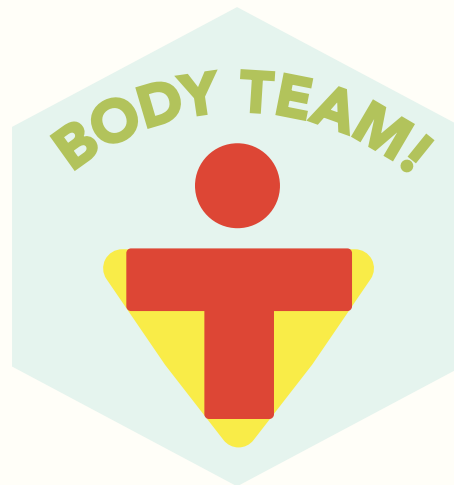


RESOURCES MENU

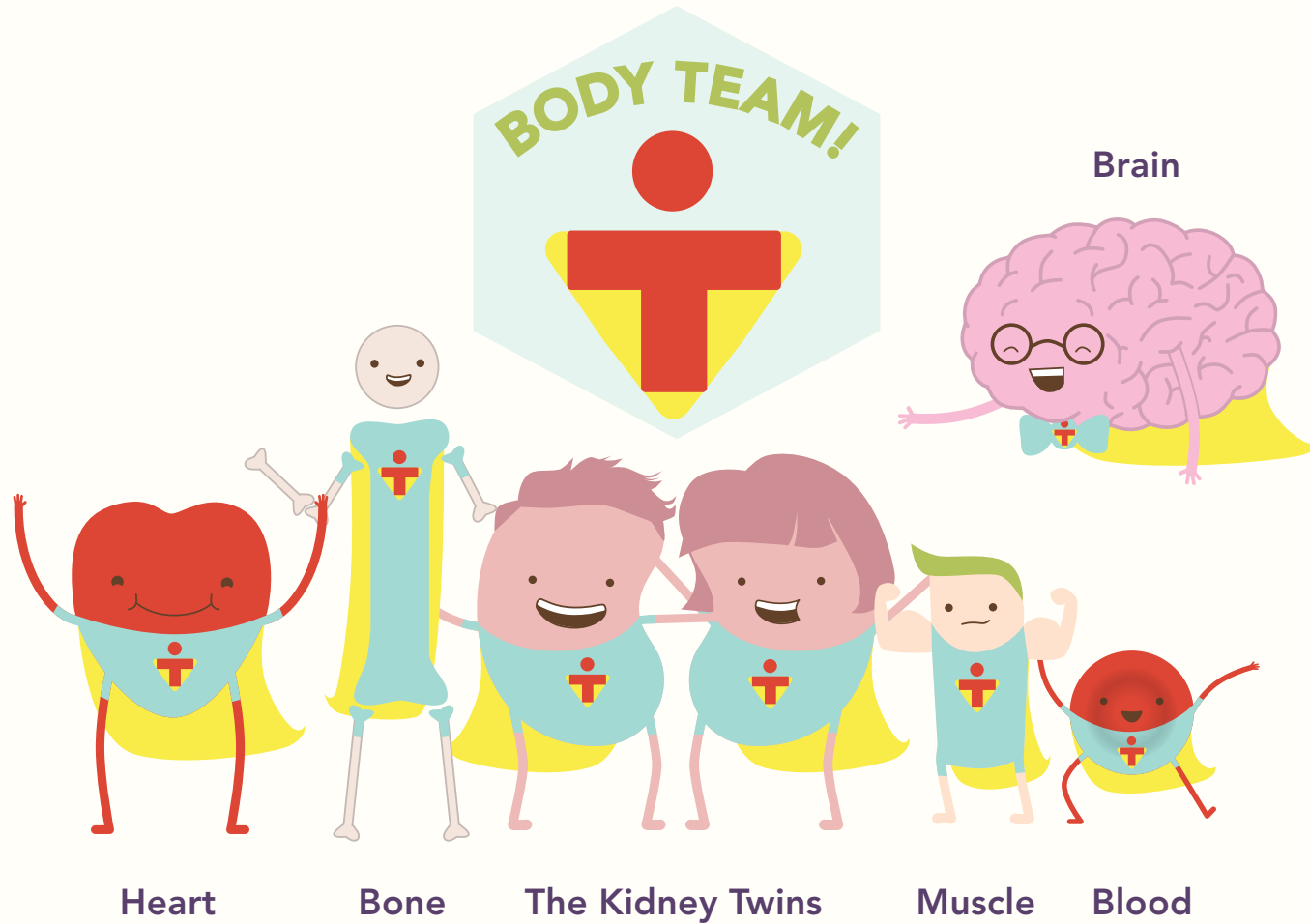
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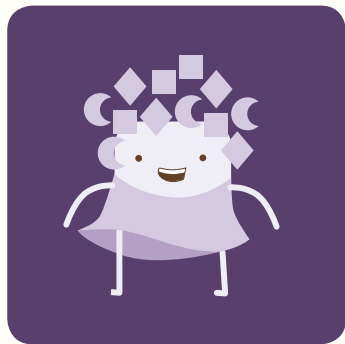
Do you remember the **Kidney Twins**? They are friends with **Blood**. Blood is always moving around the body, playing with his other friends **Brain**, **Heart**, **Bone** and **Muscle**. The Kidney Twins and Blood are a few of the important members of your:



