



Type One Diabetes (T1D) Resources in West Virginia

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Objectives

- Participants will describe the pathophysiology of type one diabetes (T1D)
- Participants will identify resources for patients with T1D in WV
- Participants will understand the complexities of caring for children with type one diabetes in a camp setting
- Participants will identify resources to help adolescent patients transition to college

Action of Insulin on Cell Metabolism



Insulin



Insulin Receptor



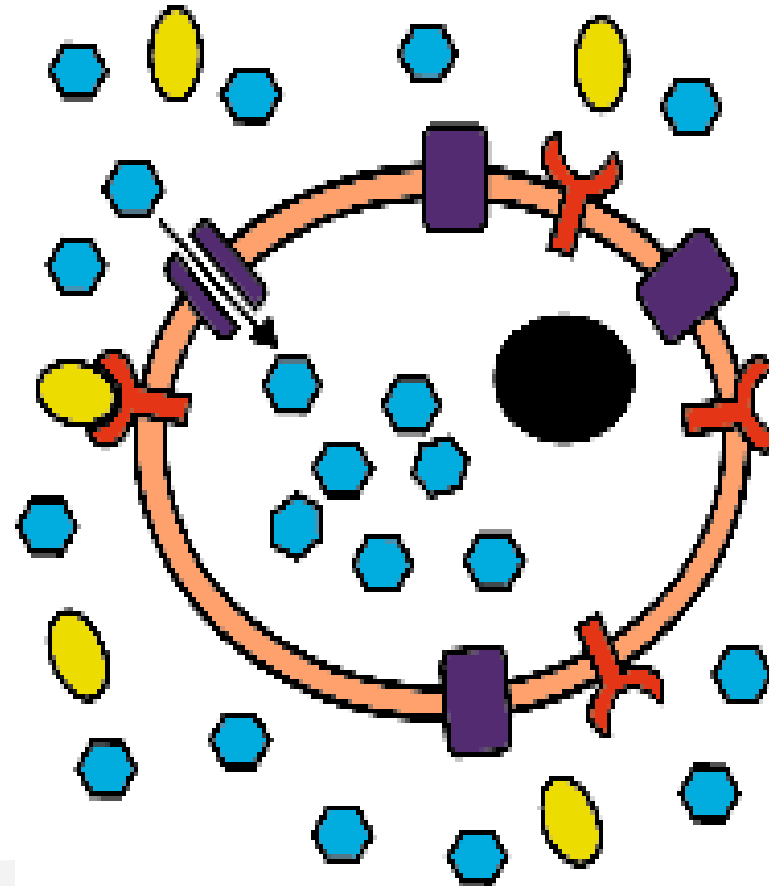
Glucose



Closed Glucose Transporter



Open Glucose Transporter



Normal Cell



What is type 1 diabetes?

- Beta cell destruction usually leading to absolute insulin deficiency
- Autoimmune disease (1970)
- 5-10% of all DM cases
- Risk factors:
 - Autoimmune
 - Genetic
 - Environmental



