

LAB RESULTS

calcium: **GOOD** ✓

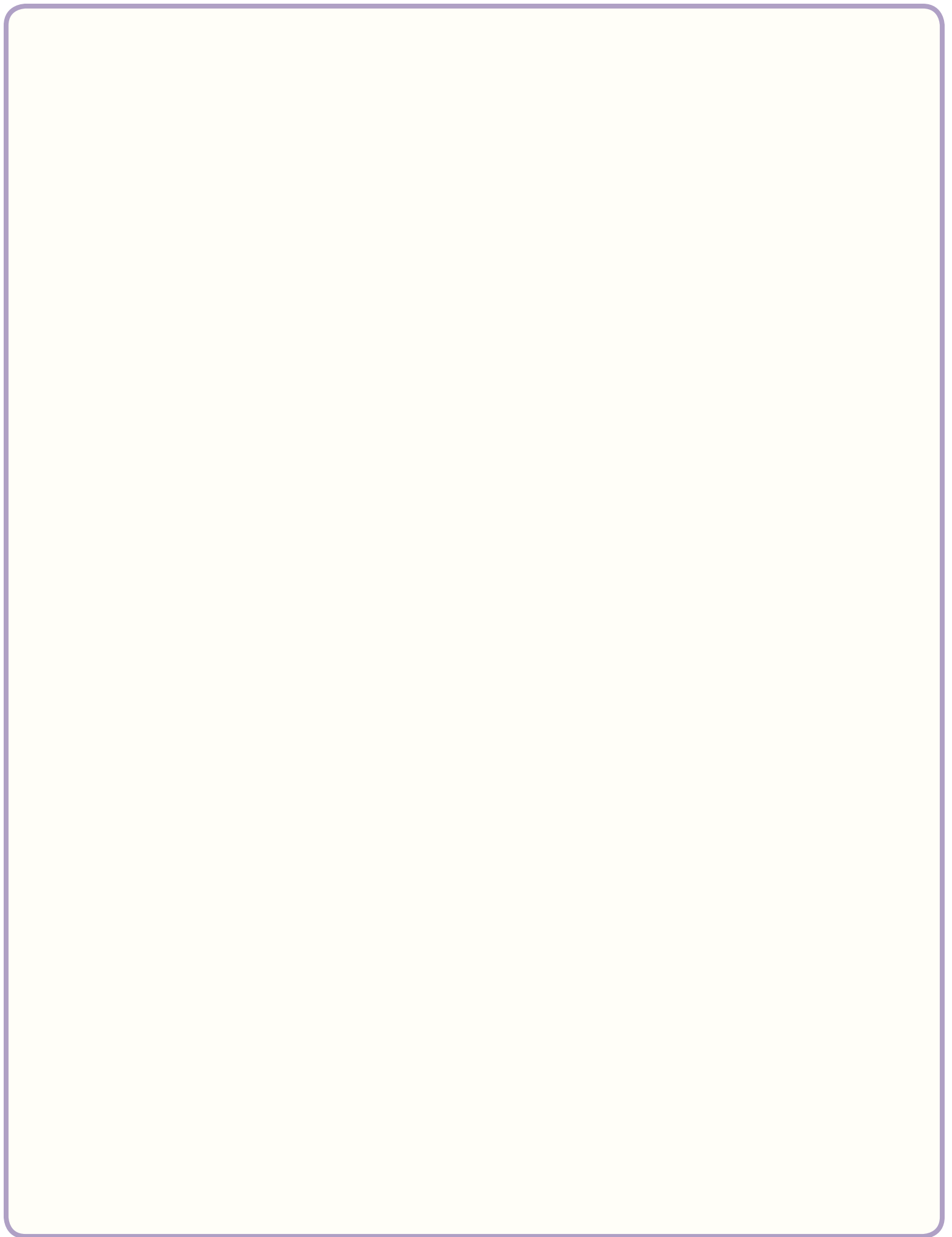
phosphate: **GOOD** ✓

vitamin D: **GOOD** ✓

PTH: **GOOD** ✓

BONE HEALTH

FACILITATOR RESOURCE

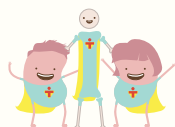


NOTES

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
- 9. BONE HEALTH**
10. Blood Pressure
11. Acid Balance
12. Growth
13. Chronic Kidney Disease
14. Family Coping Resources
15. My Coping Resources
16. Glossary

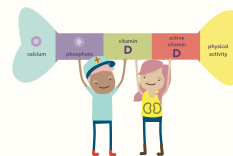
PRE-SCHOOL LEVEL



SCHOOL AGE LEVEL



ADOLESCENT LEVEL



9. GLOBAL LEARNING OBJECTIVES

By the end of this session, the children and their family will be able to understand there is a recipe for bone health and that too much of any ingredient can be damaging.

Supports: teepee, frame / structure

KIDNEY HEALTH MODULES DESIGN OVERVIEW

This material was compiled and designed to meet the needs of the diverse children, their families, caregivers and the health care providers who will be facilitating learning about how to live well with chronic kidney disease.

The design incorporates findings from research on providing health education information to children and adults. A number of families agreed to allow the consultant observe their appointments and interview them about learning about and managing their or their child's chronic kidney disease. In addition, health care providers received a questionnaire and were interviewed about their priorities for children and families in order to manage CKD effectively.

To determine initial topic areas, children and families were asked what was most important to know and most important to be able to do to manage their disease well. The Project Team considered what is required to manage CKD well from their perspective. From this information, topics were grouped into the resulting 16 topic areas. Certainly, for parents and children, "being able to do" things to manage CKD took priority over understanding so much about the disease.