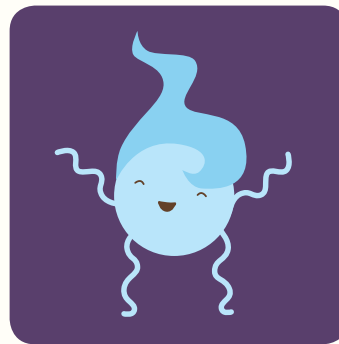
This is the team that works together to keep you healthy.



The **Body Team** uses **Building Blocks** like **minerals**, **water**, and **protein** to keep your body healthy.



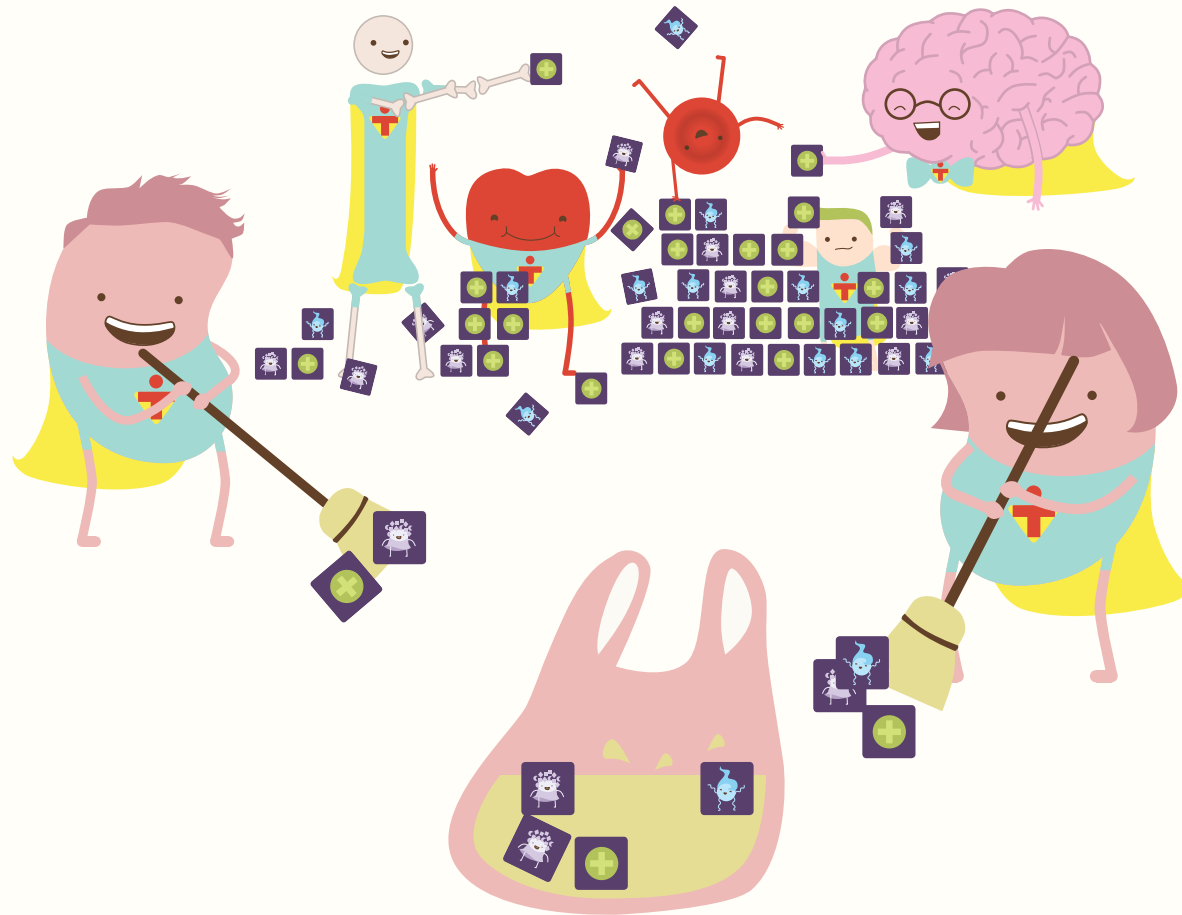
Minerals



Water



Protein