Type 1 Diabetes Cell



Insulin



Insulin
Receptor



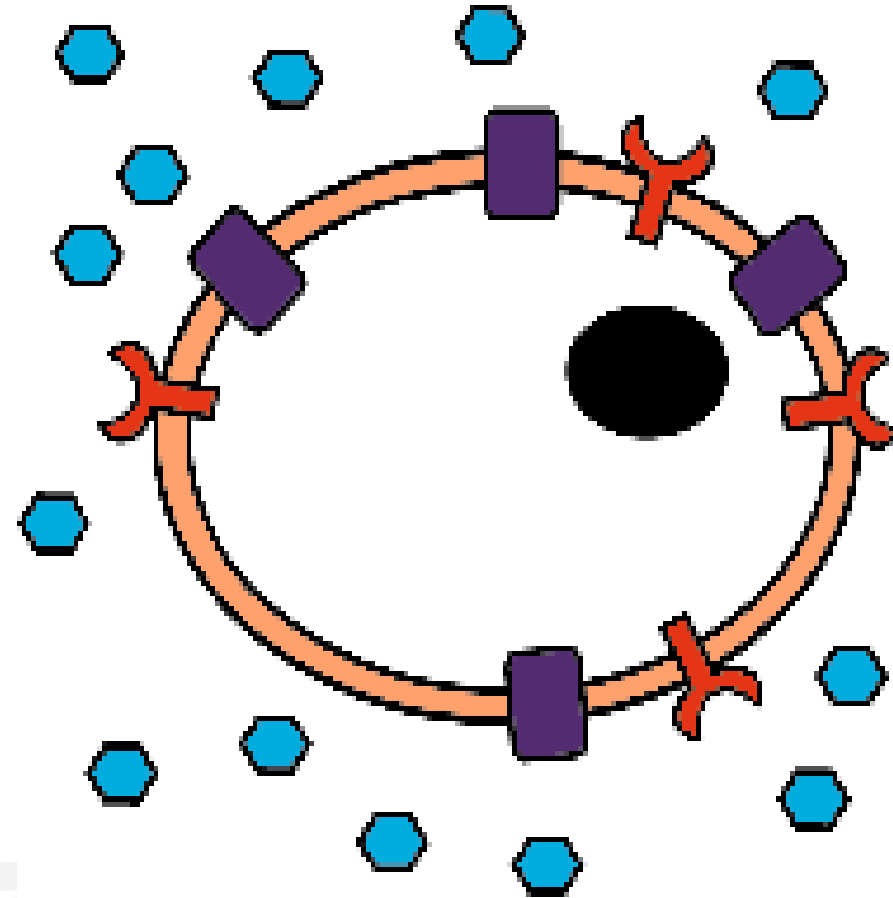
Glucose



Closed Glucose
Transporter



Open Glucose
Transporter



Type 1 Diabetes Cell

Treatment

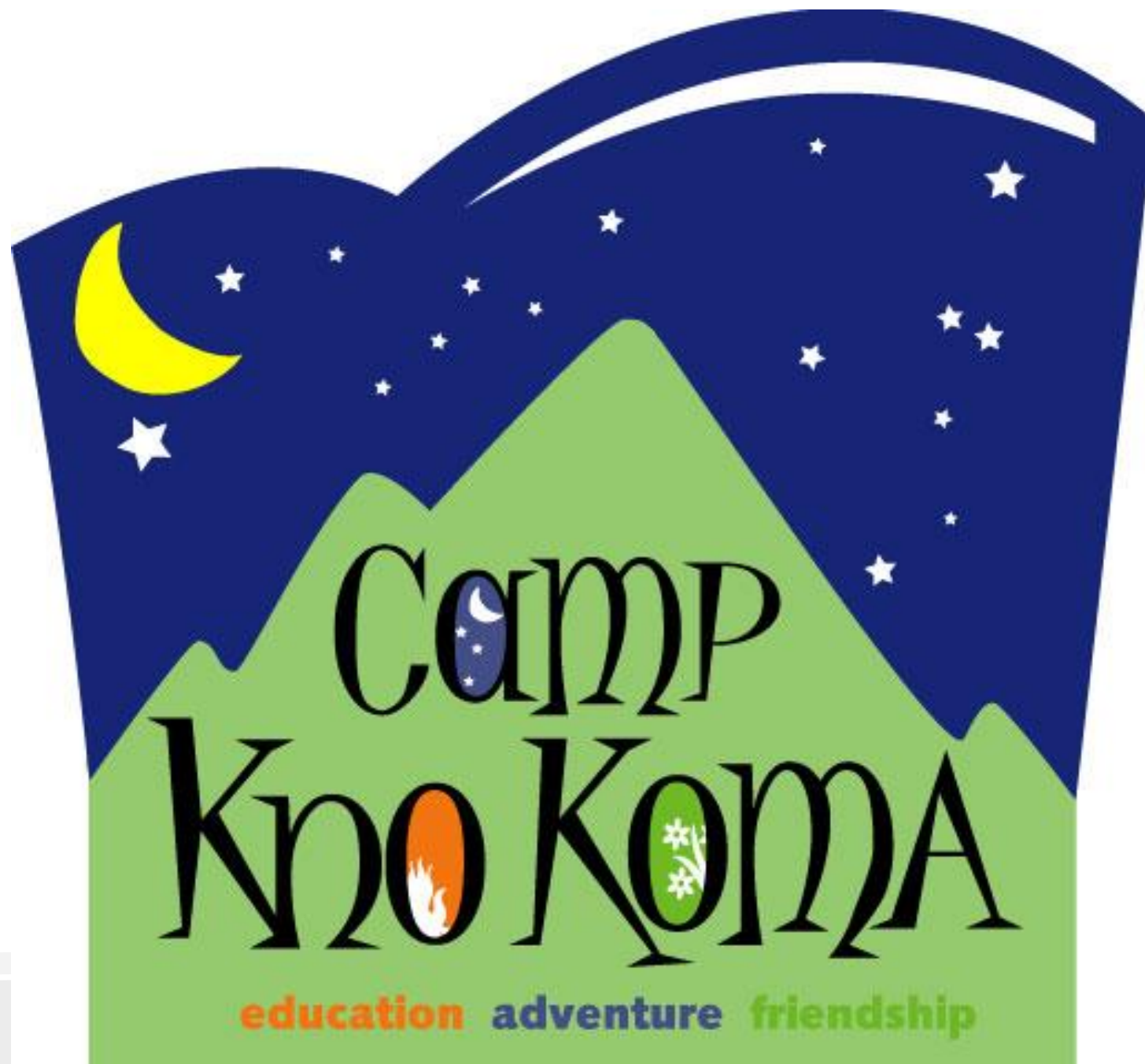
- Insulin therapy
 - Vial & Syringe
 - Insulin Pen
 - Insulin Pump
 - Continuous glucose monitors
 - “Artificial pancreas”
- Carbohydrate Counting
 - Insulin to carb ratios
 - Correction factors



Nutrition Facts	
Serving Size 1 Cake (43g)	
Servings Per Container 5	
Amount Per Serving	
Calories 200 Calories from Fat 90	
% Daily Value*	
Total Fat 10g	15%
Saturated Fat 5g	25%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 100mg	4%
Total Carbohydrate 26g	9%
Dietary Fiber 0g	0%
Sugars 19g	
Protein 1g	
Vitamin A 0%	• Vitamin C 0%
Calcium 0%	• Iron 2%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat. Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g



education adventure friendship



Our Mission

- Serve as a non-profit organization with the goal of providing Camp Kno-Koma, a summer camping experience for children with diabetes in and around the state of WV.
- 3 basic principles to a great camp experience: adventure, education and friendship. Camp Kno-Koma has remained steadfast in these principles for over 60 years.
- Physicians, nurses, dietitians, and other medical support staff and counselors will let mom and dad rest easier and have peace of mind during their child's camping adventure.
 - These health professionals realize the need for close medical supervision and they make it their # 1 priority, so the camper can make having fun their # 1 priority.