Once the topic areas were determined, the consultant worked with pediatric nephrology health care providers to determine learning objectives for the 3 developmental stages and parents and caregivers.

Using plain language principles and best practices for developmental stage learning design, modules were designed to guide learners towards achieving the learning objectives.

Each module begins with an overview of all learning objectives. The learning objectives are informed by the Key Messages and Clinical Targets which are supported by Resource Materials for the facilitator for each module.

Each section of the module begins with reminders about your approach, appropriate for each developmental level. There is ample white space for you to write your own notes and ideas for delivery.

The Parent and Caregiver Resource provides highlights of the concepts and terms for each module as well as the full glossary for that module. There is also a listing of relevant online and library-available resources.

FACILITATING LEARNING

Facilitating learning puts the emphasis on the learners and their interests and abilities rather than on an outside entity. How does this affect what you, as the healthcare provider, do?

- Work with people where they are at.
- If families are not ready to make a change, they do not need to sit through the presentation of materials. You may want to just give the Activity Sheet to these people. Or you may wish to start a conversation about what the Kidney Health Team can do to help the family feel they are ready to make some changes.
- Use Motivational Interviewing techniques.
- Be careful not to ask for more than one change at a time.
- Not everyone will be able to understand or use the information in the same way. You may find yourself revisiting modules with some children and families repeatedly while others will go away and look into things on their own.
- You will be helping people learn how to manage the disease rather than learn about the disease and understand why the doctor or healthcare team is recommending certain types of management.

Connecting and Relating Learning

A key premise of this work is interconnections. As a facilitator, find ways of linking concepts and tools throughout the modules. As much as possible, concepts are built upon throughout the modules. For instance, in Connections we begin to talk about heart health and kidneys. In Blood Pressure, we build upon that knowledge and introduce the concept of perfusion.

Applying information

Encourage children and families to refer back to information and use the concepts and terms presented. Make sure they are holding the “story books” flipping through them and back and forth in a way that makes sense to them. The concepts and information designed are age-appropriate, clinically and medically accurate and meant to be applied. The Activity Sheets are designed for use people at all levels to reinforce vocabulary and concepts.

Visual Learning

The vast majority of people are visual learners rather than auditory learners. Interesting graphics that tell a story are a more effective way for many people to learn than either listening to information on its own or reading dense information. You will notice that the glossary terms are supported through graphics linked to concepts introduced in the modules.

Literacy Levels

In Manitoba, 40% of working adults have low literacy levels. Give people time. Let them contemplate the graphics. Keep your language plain.

RESEARCH KEY FINDINGS

Developmental Stages and Learning Design Key Points

- Importance of play in learning and education for all levels.
- School-age: time to create and reinforce healthy rituals.
- Adolescence: begin to share consequences but limited.
- Delivery of learning is key: recommendation to embrace motivational interviewing as intervention approach.
- Use of transtheoretical / stages of change model.
- HCP as facilitator of learning.

Child / Parent Consultations Summary Key Points

- The “how” needs to come before the “why” in educating. Some patients and families may never get to the “why.”
- Global approach to living healthily and move towards the rationale.
- The lived experience is how we need to think about the learning and educating.
- Appreciation for visual cues and teaching aids.
- Need for useable, family-friendly diet information:
 - shopping lists and pantry list.
 - meal plans for breakfasts, lunches, dinners, snacks that are kidney health friendly and will work for whole family.
- Patients and families do and want to learn from each other.
- Value in emailing nurse clinician.

Best Practices for Health Education Summary Key Points

- Emphasis on action-oriented teaching: what people need to do and how to do it.
- Put positive in front of negative: provide hope rather than feed despair.
- Use simple pictures and graphics to display proportions.
- Plain language is not “dumbed down”: it is simply clear.

For more information, contact any member of the Kidney Health Advisory Group:

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Julie Strong, BN

Tom Blydt-Hansen, MD

Diane McKenty, RN

DEVELOPMENTAL LEVEL OBJECTIVES

By the end of this session:

The Pre-School Age Child will be able to:

- know that strong bones help you grow better and stay strong
- know that strong bones let you run and play

Possible activities include: showing bones are the framework: forts / tee pee

The School Age Child will:

- understand there is a recipe for strong bones
- recognize the key ingredients of the recipe: calcium, phosphate, vitamin D, active vitamin D and physical activity
- to name food groups that are the best sources of key ingredients: dairy, fish with bones, calcium-supplemented soy / tofu
- understand how to get the ingredients of your recipe in your body through being active, eating real food and pills
- understand the instructions for mixing the ingredients
- name an outdoor activity they enjoy doing that healthcare providers can encourage, follow and promote
- understand that you should be active every day
- know that active = breathing fast, sweating and getting red in the face every day

Possible activities include: an individual recipe card for strong bones with ingredients list (child could colour / select / write name; recipe changes regularly (meds are adjusted)

The Adolescent will be able to discuss:

- same as school age and
- there is a recipe just for strong bones
- the ingredients for their recipe
- how to check the ingredients
- that s/he has control over the ingredients through real food, being active and medicines
- how their body feels if there is not the right amount of the key ingredients and your kidneys are having trouble keeping balance:
 - weak bones which can bend and break
 - red eyes
 - itchiness
 - less growth than expected

Possible activities include:

The Parents and Caregivers will:

- understand their role in having foods in home to support strong bones
- understand their role in participating in and encouraging physical activity