When the Body Team uses their Building Blocks things can get messy! The Kidney Twins help clean up the **waste** or garbage. The waste comes out of your body in **urine**, or pee. 🍷



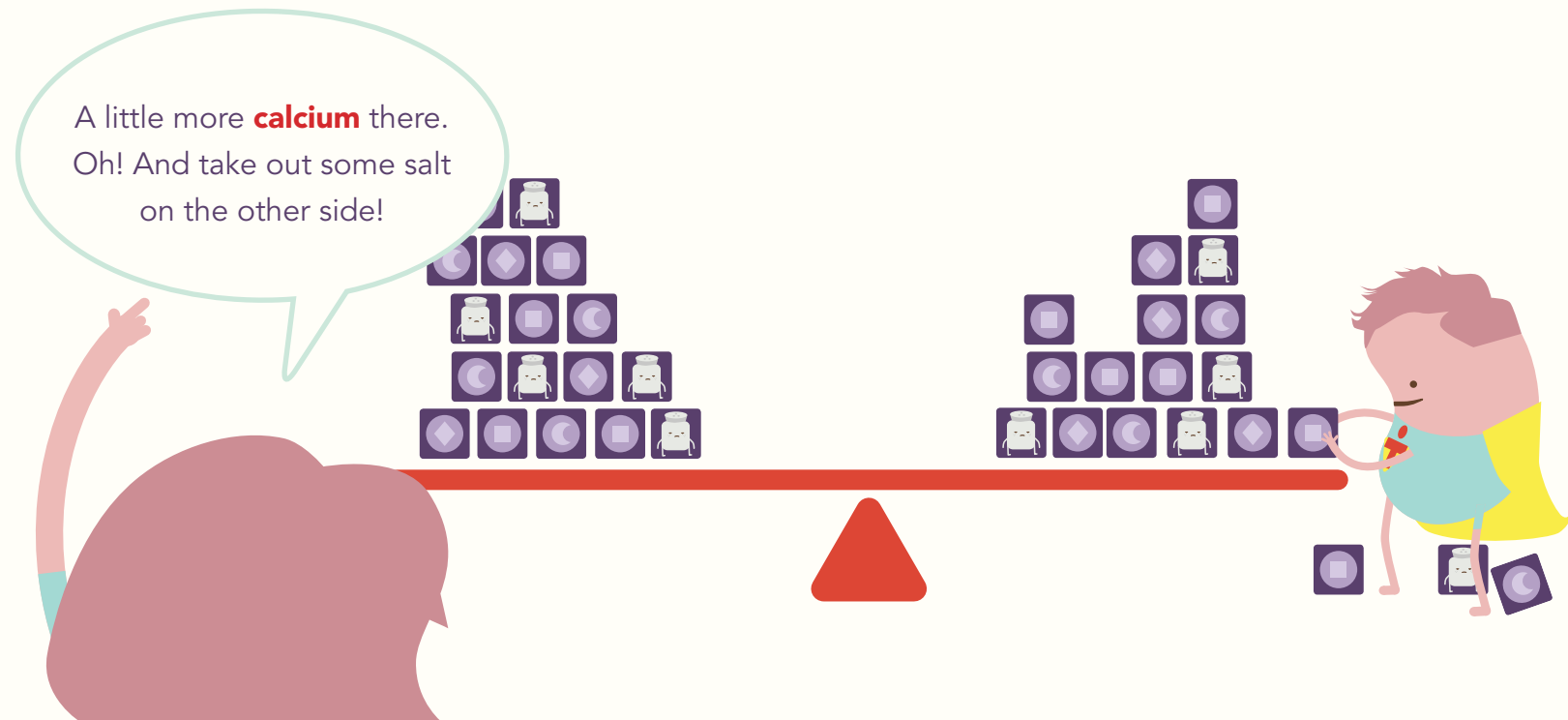
Kidneys have a special job for the Body Team. They help the rest of the team stay healthy. The Kidneys keep things your body needs.