History of Camp

- August 27-September 3, 1950
- Dr. George P. Heffner
- Cliffside Camp- Alum Creek, WV
- 34 campers
 - 6-14 years old
 - 15 boys
 - 19 girls

1950 Camp Schedule

- 7am- Wake Up, Urine specimens, Insulin injection
- 8am- Activities (rowing, archery, riflery, tennis, horseback riding, crafts)
- 11am- General Swim
- 12:30- Lunch
- Rest and more activities
- 5pm- General Swim
- 5:30pm- Supper
- Free Play
- Camp fires, movie, dance



The schedule for the typical camp day was:

- 7 a.m. — Reveille; collection of urine
- 7:30 — Insulin injections
- 8:00 — Breakfast
- 8:45 — Clean-up period
- 9:15 — Cabin inspection
- 9:20 — Flag raising
- 9:30 — Handicraft and riflery
- 10:30 — Blood sugars; snack
- 11:00 — Swimming
- 11:45 — Collection of urines
- 12:15 — Lunch
- 1 p.m. — Rest period
- 2:30 — Handicraft and riflery
- 3:30 — Snack
- 4:00 — Swimming
- 4:45 — Collection of urines
- 5:15 — Supper
- 6:00 — Free play
- 7:30 — Entertainment (movies, magician,
camp fire, etc.)
- 8:15 — Collection of urines
- 8:30 — Snack
- 9:00 — Taps

1952 Glucose Testing

- Urine collected before each meal and at bedtime
 - Tested for sugar and acetone
- Two blood glucose previously at camp; little value since BG is so variable at camp





1950 Meal Plans

- Five diets calculated; only 2 were necessary
- 3 meals and 3 snacks per day
- HS snack higher in protein
- All but one camper gained weight at camp
 - 1-6 pounds





1952 Meal Plans

- 1 of 3 specifically prepared diets
- 2060-2645 kcals
 - All high cho, protein, and fat
- Each child is evaluated individually taking their previous diet and camp activity into account



Camp KnoKoma @ Camp Virgil Tate, Charleston, WV

Friday July 14, 2006

Breakfast 8:00am	Portion	Carb Choice	"g"	I ate
Juices	½ cup	1	15	_____
Cheerios	Ind	1	14	_____
Cornflakes	Ind	1	18	_____
Banana	med	2	30	_____
Milk Low fat/Skim	8 oz	1	12	_____
Yogurt (SF)		(see label)		_____
Scrambled Egg/Salsa				
Ham				
Bagel/Cream cheese	3 oz	3	45	_____
<i>Water (drink a cup)</i>				
Name _____			Total _____	

Camp KnoKoma @ Camp Virgil Tate, Charleston, WV

Friday July 14, 2006

Lunch 12 noon	Portion	Carb Choice	"g"	I ate
BBQ on Bun	3oz/1	2	30	_____
Corn	1/2 cup	1	15	_____
Garden Greens	1 cup			
Dressings (< 5 g carb)				
Fruit Cup (SF)	1/2 cup	1	15	_____
Chocolate Pudding (SF)	½ cup	1	15	_____
Milk Low fat/Skim	8 oz	1	12	_____
Name _____			Total _____	

Camp KnoKoma @ Camp Virgil Tate, Charleston, WV

Friday July 14, 2006

Mardi gras

Dinner 5:00 pm	Portion	Carb Choice	"g"	I ate
Corn Dog	1	11/2	23	_____
Ketchup/Mustard				
Red Beans 'n Rice	1/2 cup	11/2	22	_____
w/ smoked sausage				
Chips	1 bag	1	15	_____
Caesar Salad	½ cup			
Croutons	1 oz	1	15	_____
Watermelon	1 cup	1	15	_____
Cookie	3"	1	15	_____
Milk Low fat/Skim	8 oz	1	12	_____

Gluten Free Camp KnoKoma @ Greenbrier Youth Camp
 Friday July 14, 2017
Breakfast 8:00 am

Portion	Carb Choice	"g"	I ate
Orange Juice	4 oz	1	15
Banana or Pear	each	2	30
Apple or Peach	each	1	15
Chocolate Corn Chex	3/4c	2	26
Yogurt, Straw/Banana	4 oz	1	19
Yogurt, Cherry Vanilla	4 oz	1	19
Scrambled Egg/sausage	1/2 C/patty	0	0
GF Waffles	2	2	33
SF Syrup	pouch	0	4
Milk (1% or <)	8 oz	1	12
Total			_____

Name _____

Insulin: Carb Ratio
 ___unit to ___grams
 Total grams _____
 Divided by ___units
 I should take _____units
 Or
 ___Carb Choice to
 ___units of insulin
 Total Choices _____
 Multiply by ___units
 I should take ___ units

Regular

Camp KnoKoma @ Greenbrier Youth Camp
 Friday July 14, 2016
Breakfast 8:00 am

Portion	Carb Choice	"g"	I ate
Orange Juice	4 oz	1	15
Banana or Pear	each	2	30
Apple or Peach	each	1	15
Cheerios	bowl pack	1	15
Frosted Mini Wheat	bowl pack	11/2	24
Raisin Bran	bowl pack	2	27
Pancake (4")	2	1	15
SF Syrup	pouch	0	4
Yogurt, Strawberry Banana	4 oz	1	19
Yogurt, Cherry Vanilla	4 oz	1	19
Milk (1% or <)	8 oz	1	12
Scrambled Egg/MS Sausage Patty	1/2 C/1 patty	0	0
Butter/SF Jelly/Ketchup	1	0	0
Total			_____