KEY MESSAGES

1. Diet is the first step to achieving healthy balance (e.g. vitamin D intake, calcium intake and phosphate intake or restriction).
2. Medications are used in combination with diet to achieve specific goals- Phosphate binders must be taken with food to work well.
3. Monitoring blood tests is the primary way that we determine whether we are reaching healthy targets for bone and mineral health.
4. The kidneys help in the balance of calcium, phosphate and activation of vitamin D (the physiologically effective form).
5. Bone & mineral health are critical for normal growth.
6. X-rays may be used to assess severity of CKD-related bone disease if clinically suspected.
7. Inability to achieve targets can result in osteoporosis, rickets and fragile bones.
8. Long term imbalances in calcium and phosphate can have an effect on heart function, and may also predispose to slipped capital femoral epiphyses.
9. There are specific symptoms and physical signs with extreme levels of low/high calcium and low/high phosphate. Awareness of these signs and symptoms should be individualized to the patient and parents depending on their level of risk.

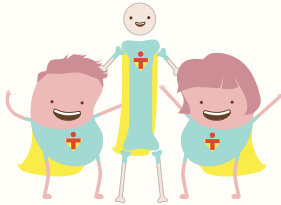
TARGETS FOR FACILITATORS TO BE AWARE OF

1. The KDOQI guidelines prescribe specific targets for regulating bone & mineral health, according to age and the level of CKD:
 - o Calcium
 - o Phosphate
 - o Product of calcium and phosphate (Ca x P product)
 - o Parathyroid hormone
 - o Vitamin D25
2. The dietitian may be consulted to provide additional detail on phosphate intake - these need to be incorporated with other diet restrictions for potassium and sodium.
3. Phosphate binders are used with diet to achieve targets, and may be self-adjusted depending on the intake of phosphate-containing foods in consultation with the Kidney Health Team dietitian.
4. There is a maximum dose of calcium carbonate (phosphate binder) due to calcium accumulation in kidney failure.
5. Height percentile and velocity, from plotted growth curves, is used to identify growth delay.
6. Bone age and grades of mineral bone disease may be determined on hand and wrist x-rays, compared with standardized normal ranges.
7. To encourage 30-60 minutes of moderate to high-intensity physical activity for school age children and adolescents.

PRE-SCHOOL LEARNING

1. PRE-SCHOOL LEVEL

9. BONE HEALTH



RESOURCES MENU

1. Your Kidney Health Team
2. Meet Your Kidneys!
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12. Growth
13. CKD: Progression and Meaning
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15. My Coping Resources
16. Glossary

MY APPROACH

1. Where is this family at? (Stages of Change)
2. Acknowledge what children do or say.
3. Model attitudes, ways of approaching problems and behaviours towards others rather than telling them.
4. Ask questions to provoke thinking; describe pictures.
5. Provide hints to assist children when they are struggling with concepts.
6. Offer a variety of choices when children are trying to find the answer
7. While your time is limited, try to give children and family time to think about the material and messages.

PRE-SCHOOL LEARNING OBJECTIVES

Remember ... children can use words and images to represent objects but are not yet reasoning logically.

The Pre-School Age Child will be able to:

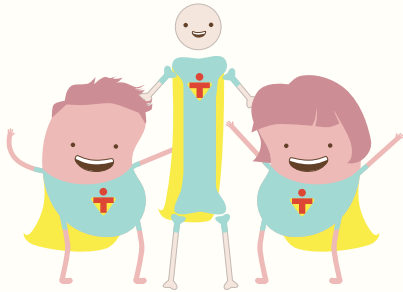
- a) know that strong bones help you grow better and stay strong
- b) know that strong bones let you run and play

Possible activities include: showing bones are the framework: forts / tee pee

LEARNING SUPPORTS

Have you got the Learning Supports you might want to use? Model teepee with internal structure visible

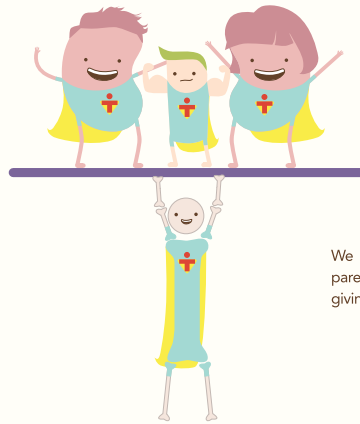
1



Here is the Kidney Twins' friend, **Bone**.

1. Here is the Kidney Twins' friend, Bone. Today, we are going to talk about Bone.

2



We want to have strong bones. My parents help me have strong bones by giving me what my body needs.

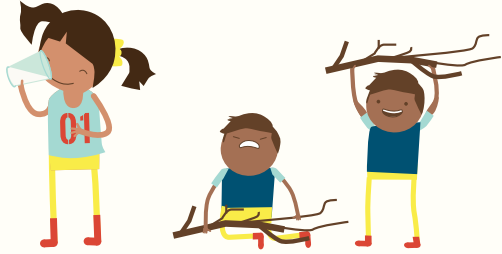
2. What is Bone doing in this picture? Bone is holding up the Kidney Twins and Muscle – Bone is very strong!

Our bones are important for us to be strong and healthy.

Optional Learning for parents if appropriate:

Building strong bones requires the right foods, regular physical activity and sometimes calcium and / or other supplements.

3



Strong bones help you grow better and stay strong! There are lots of different bones in your body!

3. When we have strong bones, we can grow better and stay strong. What do you see in this picture?

Optional Learning for parents if appropriate: by the age of five, a child should be getting 60 minutes of energetic play each day.

4

Strong bones help you run and play!



