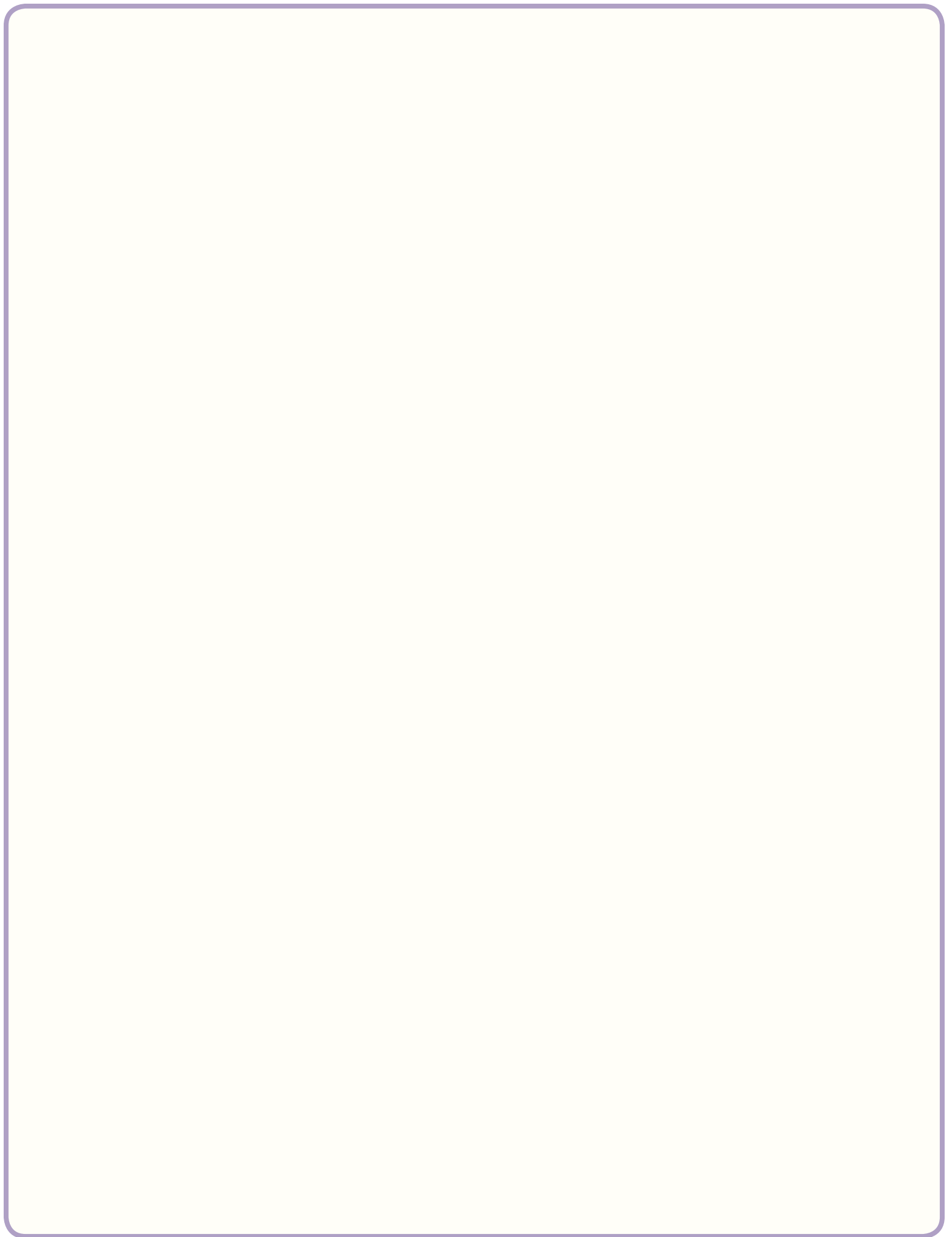




GROWTH

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



12. GLOBAL LEARNING OBJECTIVES

By the end of this session, the children and their family will be able to understand that kidney disease, food and medicine influence growth

Supports: growth curve to be included in charts; identify apps for growth curve; laminated measuring posters to be on walls in clinic room

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:

Angela Chotka, MA

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:

- a) know we check your growth at clinic
- b) understand there are supplements in addition to regular food