Name _____

Insulin: Carb Ratio
 ___unit to ___grams
 Total grams _____
 Divided by ___units
 I should take _____units
 Or
 ___Carb Choice to
 ___units of insulin
 Total Choices _____
 Multiply by ___units
 I should take ___ units

Gluten Free Camp KnoKoma @ Greenbrier Youth Camp
 Friday July 14, 2017
Lunch 12 noon

Portion	Carb Choice	"g"	I ate
Top Your Tater			
Baked Potato	12 oz	4	60
Broccoli/Shredded Cheese/Sour Cream		0	0
Grilled Chicken Breast	4 oz	0	0
Lettuce Spring Mix	1 cup	0	0
Kraft Ranch/FF Italian	pkt	0	0
Baked Apples	1/2 cup	1	15
Ice Cream	1/2 cup	1	15
Milk (1% or <)	8 oz	1	12
Crystal lite lemonade, tea, water		0	0
Black beans (bar)	1/2 c	1	15
Total			_____

Name _____

Insulin: Carb Ratio
 ___unit to ___grams
 Total grams _____
 Divided by ___units
 I should take _____units
 Or
 ___Carb Choice to
 ___units of insulin
 Total Choices _____
 Multiply by ___units
 I should take ___ units

Friday July 14, 2017
Breakfast 8:00 am

Portion	Carb Choice	"g"	I ate
Orange Juice	4 oz	1	15
Banana or Pear	each	2	30
Apple or Peach	each	1	15
Cheerios	bowl pack	1	15
Frosted Mini Wheat	bowl pack	11/2	24
Raisin Bran	bowl pack	2	27
Pancake (4")	2	1	15
SF Syrup	pouch	0	4
Yogurt, Strawberry Banana	4 oz	1	19
Yogurt, Cherry Vanilla	4 oz	1	19
Milk (1% or <)	8 oz	1	12
Scrambled Egg/Sausage	1/2 C/patty	0	0
Butter/SF Jelly/Ketchup	1	0	0
Total			_____

Name _____

Insulin: Carb Ratio
 ___unit to ___grams
 Total grams _____
 Divided by ___units
 I should take _____units
 Or
 ___Carb Choice to
 ___units of insulin
 Total Choices _____
 Multiply by ___units
 I should take ___ units

Friday July 14, 2016
Lunch 12 noon

Portion	Carb Choice	"g"	I ate
Top Your Tater			
Baked Potato	12 oz	4	60
Steamed Broccoli/Shredded Cheddar/ Sour Cream		0	0
Lettuce Spring Mix	1 cup	0	0
Bleu Cheese/Ranch Lite/FF Italian		0	0
Baked Apples	1/2 cup	1	15
Ice Cream	1/2 cup	1	15
Milk (1% or <)	8 oz	1	12
Crystal lite lemonade, tea, water		0	0
Black beans (bar)	1/2 cup	1	15
Total			_____

Name _____

Insulin: Carb Ratio
 ___unit to ___grams
 Total grams _____
 Divided by ___units
 I should take _____units
 Or
 ___Carb Choice to
 ___units of insulin
 Total Choices _____
 Multiply by ___units
 I should take ___ units

Gluten Free Camp KnoKoma @ Greenbrier Youth Camp
 Friday July 14, 2017- Luau

Portion	Carb Choice	"g"	I ate
Schar Bun	1 bun	2	37
Pua'a (Pork)/Burger/Moa (Chicken)	4 oz	0	0
Ketchup/Mustard/Mayo/Pickle/Onion/Tomato/Lettuce		0	0
Honey Mustard	1 oz	0	6
BBQ Sauce	1 oz	1/2	8
Cole Slaw	4 oz	1	16
Corn on the Cobb	4" ear	1	15
Carrot/Celery Sticks	1 cup	0	0
Kraft Ranch/FF Italian	1 pkt	0	0
Pineapple	1/2 cup	1	15
Total			_____

Name _____

Insulin: Carb Ratio
 ___unit to ___grams
 Total grams _____
 Divided by ___units
 I should take _____units
 Or
 ___Carb Choice to
 ___units of insulin
 Total Choices _____
 Multiply by ___units
 I should take ___ units

Camp KnoKoma @ Greenbrier Youth Camp
 Friday July 14, 2017

Lunch 12 noon

Portion	Carb Choice	"g"	I ate
Top Your Tater			
Baked Potato	12 oz	4	60
Steamed Broccoli/Shredded Cheddar/Sour Cream		0	0
Pulled Chicken	4oz	0	0
Lettuce Spring Mix	1 cup	0	0
Bleu Cheese/Ranch Lite/FF Italian		0	0
Baked Apples	1/2 cup	1	15
Ice Cream	1/2 cup	1	15
Milk (1% or <)	8 oz	1	12
Crystal, lite lemonade, tea, water		0	0
Black beans (bar)	1/2 cup	1	15
Total			_____

Name _____

Insulin: Carb Ratio
 ___unit to ___grams
 Total grams _____
 Divided by ___units
 I should take _____units
 Or
 ___Carb Choice to
 ___units of insulin
 Total Choices _____
 Multiply by ___units
 I should take ___ units

Camp KnoKoma @ Greenbrier Youth Camp
 Friday July 14, 2016

Dinner 5:00 pm

Portion	Carb Choice	"g"	I ate
Bun	1	2	30
Sunshine Southwest Burger	1 patty	1	19
Ketchup/Mustard/Mayo/Pickle/Onion/Tomato/Lettuce		0	0
Honey Mustard	1 oz	0	6
BBQ Sauce	1 oz	1/2	8
Cole Slaw	4 oz	1	16
Corn on the Cobb	4" ear	1	15
Carrot/Celery Sticks	1 cup	0	0
Blue cheese/Ranch Dressing/FF Italian	1 pkt	0	0
Pineapple	1/2 cup	1	15
Sugar Cookie	1	11/2	24
Milk (1% or <)	8 oz	1	12
Total			_____