4. When we have strong bones, we can play and be active.

The more active you are, the stronger your bones are; the stronger your bones, the more active you can be!

UP NEXT: SCHOOL AGE LEVEL

SCHOOL AGE LEARNING

2. SCHOOL AGE LEVEL

9. BONE HEALTH



strong bone recipe

RESOURCES MENU

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Possible activities include: an individual recipe card for strong bones with ingredients list (child could colour / select / write name; recipe changes regularly (meds are adjusted)

SCHOOL AGE LEARNING OBJECTIVES

Remember ... children can think logically about concrete objects and can apply rules in a consistent way.

The School Age Child will:

- a) understand there is a recipe for strong bones
- b) recognize the key ingredients of the recipe: calcium, phosphate, vitamin D, active vitamin D and physical activity
- c) to name food groups that are the best sources of key ingredients: dairy, fish with bones, calcium-supplemented soy / tofu
- d) understand how to get the ingredients of your recipe in your body through being active, eating real food and pills
- e) understand the instructions for mixing the ingredients
- f) name an outdoor activity they enjoy doing that healthcare providers can encourage, follow and promote
- g) understand that you should be active every day
- h) know that active = breathing fast, sweating and getting red in the face every day

MY APPROACH

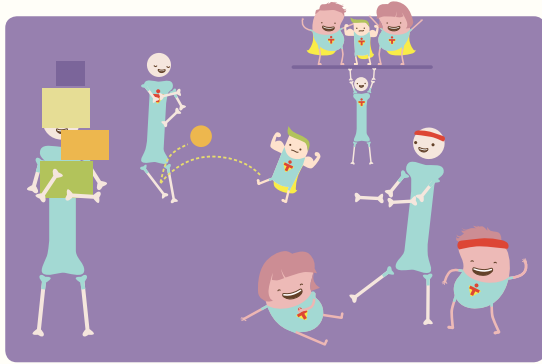
1. Where is this family at? (Stages of Change)
2. Acknowledge what children do or say.
3. Model attitudes, ways of approaching problems and behaviours towards others rather than telling them.
4. Provide information, directly giving children facts, labels and other information.
5. Ask questions to provoke thinking; ask children to describe pictures.
6. Provide hints to assist children when they are struggling with concepts.
7. Offer a variety of choices when children are trying to find the answer
8. While your time is limited, try to give children and family time to think about the material and messages.

LEARNING SUPPORTS

Have you got the Learning Supports you might want to use? Copy of Activity sheet; model teepee with internal structure visible; note card / recipe card

1

There are more than 200 different bones in our body! We want to make sure we have strong, healthy **bones**.



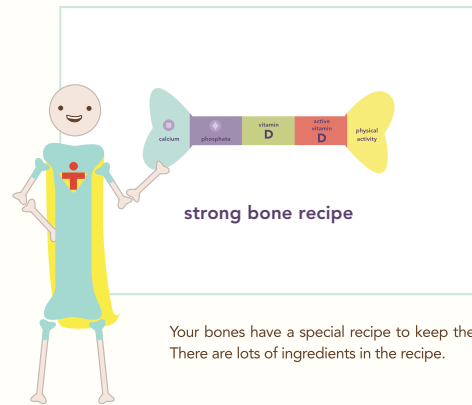
1. What do you see in this picture?

Bone is playing with everyone, having lots of fun, being really active.

We need healthy strong bones so we can run and play and grow better.

Today we are going to talk about Healthy Strong Bones.

2



2. Every one of us has a recipe for strong bones.

Do you know what a recipe is?

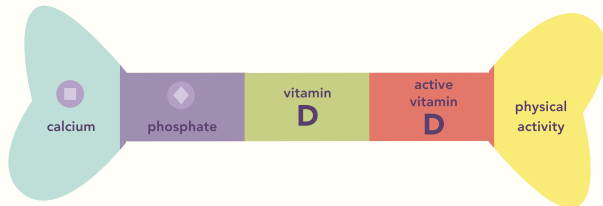
A recipe is a list of ingredients and instructions for making something.

For example, if you are going to make a cake or bake bread or make bannock, you need to know the ingredients you need and you need instructions about what to do with the ingredients.

It's the same for our bones – there is a recipe.

3

The five main ingredients in the Strong Bone Recipe are:



We need the right amounts of these ingredients to build strong bones.

3. We all need these ingredients for our bones to grow better. Each of us needs the minerals, calcium and phosphate, vitamin D, active vitamin D and we need to be active.

Do you have any ideas about how we get these ingredients in our body?

- Calcium
- Phosphate
- Vitamin D / Active Vitamin D?
- Physical activity

4



We need to get the right amounts of **calcium** and **phosphate** in the foods we eat. Usually we get more phosphate in our food than we need, so we need to focus on getting enough calcium.

4. We talk a lot about eating healthy foods, don't we? That's because our body needs the nutrients from Whole Foods. Our bones need nutrients from Whole Foods too.

Do you remember what Whole Foods are?

Whole Foods come from plants and animals. These types of food are:

vegetables • fruit • hamburger • nuts • seeds • eggs
milk • blueberries • fish • game meat (deer, elk, moose)

If we think about food made at home with ingredients that are fresh, these are foods to choose first.

home made soup • home made chicken fingers and fries
home made pizza • home made tacos • home made pasta sauce • grilled cheese sandwich using brick cheese

* **Facilitator Note:** "Whole Food" is food from plants and animals with lots of different nutrients our bodies need. Nutrients are ingredients our bodies need. We have to give our body foods that help it be strong so we can do all the things we want to do.