The Kidneys know the **right balance** of **water**, **minerals**, and **salt**.

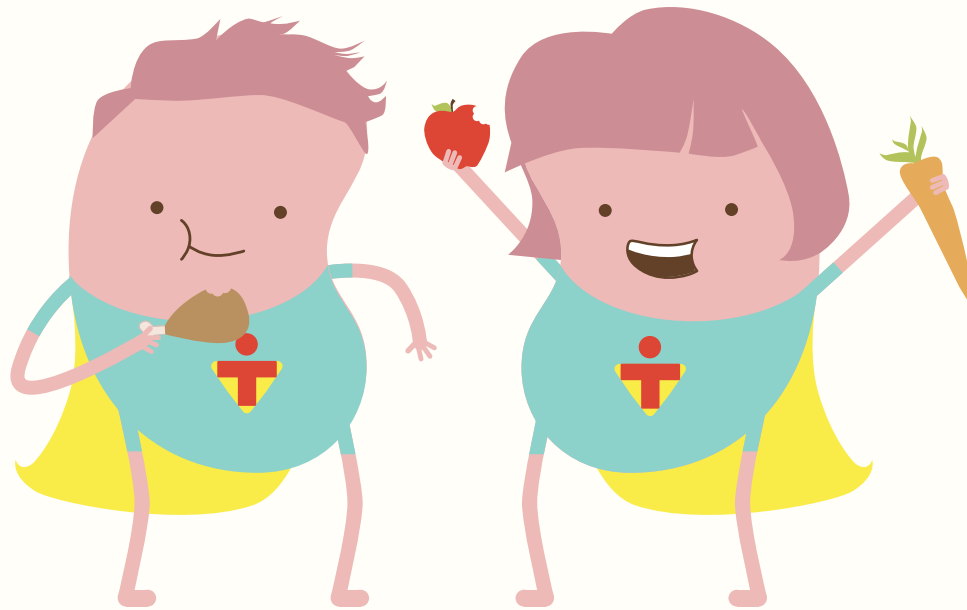
When the Kidneys find things your body does not need, they put them in the **waste**. Your **urine** is made up of water, lots of waste, salt, and some minerals.



The Kidney Twins **recycle** Building Blocks your body can use.



Your Kidneys keep **balance** in your body.
If you don't have balance, there is damage inside your body.