Name _____

Insulin: Carb Ratio
 ___unit to ___grams
 Total grams _____
 Divided by ___units
 I should take _____units
 Or
 ___Carb Choice to
 ___units of insulin
 Total Choices _____

Gluten Free

Vegetarian

Camp KnoKoma @ Greenbrier Youth Camp
 Friday July 14, 2017- Luau

Portion	Carb Choice	"g"	I ate
Dinner 5:00 pm			
Bun	1	2	30
Pua'a (Pork)/Burger/Moa (Chicken)	4 oz	0	0
Ketchup/Mustard/Mayo/Pickle/Onion/Tomato/Lettuce		0	0
Honey Mustard	1 oz	0	6
BBQ Sauce	1 oz	1/2	8
Cole Slaw	4 oz	1	16
Corn on the Cobb	4" ear	1	15
Carrot/Celery Sticks	1 cup	0	0
Blue cheese/Ranch Dressing/FF Italian	1 pkt	0	0
Pineapple	1/2 cup	1	15
Sugar Cookie	1	11/2	24
Milk (1% or <)	8 oz	1	12
Total			_____

Name _____

Insulin: Carb Ratio
 ___unit to ___grams
 Total grams _____
 Divided by ___units
 I should take _____units
 Or
 ___Carb Choice to



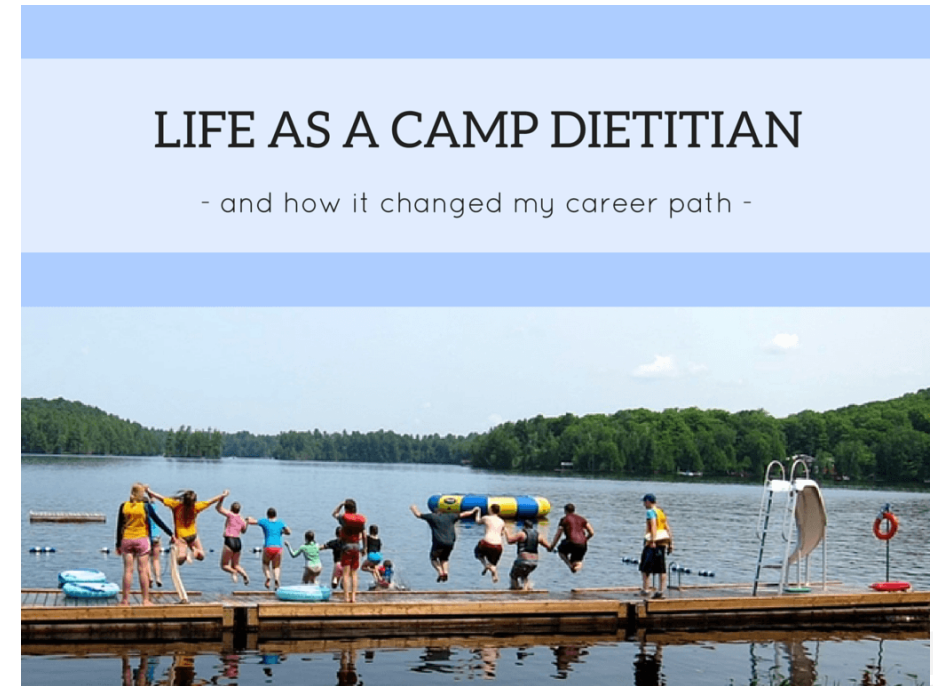
Camp Locations

- Camp Cliffside- Springfield, WV (1950)
- Camp Camelot- Kanawha County
- Camp Caesar- Cowen, WV (1992-2000)
- Camp Russell- Wheeling, WV (2000-2002)
- Camp Virgil Tate- Charleston, WV (2003-2009)
- Greenbrier Youth Camp- Anthony, WV (2010-Present)



Dietitians at Camp

- Dr. Sue Linnenkohl & Interns
- Richard McGinnis
- Eloise Hollen- 2002 to 2013
- Mallory Mount- 2014 to Present



How RDN's Can Change Lives Through Education

- Meal planning at meals
- Carb Counting at meals
- 30-minute education sessions
 - What are carbs?
 - MyPlate
 - Carb Counting
 - Activity
 - Get involved!
- Treatment of low blood sugars & how to prevent
- Allergies & Celiac Disease
- "Teachable moments"





Type 1
College
Diabetes
Network at
Marshall
University





Meet Our Officers

- Haley Whiteman and Heather Hardyman – Co-Presidents
- Abigail Saxton – Treasurer
- Megan Chafin – Secretary
- Paige Rollins – Social Media Chair
- Advisor – Mallory Mount, MS, RD, LD, CDE



What is the College Diabetes Network?



- The College Diabetes Network (CDN) was created out of a glaring need young adults with type one had been experiencing for years, and has become a hub of resources, support, and understanding for this underserved population.
- CDN is singularly focused on providing young adults with T1D the peer connections they value, and expert resources they need, to successfully manage the challenging transition to independence at college and beyond.



Why Start a Chapter at MU?

- The Type 1 College Diabetes Network at Marshall University (T1CDN@MU) is a new student organization offering support and advocacy to students with type 1 diabetes.
- The mission of T1CDN@MU is to provide type 1 diabetes advocacy to promote a friendly campus environment for all students living with type 1.