Optional: Maybe the time to begin discussion with parent / caregiver around what they have available in the home. Emphasize that our bodies need foods with more nutrients (lots of different ingredients our bodies need) which comes primarily from Whole foods.

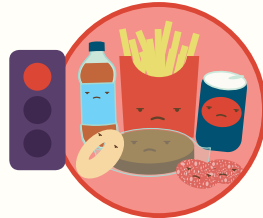
5

Some people need to be careful with foods that don't have much calcium and have too much phosphate. Processed foods can have too much phosphate!

Yellow Foods: Sometimes Foods



Red Foods: Avoid



5. The next group is the Yellow Group. What do you do when you see a yellow traffic light?

Yellow lights mean slow down. So it's a good idea to slow down with Yellow foods. Try to eat these foods only sometimes.

Yellow Foods are foods we should only eat sometimes. Yellow Foods are usually processed with added salt, added sugar, preservatives and artificial ingredients. Because they are processed, some of the important nutrients have been removed. Yellow Foods give our bodies some of the nutrients we need.

So it's a good idea to slow down with Yellow foods. Try to eat these foods only sometimes.

Look at the picture. What foods are yellow light foods?

hot dogs • canned spaghetti • white bread • muffins
cake • dried fruit • sausages • bacon

* **Facilitator Note:** Keep in mind that foods may change categories depending on the individual patient's dietary restrictions. For more information, review opening to module.

Glossary Definition: Processed foods are foods that started as whole foods, but got changed in a factory to make something else. Some important nutrients get lost when food is processed. Extra sugar or salt or chemicals are added to make it taste better or look different.

6



Can you choose the GREEN foods?

Many **Processed Foods** have phosphate added to them. Choose **Green Foods** First to help your body get enough calcium and not too much phosphate!

6. Many processed foods also have added phosphate which is not good for our bone health.

We want you to choose our Green Foods First – these are “always” foods. Whole Foods are Always Foods. Many of these foods have phosphate naturally.

7



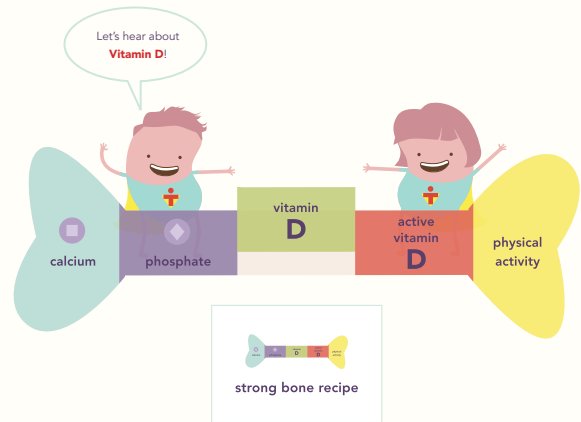
Remember, the Kidney Twins help with **balance** in your body. They balance two ingredients in our healthy bones recipe: calcium and phosphate.
The Kidney Twins **recycle** calcium in your body and get rid of the extra phosphate so you have just the right balance in your healthy bone recipe.

7. Do you remember hearing about the Kidney Twins and Balance? What do you remember?

The Kidney Twins help balance many things inside our bodies. The Kidney Twins balance two of our healthy bone recipe ingredients: calcium and phosphate.

The Kidney Twins recycle calcium and put it back in our bodies. They take out phosphate and put it in the garbage.

8



8. We have talked about calcium and phosphate.

What is the next ingredient in the bone picture?

Let's learn how we get vitamin D and active Vitamin D in our bodies for strong bones.

9



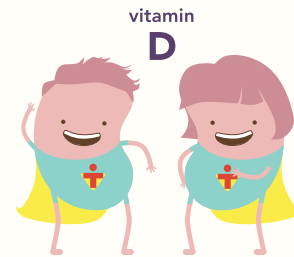
Vitamin D is called the sunshine vitamin because we get it from sunshine! We also get vitamin D from **Whole Foods**. Your body can make vitamin D if there is enough sun on your skin but you have to be careful not to get sunburned.

Most of us don't get enough vitamin D from the sun, especially in winter. We can get vitamin D in food and in **vitamin pills**.

9. We can get vitamin D from the sunshine. We have to be careful we don't get a sunburn when we are outside.

We can get vitamin D through our food and also through vitamin pills or drops as a supplement.

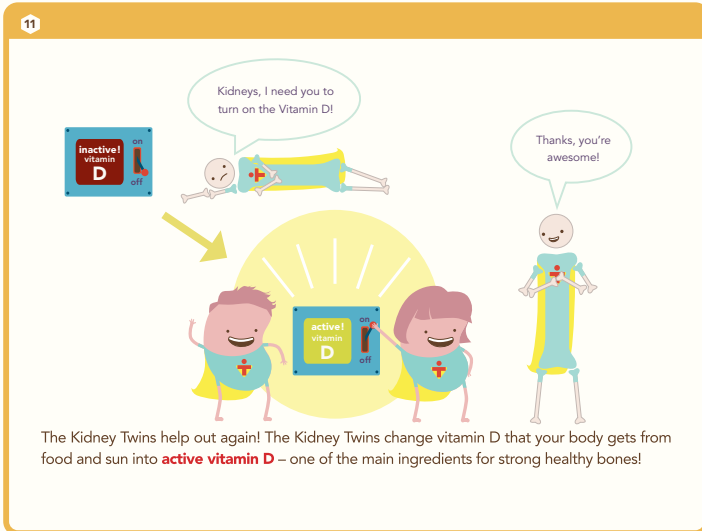
10



But there's a trick with vitamin D: the Kidney Twins have to help our body actually use it!