Possible activities include:**The Adolescent will be able to:**

- a) understand their personal recipe for growth: good nutrition, vitamin and mineral supplements and growth hormone
- b) understand that puberty will happen but might be delayed

Possible activities include:**The School Age Child will be able to:**

- a) understand there is a recipe for growth: nutritious food, vitamins, and food supplements
- b) understand there are different ways of getting nutrients in: eating healthy food; vitamin and mineral supplements; growth hormone medicine
- c) understand that good nutrition helps keep your kidneys healthy

Possible activities include: normalizing concerns about growth by showing them their growth chart; tasting supplements

The Parents and Caregivers will:

- a) identify ways to boost healthy calorie intake
- b) understand that children may not be able to eat as much because of kidney disease; breakfast is a harder meal; focus on eating what they can and enjoying family time at meals
- c) understand their child's current growth and growth potential based on seeing their child's growth curve
- d) understand that needing supplements is normal and not reflection on them
- e) understand that meal times need to be happy times and calories can enter in many ways

KEY MESSAGES

1. Genetic growth potential may be preserved by addressing factors that impede growth in CKD, including nutritional concerns and growth hormone resistance. Pubertal development may also be delayed and must be considered in determining treatment plan.
2. Metabolic demands and protein requirements may be increased in CKD. Maintaining an optimal nutrition intake is essential to maintain growth in children with CKD.
3. Other CKD co-morbidities have important effects on growth and must be controlled in conjunction with optimizing nutrition: anemia, acidosis, mineral bone disease (calcium, phosphate and PTH), and renal salt wasting. Treatment of each is considered in their respective modules.
4. Growth hormone resistance is a contributor to growth delay, and may be addressed with growth hormone treatment (daily subcutaneous injection).
5. Growth hormone testing may be ordered for children when they show signs of delayed growth, to exclude non-renal causes of growth delay. Growth hormone deficiency is not typically the cause for a child's short stature or slow growth associated with CKD. A referral to endocrine may be necessary to treat poor growth with the addition of a growth hormone supplement.
6. Growth delay risk is increased with CKD progression and advanced stage of CKD.
7. The kidneys impact on growth by their role in controlling comorbidity. The accumulation of uremic toxins in CKD results in poor appetite, nausea and delayed gastric emptying, which impact nutrition intake and absorption. Uremia also directly contributes to growth hormone resistance.
8. Diet intake assessment includes both the quality of nutrients and quantity of calories, and is the most important factor assessed in the evaluation of growth and risk of growth delay.
9. Diet supplementation with enteral (oral or NG/GT) supplements is usually required to support optimal growth. See also module on "Healthy Eating".
10. GT is very often required for treatment of under nutrition in small children, and potential need must be normalized early on.
11. Growth is measured by height (stadiometer) and plotted over time. The same measurement device should be used to track growth longitudinally.
12. Bone age relative to chronological age (wrist x-ray) can be used to determine growth potential, and will also identify mineral bone disease.
13. Growth delay may not be associated with specific physical symptoms, but children with short stature may experience social stigmatization and benefit from psychosocial supports.


TARGETS FOR FACILITATORS TO BE AWARE OF

1. Growth potential can be estimated by the mid-parental height.
2. KDOQI guidelines are used to identify specific targets for calories, protein and micronutrient intake in CKD.
3. The dietitian will provide assessment of growth and growth velocity, in progressive CKD.
4. Height percentile and velocity, from plotted growth curves, is used to identify growth delay -WHO Growth Charts.
5. Once co-morbidities that affect growth are being addressed, growth delay is determined by the absolute height percentile below a threshold or change in height crossing percentiles over time (growth velocity). This is used to indicate need for growth hormone treatment.
6. Targets for management of co-morbidities are delineated in their respective modules.

PRE-SCHOOL LEARNING

1. PRE-SCHOOL LEVEL

12. GROWTH



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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.