The Start-Up Process

- Establish advisor and officers
- Create bylaws
- Tax ID number
- Contact Disability Services and Student Affairs
- Apply for funding with Student Government Association
- Link to feature on JDRF
website: <https://www.jdrf.org/westvirginia/2018/09/07/supporting-our-students-tid-network-at-marshall-university/>



Goals for 2018-2019 Academic Year

1. Get students involved.
2. Establish low stations across campus for students when they have low blood sugar, fatigue, and have forgotten snacks.
3. Establish a “Buddy System” consisting of a group of four members; two members without type one "mentor" and two members living with type 1 "peer". This mix will allow for support, friendship, and assistance when in need.



Common Challenges for Students on Campus Living with T1 Diabetes

- Dining hall eating
- Exercise
- Creating a plan for “supplies”
- Having a talk with your roommate and friends
- Finding accommodations
- Drinking alcohol
- Snacks and backup snacks



How can you make your campus more T1D friendly?

- Low stations
- Flyers
- Chalking on campus
- Tabling Events
- FUN!
- Education



Lows Stations



- Two Low Stations established on campus currently
- Two faculty members who have children with T1D
- Locations include Old Main and the Science Building
- Working with Student Affairs and Sodexo to establish more low stations on campus



TYPE 1 COLLEGE DIABETES
NETWORK @ MARSHALL
UNIVERSITY

Candy-Free Valentine's Day

Printable Valentine's Day bookmarks are a great alternative to the traditional Valentine candy exchange. These special bookmarks can make reading time more enjoyable. Here's how to print them:

<https://www.t1college-diabetes-network.com/valentines-day-bookmarks-candy-free-valetines/>



Get a print, copy, paste, all book keys featured below this link to learn how to make it:
<http://www.t1college-diabetes-network.com/valentines-gifts-ideas-recipes/>



When you're all a few minutes apart, make a gift for your kids to give out at Valentine's. Here's how to make it:
<https://www.t1college-diabetes-network.com/valentines-gifts-ideas-recipes/>



Looking for a way to have fun and get kids moving? This Valentine's idea is sure to please. Jump ropes are enclosed in baggies with tags that read "You Make My Heart Skip a Beat!" Get the printouts and instruction here:
<https://www.t1college-diabetes-network.com/valentines-day-gifts-ideas-recipes-what-my-heart-skips-a-beat/>



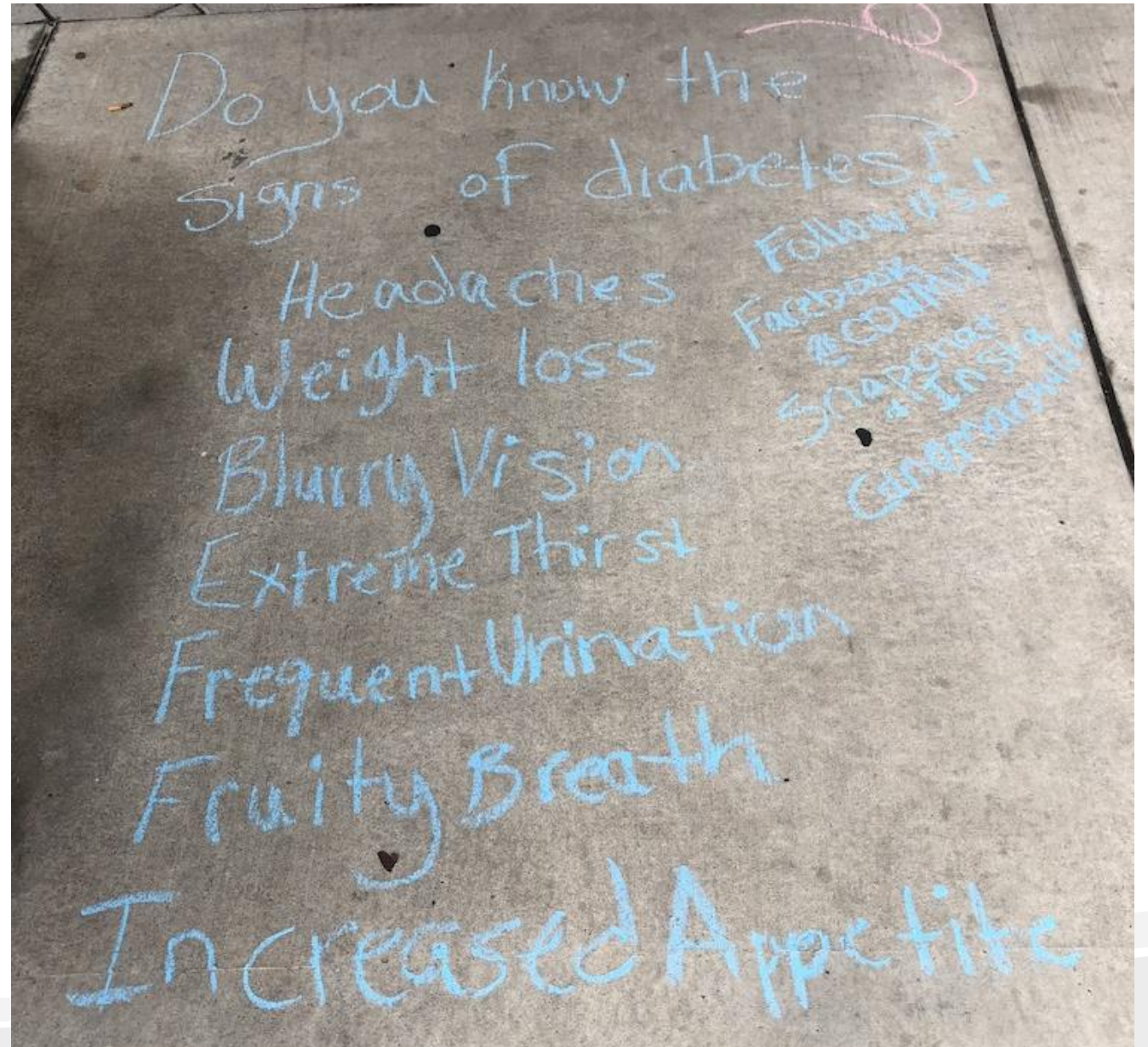
Let us show you how to enjoy a candy-free Valentine's night out!