10. But vitamin D is a little tricky. The kind of vitamin D that we get from the sun or food or pills has to be changed inside our body.

The Kidney Twins are the ones that know how to do this so our bones can use vitamin D.



11. The Kidney Twins help out in our body in so many ways. They help our bones stay strong.

The Kidney Twins change vitamin D into active vitamin D to help our bones grow strong. They are the ones that know how to turn on the switch.

Ok, we have talked about calcium, phosphate, vitamin D and active vitamin D – what's left?

What was the last ingredient for healthy bones?

Physical Activity!



12. Being active is an important ingredient for our recipe for strong bones. How do you think we get that in our bodies?

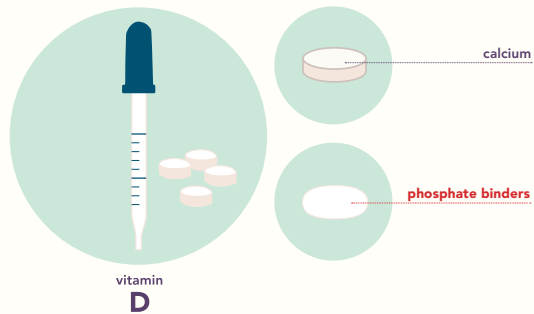
Of course we can't eat physical activity – we have to do it!

Can you tell me something you like to do where you are moving lots and you breathe fast?

If not, what could you try doing? *To parent:* eventually we want to be doing 60 minutes of physical activity every day. This can be something the whole family can do together.

* **Facilitators Note:** Set target with family: work towards 60 minutes of moderate to intense activity each day. (can reference participation website)

13



If we cannot get the right amount of the ingredients for our Strong Bone Recipe in our food, sometimes we need **medicine**.

13. Sometimes, we cannot get all the ingredients for our Strong Bone Recipe we need through the food that we eat. Sometimes we have to take pills.

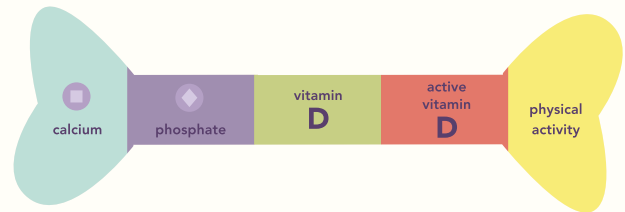
But there is no pill for physical activity! That is something we have to do.

But for the other ingredients, sometimes we need medicines.

- * **Facilitator Note:** sprinkle adherence strategies into content as appropriate

14

Remember, we need these ingredients for strong bones!



14. So, let's look at this bone together: what are the ingredients for strong healthy bones?

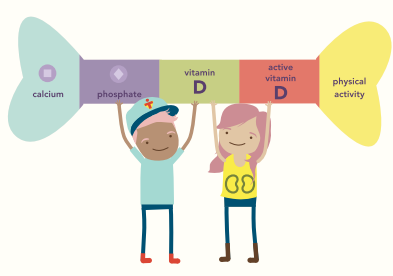
See if child can name them.

Review Parent and Caregiver Resource.

ADOLESCENT LEARNING

3. ADOLESCENT LEVEL

9. BONE HEALTH



RESOURCES MENU

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ADOLESCENT LEARNING OBJECTIVES

Remember ... many adolescents can reason abstractly and think in hypothetical terms

The Adolescent will be able to discuss:

- a) same as school age and
- b) there is a recipe just for strong bones
- c) the ingredients for their recipe
- d) how to check the ingredients
- e) that s/he has control over the ingredients through real food, being active and medicines
- f) how their body feels if there is not the right amount of the key ingredients and your kidneys are having trouble keeping balance:
 - weak bones which can bend and break
 - red eyes
 - itchiness
 - less growth than expected

Possible activities include:

MY APPROACH

1. Where is this family at? (Stages of Change)
2. Acknowledge what the adolescents say and do.
3. Model attitudes, ways of approaching problems and behaviours towards others rather than telling them.
4. Ask questions to provoke thinking; describe pictures.
5. Guide, do not dictate. Youth want info so they can make their own decisions.
6. Be patient. Don't be discouraged if your first offers of support are turned down.
7. Give opportunities to use strategic thinking, reasoning and problem solving.
8. Let them do some evaluation and monitoring of their understanding.
9. While your time is limited, try not to give children and family time to think about the material and messages.

LEARNING SUPPORTS

Have you got the Learning Supports you might want to use? Copy of activity sheet

1

Our bodies have a recipe for Strong Bones.

The recipe has 5 main ingredients: calcium, phosphate, vitamin D and active Vitamin D and ...

... don't forget **physical activity!**

1. Today we are going to talk about Bone Health. Having strong bones make you grow better and get stronger. We each have our own recipe for strong bones.

Do you know what a recipe is?

A recipe is a list of ingredients and instructions for making something.

For example, if you are going to make a cake or bake bread or make bannock, you need to know the ingredients you need and you need instructions about what to do with the ingredients.

We are going to talk about how you get the ingredients you need for strong bones.

2

Our **Kidney Health Team** is always checking the amounts of each ingredient in the recipe.

They check the amounts of the ingredients through **blood tests**.

The amount of each ingredient is always changing so we have to have blood tests done regularly.

LAB RESULTS

calcium: OKAY

phosphate: TOO MUCH

vitamin D: NOT ENOUGH

*PTH: HIGH

*PTH test tells us if you have enough active vitamin D

2. The ingredients we need for strong bones are always changing in our bodies so we test your blood regularly.

The blood tests tell us how much of each of these ingredients you have in your body.