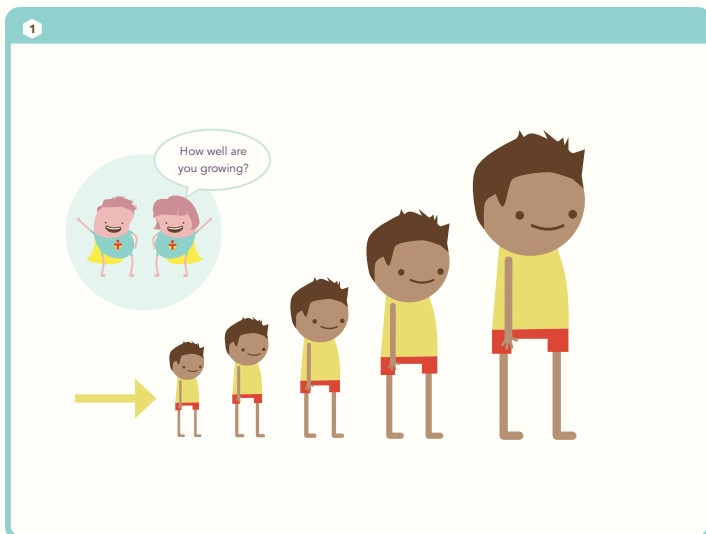
The Pre-School Age Child will be able to:

- a) know we check your growth at clinic
- b) understand there are supplements in addition to regular food

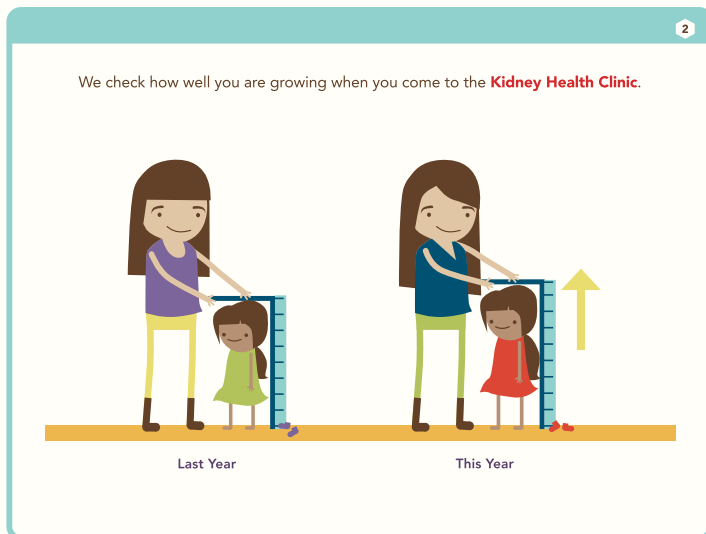
Possible activities include:

LEARNING SUPPORTS

Have you got the Learning Supports you might want to use? Growth curve to be included in charts; identify apps for growth curve; laminated measuring posters to be on walls in clinic room



1. How well are you growing? Are you getting bigger?



2. When you come to see us at clinic, we check how you are growing.

You need to stand still so we can see how much you are growing.

3



We want you to keep growing well!

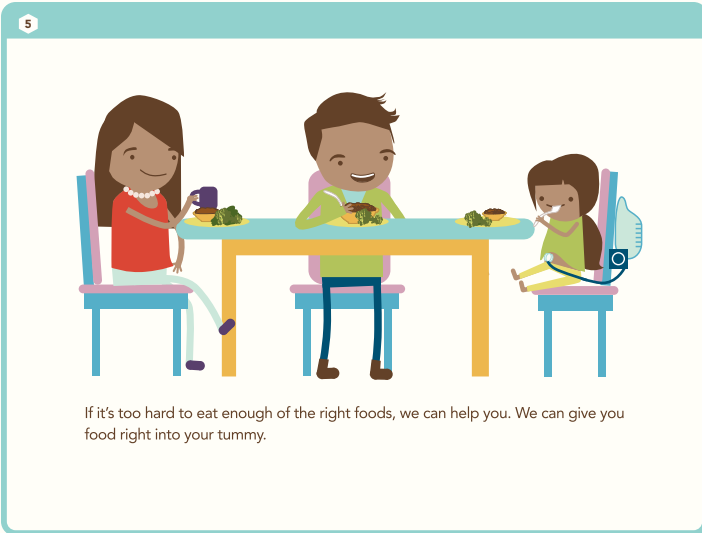
3. We want you to keep growing well. We can help.

4



Sometimes we need extra foods and drinks to help us grow better.