1. Relax! Schedule a massage.
2. Enjoy a night out to the movie theatre.
3. Go to the gym together.
4. Watch the sunset or rise.
5. Plan a vacation.
6. Have a Netflix night in.
7. Go bowling.
8. Go roller blading/skating.
9. Plan a fun scavenger hunt at a mall.
10. Enjoy an art class or pottery decorating.
11. Enjoy a cooking class at Huntington's Kitchen.
12. Go hiking or biking.
13. Learn a new board game or card game together.
14. Go indoor put-put golfing.
15. Attend a local museum.

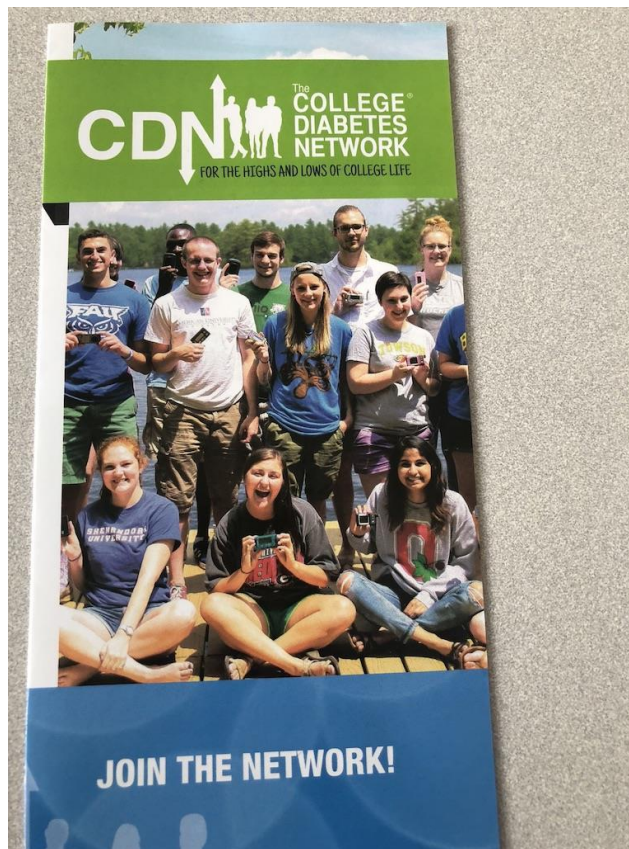


Chalking on Campus





Tabling Event Supplies

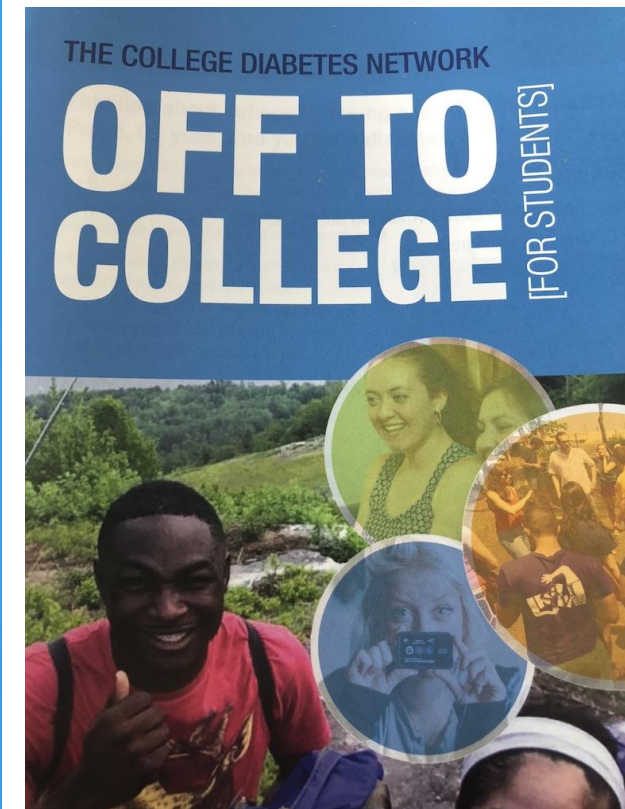


STOP AND CHECK

Do you have...