We know if you have too much or not enough of some ingredients.


Optional learning:

PTH is short for parathyroid hormone. PTH increases when you don't have enough active Vitamin D in your body.

Parathyroid hormone (PTH) is a hormone produced by the parathyroid gland. PTH helps to keep the right balance of calcium, phosphate and vitamin D to keep our bones strong. The kidney is important for controlling the amount of PTH. Too much PTH, which can happen with chronic kidney disease, can cause bone disease. There are blood tests that can tell the amount of PTH in your blood.

3

The Kidney Health Team will adjust our **medicines** to get the right amount of the main ingredients for our Strong Bone Recipe.



What happens if we don't have the right amount of some ingredients for Strong Bones?

Your bones can get weak and you might not grow as well.

I've been taking 3 of these **pills**.

That's great because everything is just right – all with green check marks now!

LAB RESULTS	
calcium:	GOOD ✓
phosphate:	GOOD ✓
vitamin D:	GOOD ✓
PTH:	GOOD ✓

3. If you don't have the right amount of the ingredients for your recipe, we might suggest you eat differently. We might also adjust pills and medications.

You might have too much of some ingredients and not enough of others.

We keep checking your blood work to see how much of the different ingredients you have.

4

Will I notice anything if I do not have the right amounts of the main ingredients for strong bones?

Most of the time you won't notice anything but if things are really out of balance, you might notice some of these things:



WARNING

- Red eyes
- Itchiness
- Hard bumps along my veins
- Poor growth
- Weaker bones that can break

4. Your body might give us some signs if you do not have the right amount of ingredients for strong bones.


Signs to watch for include:

- having red eyes
- feeling itchy
- hard bumps along my veins
- less growth than expected
- weaker bones that can break

* **Facilitator's Note:** we will talk more about growth in that module

5


The right ingredients come from healthy food.



How do I know what is healthy food?

Foods that have many different **nutrients** are best. Some foods, like cola have too much extra sugar and too much phosphate. We need **Whole Foods**.

? Whole Foods come from plants and animals!



5. How do you decide what food is right for you?


Do you remember when we talked about foods in different groups? Green, Yellow and Red?

Most of the time, we can get the ingredients we need for strong bones through the nutrients in Whole Food.

Do you remember what Whole Food is?


6

Choose **Green Foods First**:



So I want to be careful that the foods I eat are right for my bone health. How do I do that?

It is better to get calcium and phosphate from Whole Foods to keep the best balance! **Processed Foods** can have too much added phosphate for our bodies.



6. We talk a lot about eating healthy foods, don't we? That's because our body needs the nutrients from Whole Foods. Our bones need nutrients from Whole Foods too.

Do you remember what Whole Foods are?

Whole Foods come from plants and animals. These types of food are:

vegetables • fruit • hamburger • nuts • seeds • eggs
milk • blueberries • fish • game meat (deer, elk, moose)

If we think about food made at home with ingredients that are fresh, these are foods to choose first.

home made soup • home made chicken fingers and fries
home made pizza • home made tacos • home made pasta sauce • grilled cheese sandwich using brick cheese

* **Facilitator Note:** "Whole Food" is food from plants and animals with lots of different nutrients our bodies need. Nutrients are ingredients our bodies need. We have to give our body foods that help it be strong so we can do all the things we want to do.

Optional: May be the time to begin discussion with parent / caregiver around what they have available in the home. Emphasize that our bodies need foods with more nutrients (lots of different ingredients our bodies need) which comes primarily from Whole foods.

7

WARNING
Avoid Added Phosphate

I have heard some people have to be careful about getting too much phosphate. There are a lot of processed foods that are full of phosphate that the **Doctors** say to avoid.

Some of the Whole Foods also have more phosphate. Getting advice from the Kidney Health Team **Dietitian** can really help sort that out.

colas • bottled iced tea
flavoured waters • store-bought baking
flash frozen meat • chocolate
pre-seasoned and processed meats

7. The next group is the Yellow Group. What do you do when you see a yellow traffic light?

Yellow lights mean slow down. So it's a good idea to slow down with Yellow foods. Try to eat these foods only sometimes.

Yellow Foods are foods we should only eat sometimes. Yellow Foods are usually processed with added salt, added sugar, preservatives and artificial ingredients. Because they are processed, some of the important nutrients have been removed. Yellow Foods give our bodies some of the nutrients we need.

So it's a good idea to slow down with Yellow foods. Try to eat these foods only sometimes.

Look at the picture. What foods are yellow light foods?

hot dogs • canned spaghetti • white bread • muffins
cake • dried fruit • sausages • bacon

* **Facilitator Note:** Keep in mind that foods may change categories depending on the individual patient's dietary restrictions. For more information, review opening to module 5.

Glossary Definition: Processed foods are foods that started as whole foods, but got changed in a factory to make something else. Some important nutrients get lost when food is processed. Extra sugar or salt or chemicals are added to make it taste better or look different.

8

calcium phosphate vitamin D active vitamin D physical activity

So what's with Vitamin D?

Vitamin D is a little tricky. We can eat food and take pills for Vitamin D but our body needs help to use it to make healthy bones.

Let me guess: this is where the **kidneys** come in?

Bingo!