4. We can help you grow better by giving you extra foods and drinks.



5. Sometimes, it is too difficult to eat the right foods. We can give you the extra foods right into your tummy.

SCHOOL AGE LEARNING

2. SCHOOL AGE LEVEL

12. GROWTH



RESOURCES MENU

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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 be able to:

- a) understand there is a recipe for growth: nutritious food, vitamins, and food supplements
- b) understand there are different ways of getting nutrients in: eating healthy food; vitamin and mineral supplements; growth hormone medicine
- c) understand that good nutrition helps keep your kidneys healthy

Possible activities include: normalizing concerns about growth by showing them their growth chart; tasting supplements

MY APPROACH

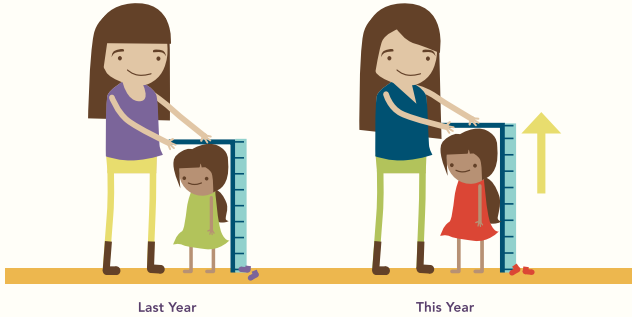
1. Where is this family at? (Stages of Change)
2. Acknowledge what children do or say.
3. Model attitudes, ways of approaching problems and behaviours towards others rather than telling them.
4. Provide information, directly giving children facts, labels and other information.
5. Ask questions to provoke 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; growth curve to be included in charts; identify apps for growth curve; laminated measuring posters to be on walls in clinic room

1

We check how well you are growing when you come to the **Kidney Health Clinic**.



1. Possible dialogue:

Today we are going to talk about growing well.

We check how you are growing when you come to the Kidney Health Clinic.

2

There is a recipe for growing well!



2. There is a recipe for growing well.

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.

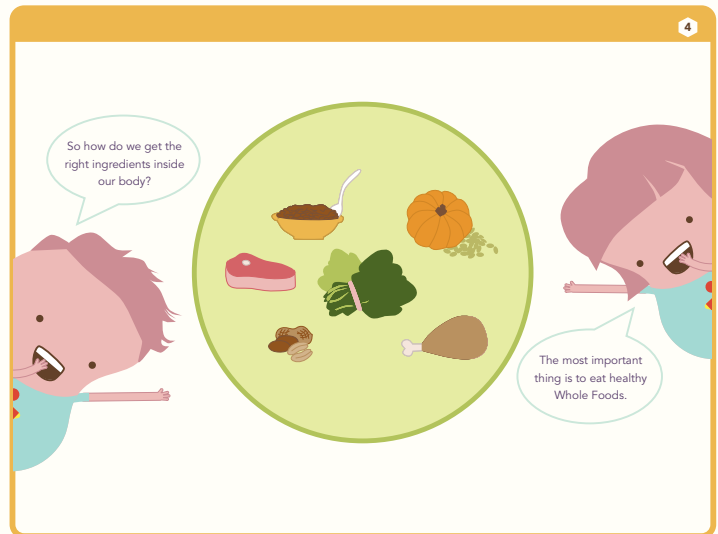


3. There are four ingredients for good growth.

Look at this picture. Can you guess what the ingredients are?

Give child time to guess. Fill in the ones they do not name.

- Whole Foods
- Food supplements
- Vitamin and mineral supplements
- Growth hormone



4. How do you think we get these ingredients for growth in our body?

There are different ways ... one way is to eat Whole Foods with lots of nutrients our body needs.

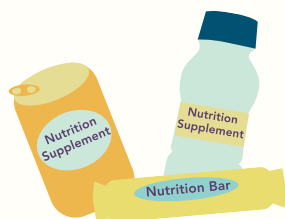
We talk a lot about eating healthy foods, don't we? Do you remember what Whole Foods are?

Whole Foods are from plants and animals.

It is best if you can eat Whole Foods most of the time because these are the foods that give your body the minerals, vitamins and nutrients it needs to work well.