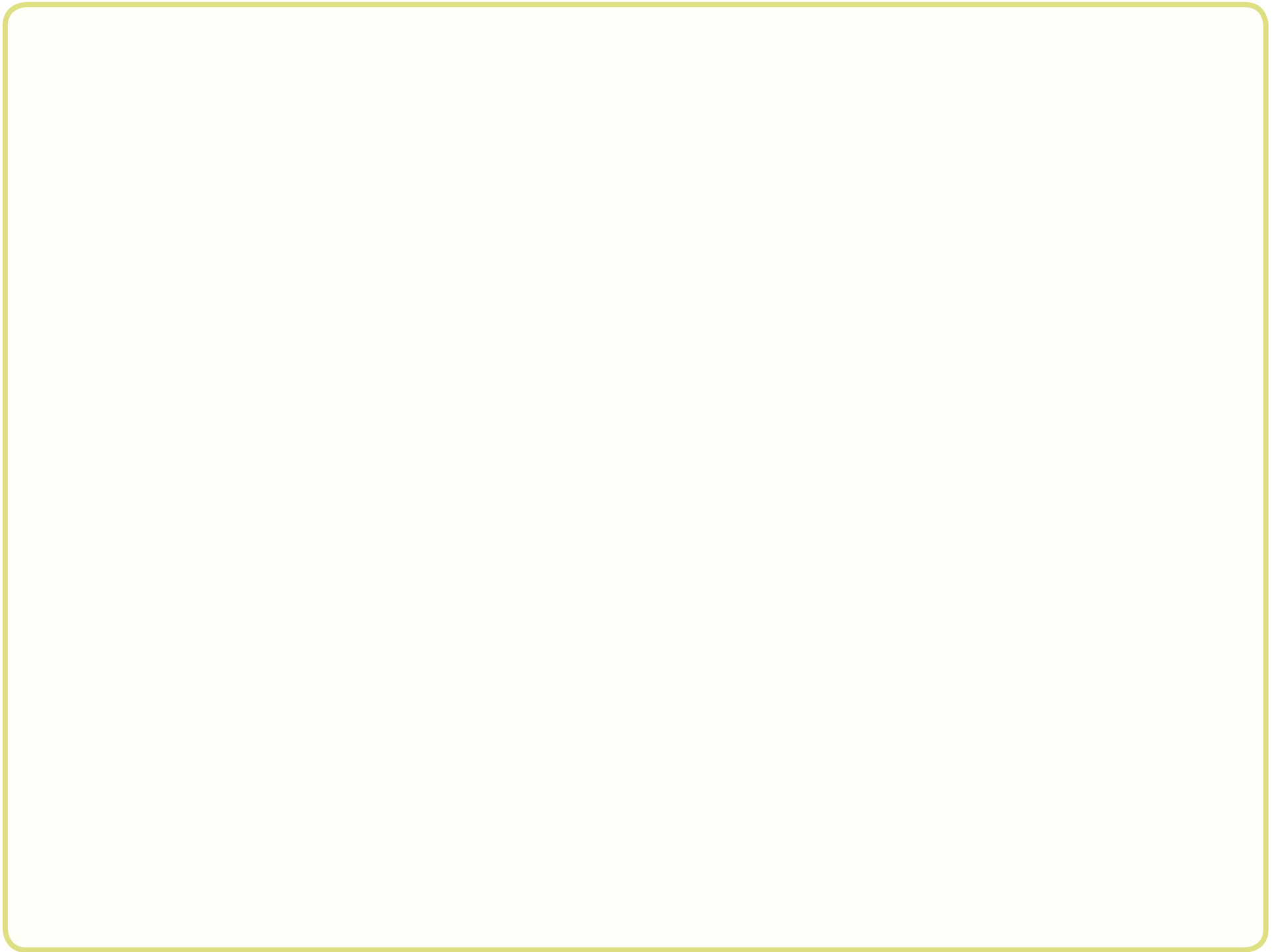


We have to keep our kidneys healthy!

Our kidneys stay healthy when we eat well and stay active.

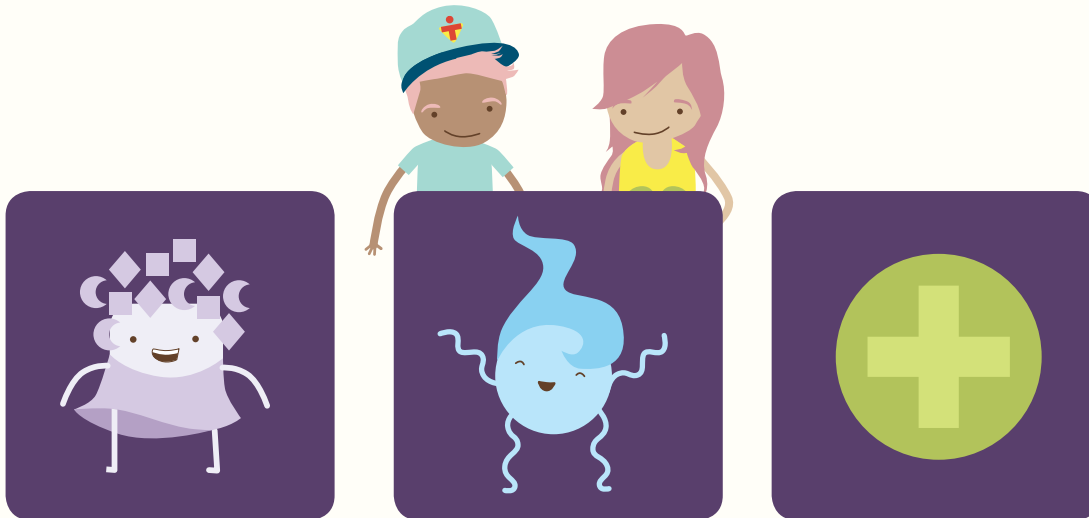
Sometimes, we need some help from our **Kidney Health Team**.

