OFF TO COLLEGE

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TOPICS COVERED

• DEFINITION OF EMERGING ADULTHOOD
• PREPARING YOURSELF FOR TRANSITION
• IF YOU CHOOSE TO DRINK BE SAVVY ABOUT THE CARBS IN ALCOHOL
• TIPS FOR STAYING SAFE WHILE DRINKING
• GUIDELINES FOR TAKING YOUR INSULIN WHEN DRINKING
• OTHER
DEFINITION OF EMERGING ADULTHOOD

• Psychologist Jeffrey Arnett proposed a hypothetical phase of life span which encompasses late adolescence and early adulthood.

• Distinct period between 18 and 25 years, characterized by ‘identity exploration, instability, self-focus, and feeling in-between’.

• Arnett called this period ‘roleless role’ because emerging adults do a wide variety of activities and not constrained by any kind of “role requirements”.
CHALLENGES OF YOUNG ADULTHOOD

UNIQUE CHALLENGES:

• MOVING AWAY FROM HOME WITH INCREASING RESPONSIBILITY AND INDEPENDENCE
• INCREASED FINANCIAL INDEPENDENCE
• CHANGES IN PEER GROUPS AND OTHER RELATIONSHIPS
• INCREASED ACCESS TO ALCOHOL
• FEWER FAMILY RESTRICTIONS OR MONITORING
WHAT TO THINK ABOUT BEFORE THE MOVE

• CDN – COLLEGE DIABETES NETWORK
• SCHOLARSHIPS AVAILABLE
  HTTPS://COLLEGEDIABETESNETWORK.ORG/CONTENT/FRESHMAN-SCHOLARSHIPS
• FIND OUT ABOUT CAMPUS HEALTH CARE CENTER, CHECK OUT AVAILABLE DIABETES
  RESOURCES – ASK ABOUT OTHER STUDENTS ON CAMPUS WITH DM, IF CENTER
  PROVIDES AND FAMILIAR WITH DIABETE CARE
• REGISTER FOR DISABILITY/AUXILIARY SERVICES
• DO YOU NEED TO ESTABLISH CARE WITH A NEW ENDOCRINOLOGIST CLOSER TO
  COLLEGE OR TRANSITION TO ADULT CARE
TRANSITION TO ADULT CARE

• TRANSITION TO SELF-CARE/ REDUCTION IN PARENTAL AND HEALTHCARE SUPERVISION – START AT LEAST A YEAR PRIOR TO TRANSITION

• INCREASE IN SELF-ACCOUNTABILITY – MASTER YOUR DIABETES SELF-MANAGEMENT SKILLS

• RESPONSIBILITY FOR ONE’S OWN HEALTH CARE OPTIONS (GET IN CHARGE OF DOCTORS APPOINTMENTS, MEDICATIONS, MEDICAL DEVICES, MEDICAL LETTERS FOR COLLEGE ACCOMMODATIONS, ETC.).

• SELF-CARE BECOMES AN AUTOMATIC PART OF YOUR DAILY ROUTINE – EASY TO GET BURNT OUT BY NEW DEMANDS

DON’T LET THIS HAPPEN:

• DON’T VIEW LAPSES AS A SIGN OF FAILURE

• EVERYONE GETS ON TRACK AT A DIFFERENT PACE

• DO NOT BE AFRAID TO DISCUSS TRANSITIONAL CHALLENGES

• ALCOHOL AND ITS COVERAGE WITH INSULIN, SICK DAYS ON YOUR OWN, SEXUAL ACTIVITY
DINING AT SCHOOL

• WHAT MEAL PLAN TO CHOOSE
• DINING HALLS LOCATIONS AND HOURS
• WHICH ONE PROVIDES NUTRITIONAL INFORMATION
• ARE THERE GLUTEN FREE CHOICES
• AVAILABILITY OF SNACKS AFTER DINING HALLS CLOSED – KEEPING SNACKS IN YOUR ROOM
• CAN YOU HAVE FRIDGE IN THE ROOM
• KNOW WHERE IS THE CLOSEST STORE TO GET SNACKS AND/OR PHARMACY
THINGS TO KEEP IN YOUR ROOM

- Haribo Goldbären
- Life Savers
- Smarties
- Glucose tablets
- Minute Maid 100% Juice packets
- Insta-Glucose gel
TO DO LIST