- ✓ insulin in your pump
- ✓ a low treatment/
glucagon pen
- ✓ glucometer
- ✓ back-up insulin pen
and needles
- ✓ fully charged pump
- ✓ extra pump site

•CDN Marshall Campus•





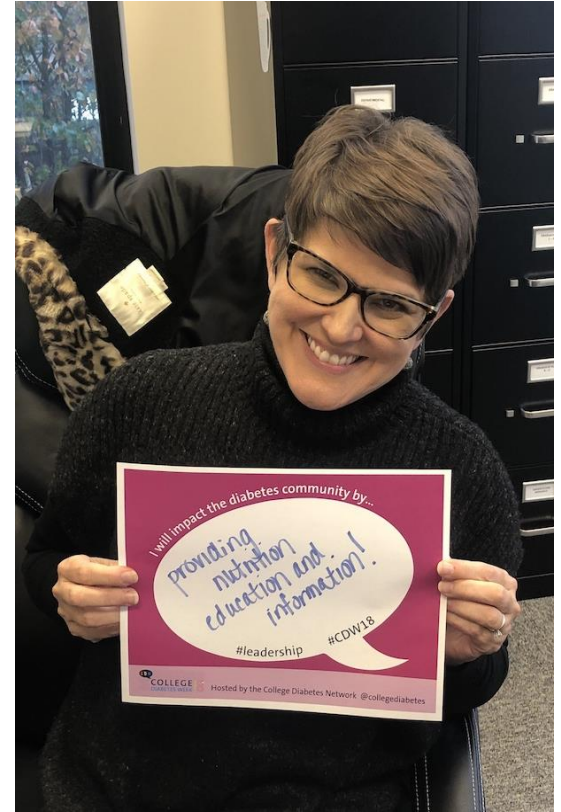
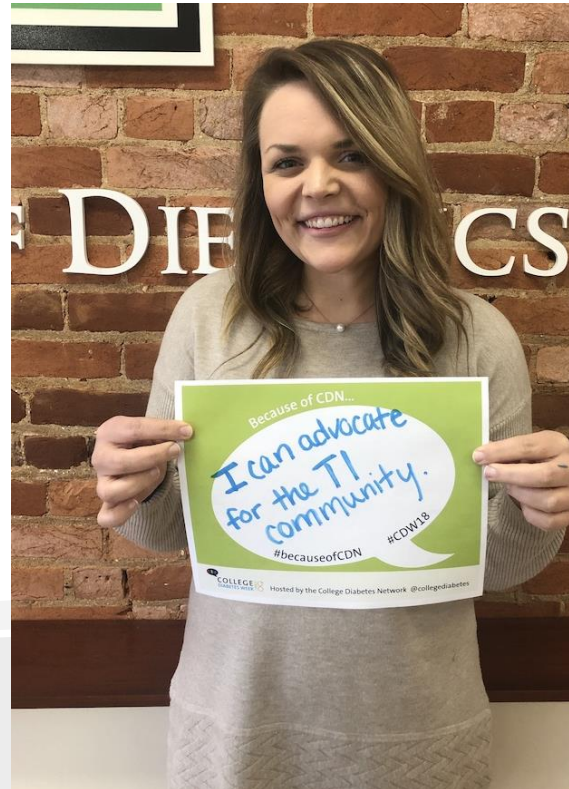
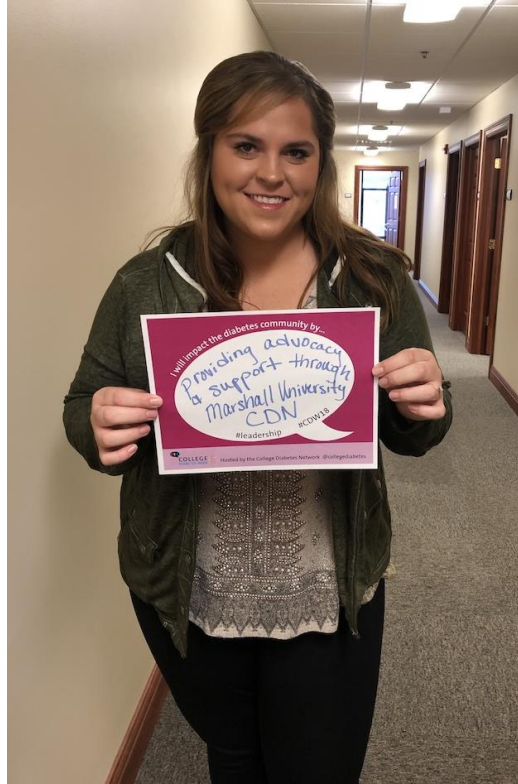
Green and White Day/Orientation



FUN!



Advocacy





Type 1 Opportunities in WV

- Camp Kno-Koma
- JDRF Family Weekend
- College Diabetes Network @ MU



What We've Accomplished

- JDRF walk – to come in May!
- Diagnosis bags
- Low Stations
- Partnering with Student Affairs and Student Government Association



How to Get Involved in a CDN Chapter

1. Visit the CDN website: collegediabetesnetwork.org/chapters
2. Join or start a Chapter
3. Search for a Chapter on the website.
4. Contact CDN staff at: chapters@collegediabetesnetwork.org



Why Get Involved in a Chapter

- Connect with other students who get it
- Have a friend to call
- Learn about local resources
- Gain leadership experience
- Participate in community service projects
- Be a part of a national community
- Inspire others!



Contact Us

Email: marshall@collegediabetesnetwork.org

Phone: Haley Whiteman, Co-President

(304) 838-0924

Heather Hardyman, Co-President

(740) 727-8436



Social Media Handles

- Instagram @cdnmarshallu
- Facebook www.facebook.com/cdnmu
- Twitter @CDNMarshallU
- Snapchat cdnmarshallu



How Does this Relate to You, the RDN?

- Clinical RDNs can educate college aged patients about College Diabetes Network and encourage them to find a chapter.
- Need to learn more about type 1 diabetes?
- How can we make it relate to you?
- Discussion



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- <http://www.marshall.edu/home/index.html>
- Mallory Mount
- Steven Norman
- Cindy Gay