UP NEXT: ADOLESCENT LEVEL



BALANCE

ADOLESCENT LEVEL

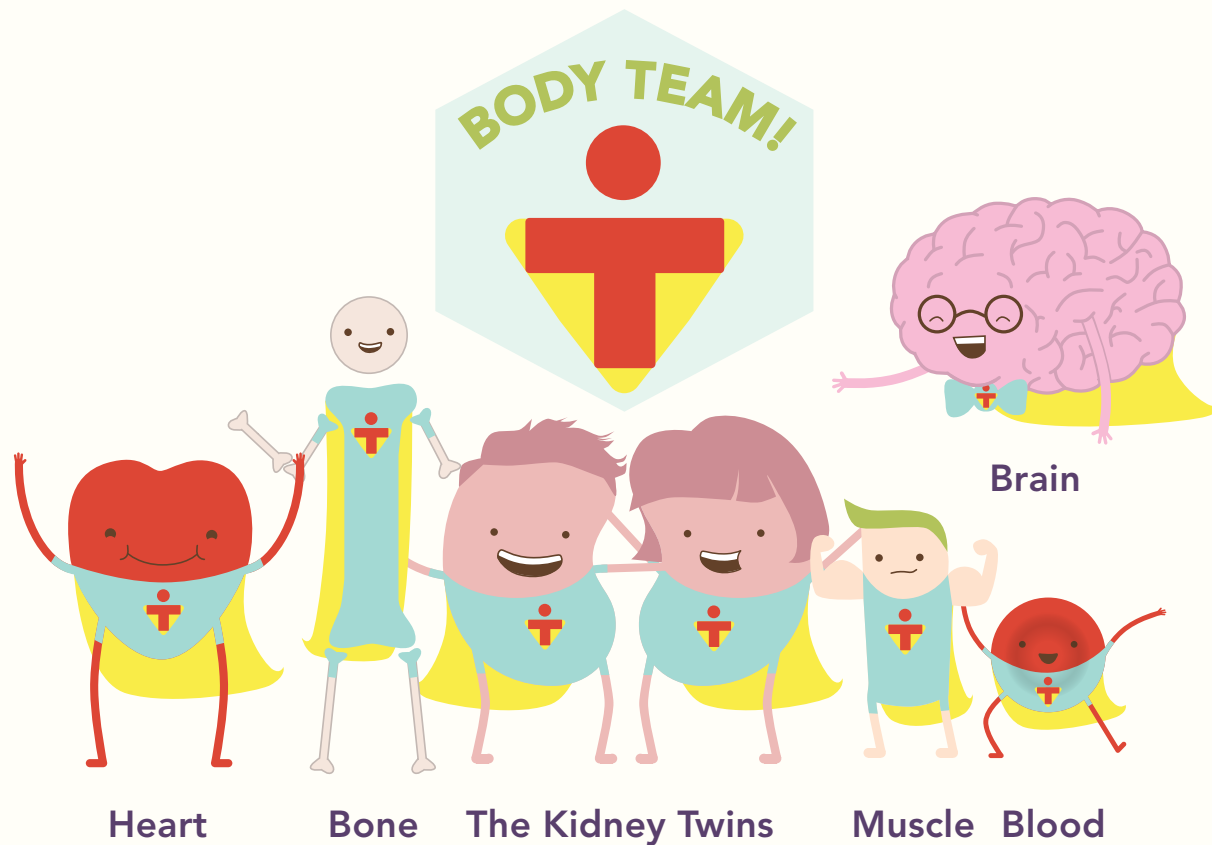


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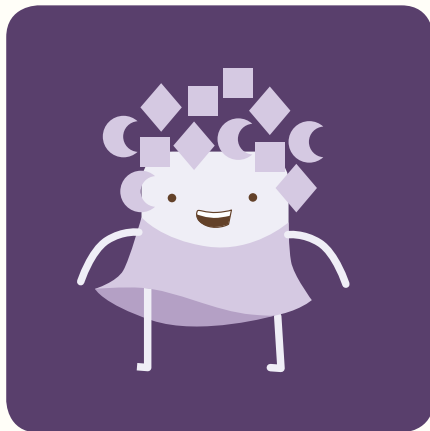


Hey! Remember the **Kidney Twins**? They're friends with **Blood**. Blood is always moving around the body, hanging out with his other friends **Brain**, **Heart**, **Bone** and **Muscle**. The Kidney Twins and Blood are a few of the important members of your...