(link to Healthy Eating Module)

5



But sometimes we cannot eat everything we need to grow. That's ok. There are extra foods and drinks that our **Kidney Health Team** gives us that help us get the **nutrition** we need.

5. **It's normal for some children with kidney disease to not be able to eat enough nutrients. It's not their fault.**

There are extra foods and drinks we can give you so you get the nutrition you need.

6



Sometimes we can't eat all the food that we need. The Kidney Health Team is here to help!

6. **It's ok if you can't eat all the foods you need. It happens.**

We can help.

Sometimes that means putting put supplements or extra foods inside your body through a tube.

7

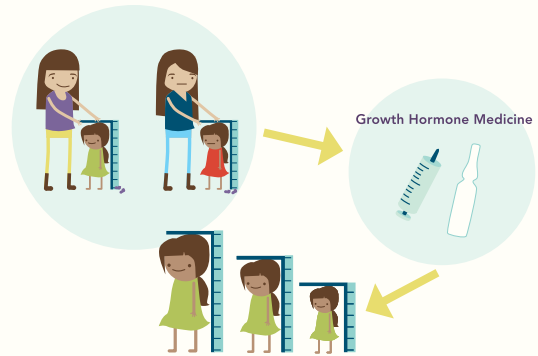


To grow well, your body also needs the right amount of **vitamins** and **minerals**. Sometimes the Kidney Health Team will suggest **vitamin** and **mineral supplements**.

7. If you cannot get all the minerals and vitamins through your food, you can take them as vitamin and mineral supplements.

Sometimes we suggest or prescribe vitamins and mineral supplements.

8

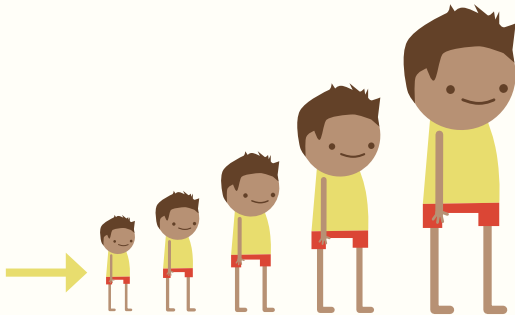


Some kids with kidney disease don't grow as well. They may need extra **growth hormone medicine** to help them grow better.

8. Some kids with kidney disease don't grow as well. We can help by giving them extra growth hormone medicine. This medicine is an injection.

9

The recipe for Good Growth is good nutrition, vitamins, minerals and growth hormone. Sometimes we get those ingredients from Whole Foods and sometimes we get them from food supplements, **pills** and growth hormone medicine.



9. Can you remember what the recipe for good growth is?

- Whole Foods
- Food supplements
- Vitamin and mineral supplements
- Growth hormone

10



Good nutrition, vitamins and growth hormone help you have healthy kidneys.
Healthy kidneys help you grow!

10. It helps us grow better when our kidneys are healthy.

We try to keep our kidneys healthy by eating Whole Foods.

Would you like to see how you are growing?

Let's look at your chart together.

Review Parent and Caregiver Resource.

UP NEXT: ADOLESCENT LEVEL

ADOLESCENT LEARNING

3. ADOLESCENT LEVEL

12. GROWTH



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:

- a) understand their personal recipe for growth: good nutrition, vitamin and mineral supplements and growth hormone
- b) understand that puberty will happen but might be delayed

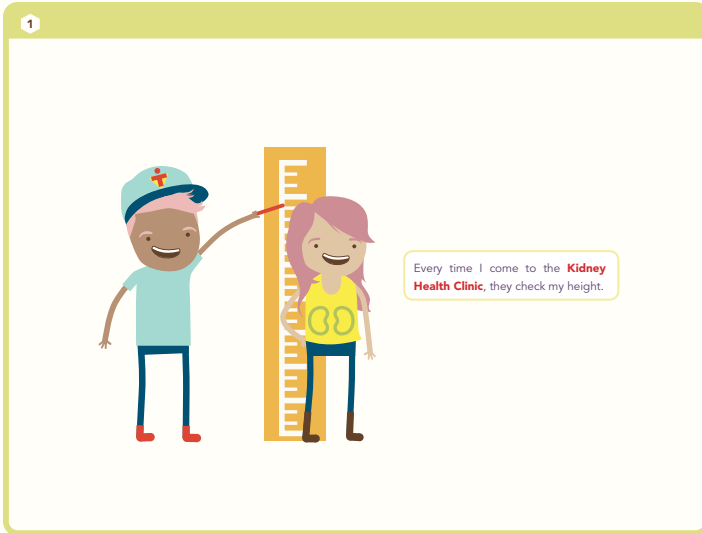
Possible activities include:

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; growth curve to be included in charts; identify apps for growth curve; laminated measuring posters to be on walls in clinic room



1. We check your height every time you come to the Kidney Health Clinic.

Do you know why?