LAB RESULTS

calcium: GOOD ✓
phosphate: GOOD ✓
vitamin D: GOOD ✓
PTH: GOOD ✓

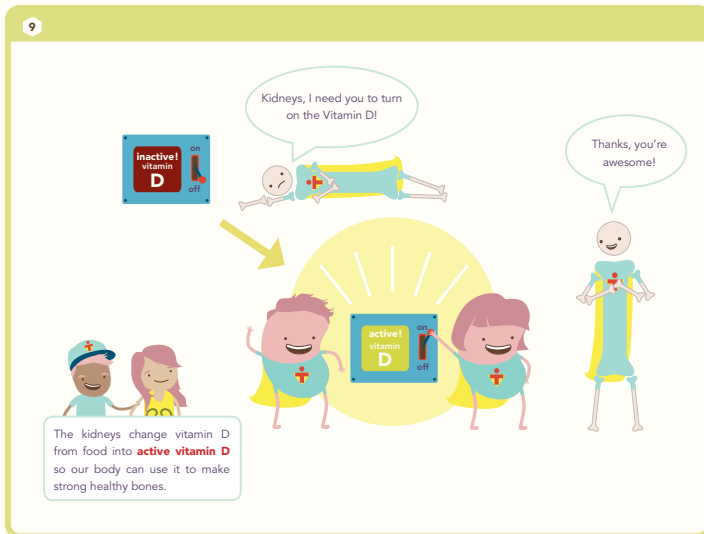
8. The kidneys help out in our body in so many ways. They help our bones stay strong too.

What's the next ingredient?

Vitamin D

The kidneys change vitamin D into active vitamin D to help our bones grow strong.

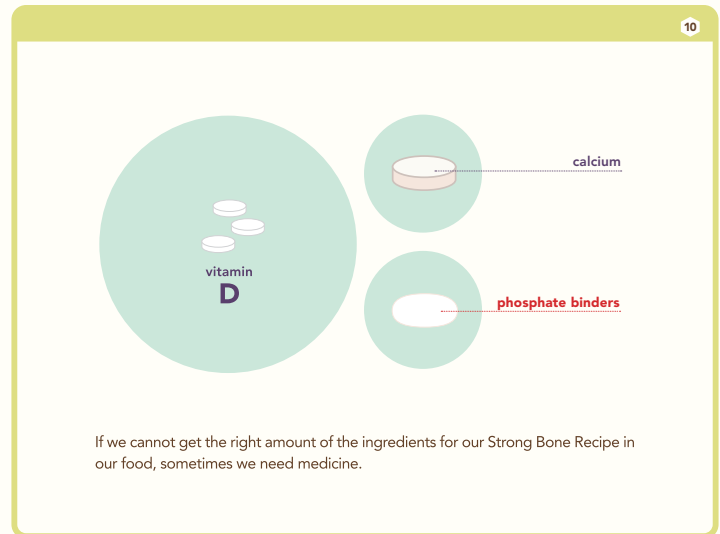
Your kidneys are responsible for changing inactive vitamin D to Active Vitamin D.



9. There are 2 concepts about kidneys and vitamin D:
1. kidneys have a special tool that turns on vitamin D (
 2. your bones need the turned on vitamin d to use calcium and phosphate

Your kidneys help keep your bones strong and healthy.

Your body needs Active Vitamin D to use calcium and phosphate to make your bones strong.



10. Sometimes, we cannot get all the ingredients for our Strong Bone Recipe we need through the food that we eat. Sometimes we have to take medicines.

* **Facilitator Note:** sprinkle adherence strategies into content as appropriate

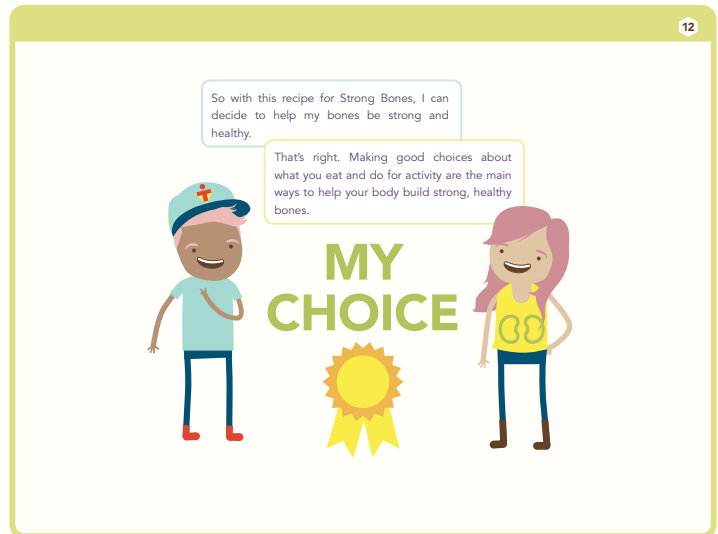


11. There is one ingredient for our Strong Bone Recipe we do not get through food. Do you remember what it is?

Yes, being physically active.

We need to be active to keep our bones strong and healthy. We should try to do some exercise every day that makes us breathe hard and makes our face go red. Do you do anything like that?

* **Facilitators Notes:** Ask parents and child to rate their activity now. Make a note and set a goal for the exercise. Ask parent / caregiver how they could support their child in trying to exercise regularly.

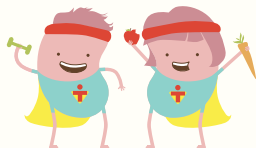


12. Your bones are the frame for your body. We want to keep them as strong and healthy as we can.

What are some of the things you can do to help your body get the right ingredients for building strong healthy bones?

- eat real nutritious foods sometimes you have to watch for foods that are high in phosphate
- exercise
- watch for signs of having too much or not enough of some ingredients
- keep kidneys healthy (food & activity)

Review Parent and Caregiver Resource.



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