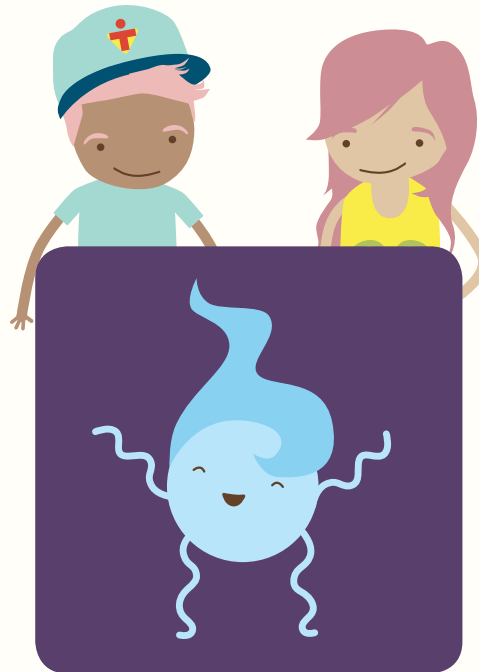


Did you know that the **Body Team** uses **Building Blocks** like these to keep your body healthy?

Building Blocks like **minerals, water** and **protein**? I sure did.



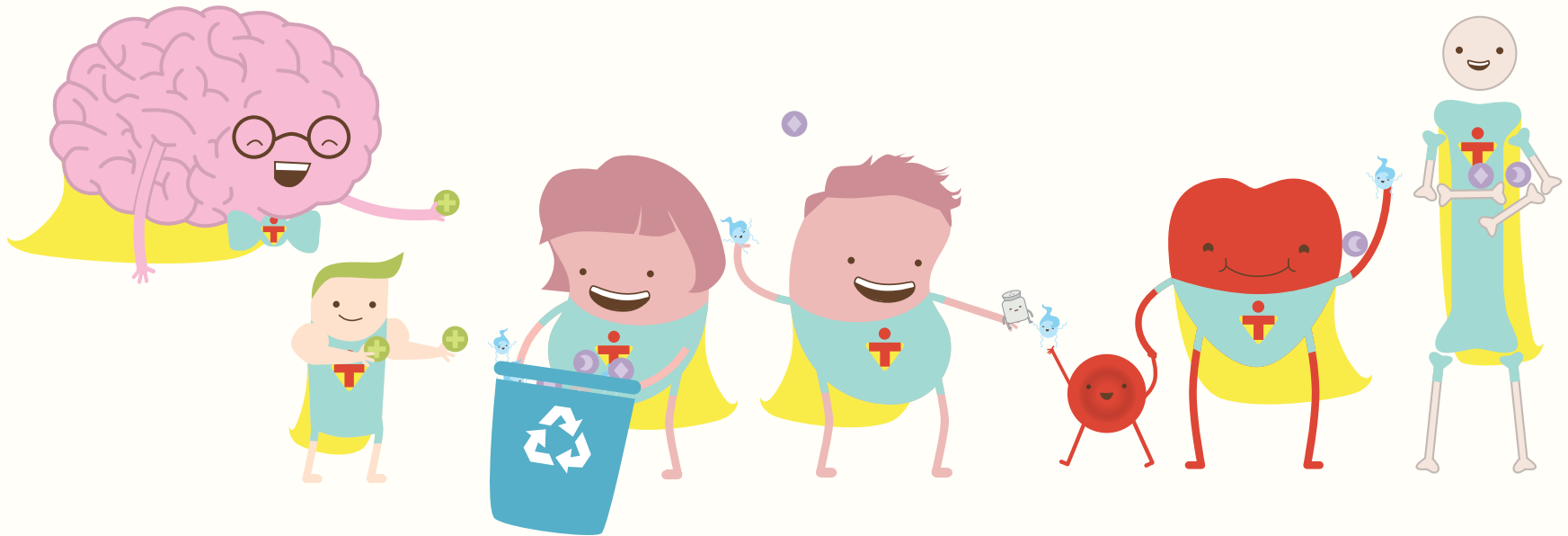
Minerals



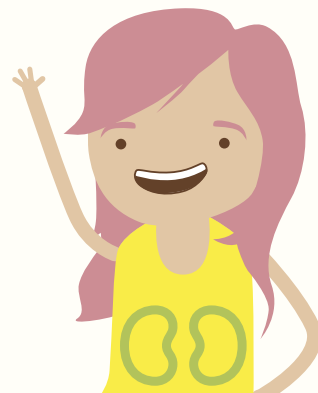
Water



Protein



Each Body Team Member gets certain recycled Building Blocks from the kidneys.



Hey, I think we did it again!



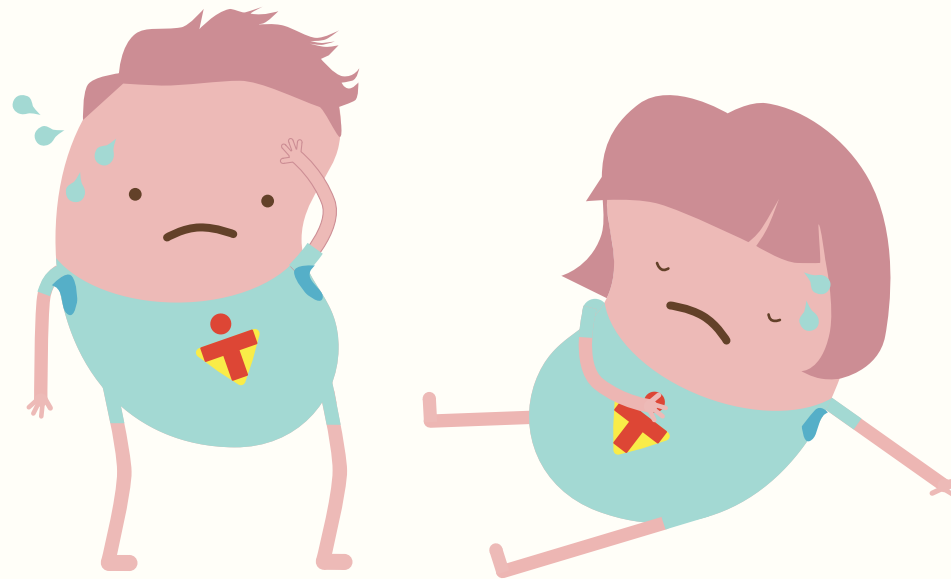
$$\begin{aligned}
 & \frac{GMm}{r^2} = \frac{mv^2}{r} \\
 \text{but } v^2 &= \left(\frac{d}{t}\right)^2 = \left(\frac{2\pi r}{t}\right)^2 = \frac{4\pi^2 r^2}{t^2} \\
 \text{so } \frac{GM}{r^2} &= \frac{4\pi^2 r^2}{rt^2} \\
 \text{or } M &= \frac{r^2}{G} \left(\frac{4\pi^2 r^2}{rt^2}\right) \\
 M &= \left(\frac{4\pi^2}{G}\right) \frac{r^3}{t^2}
 \end{aligned}$$



Yep! This formula is just the right amount.



Ahh.. A little more protein, and a little less salt for the brain - smart!



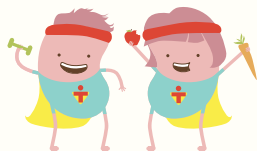
If your kidneys are not working properly, they struggle to keep the balance in your body. They have to work harder to remove waste. Even though you might not feel really sick, your kidneys cannot always keep the balance your body needs to stay healthy.



I know if I eat well and exercise, I can help keep my body in balance.



HEALTHY KIDNEYS



Created by Julie Strong BN, Tom Blydt-Hansen MD, Diane McKenty RN, and Angela Chotka MA with Pediatric Nephrology (Children's Hospital Health Sciences Centre) and Chotka Consulting: Creative Balanced Solutions. With thanks to the Children's Hospital Foundation of Manitoba for their generous support.

For more information about this resource, please contact Pediatric Nephrology at 204-787-4947 or jstrong@exchange.hsc.mb.ca or the Children's Hospital Foundation of Manitoba <http://goodbear.mb.ca>