We are checking to see how you are growing. We want you to grow well.

Today we are going to talk about helping you grow well.



2. There is a recipe with 4 ingredients for good growth.

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.

What are the ingredients for Good Growth?

- Vitamins and minerals
- Whole foods
- Nutrition supplements
- Growth hormone

3

Good **nutrition**. I think I have heard this before.

I know. They keep talking about "good nutrition." It's way more important for our body than I ever knew.



The best thing we can do for our body is to eat Whole Foods. Whole Foods come from plants and animals and have many different **nutrients** our body needs.

3. How do you think we get these ingredients for growth in our body?

There are different ways ... one way is to eat Whole Foods with lots of nutrients our body needs.

We talk a lot about eating healthy foods, don't we? Do you remember what Whole Foods are?

Whole Foods are from plants and animals.

It is best if you can eat Whole Foods most of the time because these are the foods that give your body the minerals, vitamins and nutrients it needs to work well.

(link to Healthy Eating Module)

4

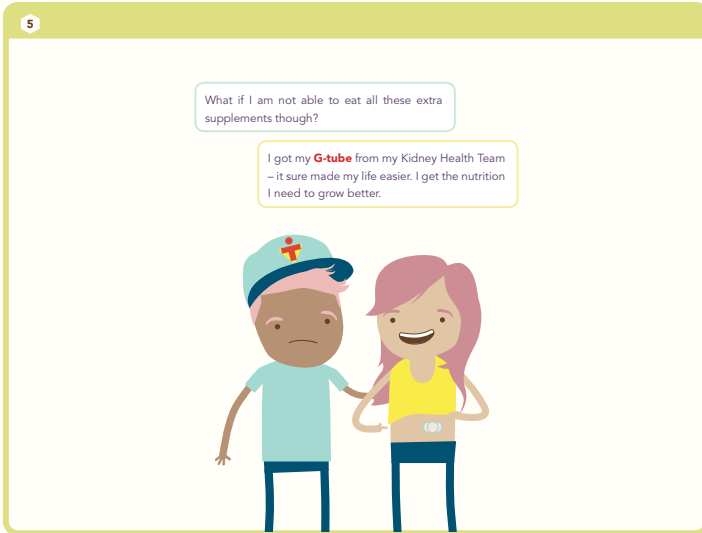
But sometimes I just can't eat all the food my body needs.

That's more common than you think. There are lots of different supplements - like nutrition bars and drinks - you can try. My **Dietitian** helped me.



4. It is ok if you cannot get all the ingredients for growth through eating. There are other ways we can provide good nutrition for your body. We can help.

We can prescribe food supplements, vitamin and mineral supplements and medicines.

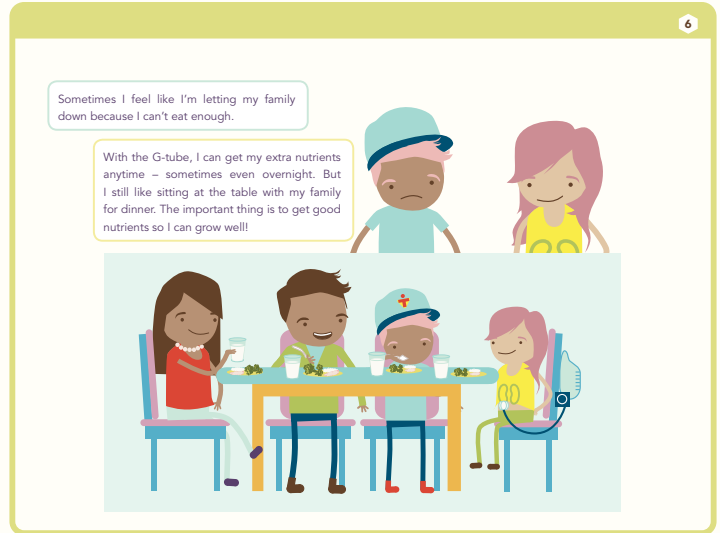


5. You don't need to feel bad if you cannot get all the nutrients your body needs through eating.

We have ways to help your body get the nutrients it needs to grow well through food supplements.