• **PLAN FOR SUPPLIES** – HOW AND WHO TO ORDER, WHERE TO KEEP (LIMITED SPACE IN DORM ROOM), RE-STOCKING PLAN, WHICH ONES, BACK UP SUPPLIES, CHECK OUT DORM MAIL ROOM AND HOW THE PACKAGES HANDLED, HOW TO YOU GET NOTIFIED ABOUT PACKAGE ARRIVAL

• **BACK UP SUPPLIES** – EXTRA METER, STRIPS, KETOSTIX, LONG ACTING INSULIN, INSULIN PENS (WHERE TO STORE), INSULIN SYRINGES

• **EMERGENCY SUPPLIES** – KETONE STRIPS, KETOSTIX, GLUCAGON, EMERGENCY ID (HERE ARE JUST A FEW OPTIONS: [HOPE PAIGE DESIGNS](#), [ELEGANT MEDICAL ALERT](#) – KETONE STRIPS, KETOSTIX, GLUCAGON, EMERGENCY ID (HERE ARE JUST A FEW OPTIONS: HOPE PAIGE DESIGNS, ELEGANT MEDICAL ALERT, [LAUREN’S HOPE](#) – KETONE STRIPS, KETOSTIX, GLUCAGON,
TO DO LIST (CONT)

• **COMMUNICATION** – REACH OUT TO YOUR ROOMMATE ON FACEBOOK, YOU MAY OR MAY NOT WANT TO TELL BEFORE ABOUT DIABETES, SOMETIMES IT IS NOT EASY

• GET HELP ON HOW TO TELL
  HTTPS://COLLEGERECREATIONSDIABETESNETWORK.ORG/SITES/DEFAULT/FILES/HAVING%20THE%20TALK_ROOMMATE_FINAL_SMALL.PDF

• MAKE YOUR INSULIN AND CGM DEVICES FASHIONABLE AND NOT OBVIOUS
  HTTP://WWW.TALLYGEAR.COM/

• **EMERGENCY HEALTH RELATED OUTREACH LOCALLY** – WHO TO CONTACT, NEARBY HOSPITAL, STUDENT HEALTH (CHECK AHEAD OF TIME), YOUR ROOMMATE AND CLOSE FRIEND TO MAKE AWARE OF THESE RESOURCES AND EDUCATE THEM

• IMPORTANT DIABETES CONTACT INFORMATION

• HTTPS://COLLEGERECREATIONSDIABETESNETWORK.ORG/SITES/DEFAULT/FILES/IMPORTANT%20DIABETES%20CONTACT%20INFORMATION.PDF
PREPARE AHEAD OF TIME

• CHAPTER 9 ADA “GOING TO COLLEGE WITH DIABETES” – GREAT RESOURCE

• HTTP://MAIN.DIABETES.ORG/DORG/PDFS/ADVOCACY/DISCRIMINATION/GOING-TO-COLLEGE-WITH-DIABETES.PDF

• ASK ABOUT EXAMS ACCOMMODATION LETTER EARLY – OBTAINING ACCOMMODATIONS MAY TAKE FEW MONTHS, APPROVAL TAKES TIME

• HTTP://MAIN.DIABETES.ORG/DORG/PDFS/ADVOCACY/DISCRIMINATION/STANDARDIZED-TESTING_DF.PDF
AND NOW....MAIN TOPIC

ARNETT HYPOTHESIS ON SUBSTANCE USE IN EMERGING ADULTS:

• FREEDOM TO EXPERIMENT WITH SUBSTANCE AS PART OF SEEKING IDENTITY

• LACK OF EXPECTATIONS FOR ADULT BEHAVIOR

• SELF-MEDICATION IN RESPONSE TO STRESS OF MANY LIFE CHANGES

• PESSIMISM ABOUT FUTURE

5 Rules of Alcohol

1 - Open bar is a dangerous game. Respect it.
2 - Vodka can be mixed up with anything. Even more vodka.
3 - Tequila changes people.
4 - If you do something really stupid, never say that you are drunk. Unless you’re not.
5 - If he/she’s still ugly after the 7th beer, give up.
REASONS FOR ALCOHOL REPORTED BY T1D’S

• 26% OF ADOLESCENTS WITH DIABETES REPORT ONGOING OR SUSTAINED ALCOHOL USE, 35-39% INDIVIDUALS WITH NO DIABETES

• MOST COMMONLY REPORTED REASON TO DRINK – HELP TO ‘FIT IN’ BETTER WITHIN SOCIAL GROUP

• OTHER REASONS – USE AS A TOOL TO RESIST THE ‘CONTROL’ OF DIABETES ON LIFESTYLE AND IDENTITY, NOT BEING SEEN AS ‘DIABETIC’ MORE IMPORTANT THAN MAINTAINING OPTIMAL DIABETES CONTROL