Sometimes you drink the food supplements and sometimes we put the food supplements directly into your body through a feeding tube.

And, sometimes we prescribe vitamin and mineral pills to help with nutrition.



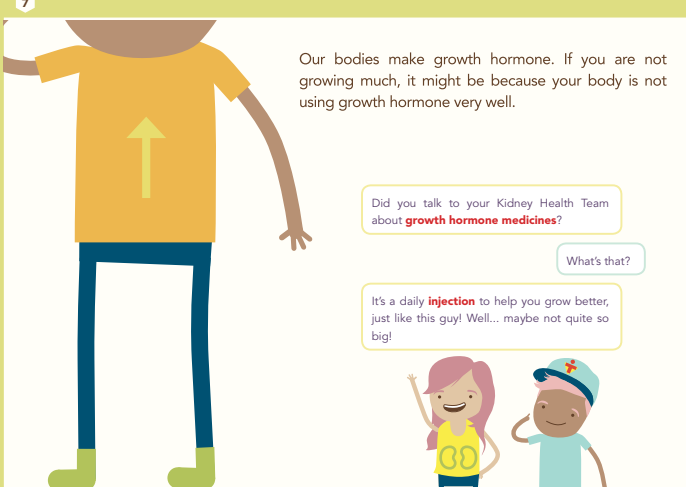
6. You and your family need to understand that you cannot always eat when your family does. Join your family at meal times even if you don't feel like eating.

There are many complicated things happening in your body that can make it more difficult to eat well. If this happens, try not to get stressed about it. There are other ways to get nutrients in your body.

The important thing is to remember to get the nutrients into your body.

Breakfast is often a difficult meal for people with kidney disease. Many people with kidney disease have a hard time eating breakfast.

7



Our bodies make growth hormone. If you are not growing much, it might be because your body is not using growth hormone very well.

Did you talk to your Kidney Health Team about **growth hormone medicines**?

What's that?


It's a daily **injection** to help you grow better, just like this guy! Well... maybe not quite so big!

7. Sometimes with kidney diseases, your body cannot use growth hormone very well.

We can check how your body is using growth hormone.

If your body needs help, we might prescribe a daily injection.

8



This is a little awkward but if I'm growing more slowly, is my body still going to change like it should?

You mean "**puberty**"?

Yeah, will I still go through "the change" like other people?

Absolutely – you might just be a bit older than some of your friends. You can talk to your Kidney Health Team about that.

8. Do you have any questions about this slide? Do you know what puberty means? It is when our body changes from being a child into an adult. A girl's body will become a woman's body and a boy's body will become a man's body. Each of us go through different changes.

You still will go through puberty but it might be later than some of your friends.

9

So there is a recipe for Good Growth but we have to be flexible about how we get the nutrition into our body.

That's right. Sometimes, we need help getting everything we need.

Ok, but I can still choose what will work best for me?

When I was going through this, I talked a lot to my Kidney Health Team about my choices and what would work for me.

Whole Foods



Vitamins and Minerals



Nutrition Supplements



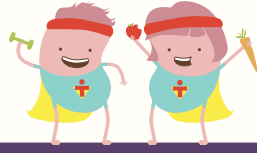
Growth Hormone



9. We all need to remember to be patient and flexible about getting the right nutrients into your body.

Over time and through trying different options, we can figure out the best ways that work for you.

Review Parent and Caregiver Resource.

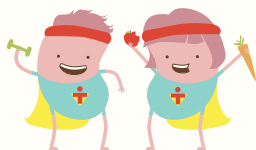


ADDITIONAL NOTES

A large, empty rectangular area with a light pink background, intended for writing additional notes. The area is bounded by a dark purple header bar at the top and rounded corners.



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>