• “ENABLE TO SITUATE, STRENGTHEN AND EMBODY OWN IDENTITY AS OTHER STUDENTS WITH NO DM”
Alcohol and carbs

- Whiskey 0
- Martini 0
- Bloody Mary 7
- Cosmopolitan 13
- White Russian 17
- Vodka & Orange Juice 28
- Brandy 0
- Tequila shot 0
- Margarita 8
- Gin & Tonic 16
- Rum & Coke 39

Fewer carbs → More carbs
CARB FREE ALCOHOL

• WHISKEY (NOT INCLUDING THE FLAVORED ONES LIKE FIREBALL)
• VODKA (NOT INCLUDING THE FLAVORED ONES LIKE WATERMELON OR ORANGE)
• GIN
• BOURBON
WHICH GROUP DO YOU BELONG TO?

• “ABSTAINERS” – METHODICAL MANAGERS OF OWN DIABETES, DO NOT WANT TO RISK SEVERE HYPOGLYCEMIA AND POOR GLYCEMIC CONTROL ASSOCIATED WITH ALCOHOL USE

• “LIGHT DRINKERS” – EXPERIMENT WITH ALCOHOL USE, KEEP SELF-AWARENESS OF Quantities AND CONSEQUENCES

• “HEAVY DRINKERS” – SELF-MEDICATING WITH ALCOHOL IN RESPONSE TO STRESS
<table>
<thead>
<tr>
<th>Underage consumption of alcohol is allowed...</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. on private, non alcohol-selling premises, with parental consent in 29 states</td>
<td>Alaska, Colorado, Connecticut, Delaware, Georgia, Illinois, Iowa, Kansas, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, Ohio, Oklahoma, Oregon, South Carolina, Texas, Virginia, Washington, Wisconsin, Wyoming</td>
</tr>
<tr>
<td>2. on private, non alcohol-selling premises, without parental consent in 6 states</td>
<td>Louisiana, Nebraska, Nevada, New Jersey, Oklahoma, South Carolina</td>
</tr>
<tr>
<td>5. for government work related purposes in 4 states</td>
<td>Michigan, Mississippi, Oregon, South Carolina</td>
</tr>
<tr>
<td>7. when reporting medical need due to underage drinking for another minor in 17 states and DC</td>
<td>California, Colorado, Delaware, District of Columbia, Indiana, Kentucky, Michigan, Minnesota, New Jersey, New York, North Carolina, North Dakota, Oklahoma, Pennsylvania, Texas, Utah, Vermont, Washington</td>
</tr>
<tr>
<td>8. on alcohol-selling premises, with parental approval in 10 states</td>
<td>Connecticut, Kansas, Louisiana, Massachusetts, Mississippi, Nevada, Ohio, Texas, Wisconsin, Wyoming</td>
</tr>
<tr>
<td>9. on alcohol-selling premises, with parental approval in 10 states</td>
<td>Examples: restaurant, bar, or a venue where alcohol is sold</td>
</tr>
</tbody>
</table>

| Examples: private home, private office, or private property with parental presence and consent |
| Louisiana, Nebraska, Nevada, New Jersey, Oklahoma, South Carolina |
| Drinking wine during a church ceremony |
| Medical treatment prescribed or administered by a licensed physician |
| Working undercover with police and participating in government research |
| Students in culinary school |
| Underage drinker calls 911 to report medical emergency for another underage drinker |
| Examples: restaurant, bar, or a venue where alcohol is sold |
UNITS OF ALCOHOL

• ‘SAFE’ LIMITS – 1-2 UNITS PER DAY FOR WOMEN, 2-3 UNITS PER DAY FOR MEN

• 1 UNIT = 8-10 GRAMS OF ETHANOL

• REGULAR CONSUMPTION OF SMALL QUANTITIES IS SAFER THAN ‘BINGE DRINKING’

• ‘BINGE DRINKING’ – 8 UNITS PER WEEK FOR MALE AND 6 UNITS FOR FEMALE
Blood Glucose Control

- Increasing intensity and duration of exercise
  - Sympathoadrenergic activity

Dynamic Glycogen (1/2 mol)

- ACTH Cortisol
- Gluconeogenesis (glucogenic amino acids, glycerol, lactate etc.)
- Glycogenolytic Cascade

- Hepatocytes with glucagon receptors

Blood-[Glucose]

- {fall — Rise in glucagon & fall in insulin
  rise — Rise in inulin & fall in glucagon

- Storage in fat tissue
- Oxidation in brain, erythrocytes, muscles etc.
• In diabetes – no suppression of insulin
• No change in counter-regulatory hormone levels
• Lower glycogen stores due to chronically elevated glucagon
• Impaired ability to detect the onset of hypoglycemia
• Hypoglycemia may be mistaken for intoxication by third parties
• Excess NADH blocks normal metabolic pathways =

• Acidosis from lactic acid build up and hypoglycemia from lack of glucose synthesis

• Glucose may be only marginally elevated or low
EFFECT OF ALCOHOL ON GLUCOSE IN DIABETES

- IMPAIRED ABILITY TO DETECT HYPOGLYCEMIA

- FAILURE TO SUPPRESS KETONE FORMATION (BETA-HYDROXYBUTIRATE AND LACTATE) → INCREASED RISK OF ACIDOSIS WITH NORMAL OR MILDLY ELEVATED BLOOD SUGARS

- SUPPRESSION OF GLUCONEOGENESIS → IMPAIRED RESPONSE TO HYPOGLYCEMIA

- INCREASED RISK OF HYPOGLYCEMIA THE NEXT MORNING (WHEN GLYCOGEN STORES ARE EXHAUSTED) – EFFECT CAN LAST UP TO 16 HOURS
COVERING ALCOHOL WITH INSULIN

• DUE TO THE RISK OF HYPOGLYCEMIA IF YOU ARE DRINKING DRINKS WITH HARD ALCOHOL ONLY TAKE INSULIN FOR ANYTHING OVER 10G OF CARBS

• USE 25-50% LESS INSULIN FOR COVERAGE

• IF YOU ARE NOT ON INSULIN PUMP, REMEMBER THE RULE OF UNUSED INSULIN – 20-25% OF INSULIN USED UP EVERY HOUR, THE REMAINING IS STILL ACTIVE

• CHECK BLOOD SUGAR BEFORE GOING TO BED
SERVING OF BEVERAGES

Standard drink servings

16oz red solo cup
FACTS ON ALCOHOL DIGESTION

• The liver can process one ounce of liquor in an hour, excess stays in the blood and tissues till it gets metabolized.

• Women tend to have less ADH (Alcohol Dehydrogenase) enzyme that helps to breakdown alcohol (ethanol) in the body.

• Important to keep with hydration.

• Sleep.

• And food intake affect alcohol digestion - eat high-protein foods (tofu, cheese, etc.) along with alcohol before and when drinking, and you’ll be in much more control.
HARD ALCOHOL WITH CARBS (SUGAR)

• FIREBALL
  • EXAMPLE: 11G OF CARB PER 1.5OZ

• FLAVORED RUM (TYPICALLY HAS SUGAR ADDED)
  • EXAMPLE: CAPTAIN MORGAN PARROT BAY COCONUT RUM 9.7G OF CARB PER 1.5OZ

• FLAVORED VODKA
  • EXAMPLE: WATERMELON VODKA 2G OF CARB PER 1.5OZ
LITE BEER AND CARBS (12OZ BOTTLE)

• BUD SELECT 55: 55 CALORIES, 1.9 CARBS
• MGD 64: 64 CALORIES, 2.4 CARBS
• ROLLING ROCK GREEN LIGHT: 92 CALORIES, 2.4 CARBS
• MICHELOB ULTRA: 95 CALORIES, 2.6 CARBS
• BUD SELECT: 99 CALORIES, 3.1 CARBS
• MILLER LITE: 96 CALORIES, 3.2 CARBS
• NATURAL LIGHT: 95 CALORIES, 3.2 CARBS
• MICHELOB ULTRA AMBER: 114 CALORIES, 3.7 CARBS
• COORS LIGHT: 102 CALORIES, 5 CARBS
• AMSTEL LIGHT: 95 CALORIES, 5 CARBS
• BUD LIGHT: 110 CALORIES, 6.6 CARBS
WINE 5OZ SERVING

- MERLOT: 120 CALORIES, 3.7 CARBS
- PINOT NOIR: 121 CALORIES, 3.4 CARBS
- CABERNET: 120 CALORIES, 3.8 CARBS

- CHARDONNAY: 118 CALORIES, 3.7 CARBS
- PINOT GRIS/GRIGIO: 122 CALORIES, 3.2 CARBS
- RIESLING: 118 CALORIES, 5.5 CARBS
- CHAMPAGNE/SPARKING WHITES: 96 CALORIES, 1.5 CARBS
TIPS IF YOU CHOOSE TO DRINK ALCOHOL

• HYDRATE! DRINK WISELY!
• EAT A BALANCED MEAL BEFORE DRINKING (CARBS, FAT, PROTEIN), DO NOT DRINK ON AN EMPTY STOMACH
  • TAKE INSULIN WITH YOUR MEAL
• BRING YOUR OWN MIXERS THAT YOU KNOW THE CARB COUNT ON
• BRING YOUR OWN ALCOHOL
• ALTERNATE AN ALCOHOLIC DRINK WITH WATER OR ADD DIET SODA TO YOUR DRINK
• CHECK BEDTIME BLOOD SUGAR, CHECK ACTIVE INSULIN
• SNACK WITHOUT INSULIN COVERAGE IF BLOOD SUGAR IS LESS THAN 130
• CONSIDER BASAL RATE REDUCTION BY 20-30% IF YOU WERE PHYSICALLY ACTIVE (DANCING, EXERCISING)
TIPS CONTINUED...

• MAKE SURE AT LEAST 2 OF YOUR FRIENDS KNOW YOU HAVE TYPE 1 DIABETES AND SIGNS OF HYPOGLYCEMIA AND HYPERGLYCEMIA AND HOW TO TREAT

• USE THE BUDDY SYSTEM

• AVOID JUNGLE JUICE

• KEEP YOUR EYES ON YOUR DRINK AT ALL TIME

• TRY TO DRINK BEVERAGES WITH A BOTTLE THAT NEEDS TO BE OPEN AND OPEN IT YOURSELF

• HAVE PLENTY OF SIMPLE SUGAR FOR EMERGENCY USE, REMEMBER GLUCAGON DOES NOT WORK WELL DUE TO IMPAIRED GLUCONEOGENESIS => CONSUME SUGAR FOR HYPOGLYCEMIA TREATMENT
BURNT OUT IS COMMON BUT DON’T LET IT LAST FOR TOO LONG

• 24-HOUR, 7-DAY/WEEK, 365 DAYS/YEAR, NO DAYS OFF

• “IT IS DIFFICULT, DEMANDING AND CHALLENGING CONDITION, REQUIRING DAILY ATTENTION, IT IS UPSETTING, AND IT NEVER GOES AWAY”

• IT IS COMMON TO FEEL ANGRY AND FRUSTRATED, NORMAL TO HAVE STRONG EMOTIONS

• DIABETES “BURNOUT” – PSYCHOLOGICAL CONDITION CHARACTERIZED BY CHRONIC FRUSTRATION AND FEELINGS OF FAILURE, WHICH MAY NEGATIVELY AFFECT GLYCEMIC CONTROL VIA THE EFFECTS OF DISTRESS ON SELF-CARE BEHAVIORS.

• YOU ARE NOT ALONE

• UP TO 3 MILLION YOUTH AND ADULTS IN THE US ARE LIVING WITH T1D

• 85% ADULTS
THERE ARE GOOD AND BAD DAYS

• “...SO IT IS A PAIN, DIABETES IS NOT EASY, BUT WHEN YOU MAKE DIABETES MANAGEMENT A PART OF YOUR DAILY RITUALS, OVERTIME THE TASKS BECOME A PART OF YOUR ROUTINE”.

• REMEMBER THAT PERFECTION IS NOT THE GOAL, NO ONE CAN BE PERFECT

• WHEN YOU HAVE A BAD DAY, BLAME THE DIABETES BUT ATTEMPT TO MAKE IT BETTER THE NEXT DAY

• “GOOD THAT I CHECKED MY BLOOD SUGAR, BECAUSE I WAS NOT AWARE THAT I WAS RUNNING HIGH. I CAN NOW TAKE ACTION”.

• KNOW THAT YOU ARE A STRONG PERSON, BELIEVE IN YOURSELF, REACH OUT TO OTHERS

• “I HAVE COME TO ACCEPT THAT IT IS A PART OF ME, RATHER THAN A SERIES OF BLOOD SUGAR NUMBERS AND LAB RESULTS. I KNOW THAT I AM NOT ALONE, AND I CAN THINK ABOUT DIABETES IN A MORE HEALTHY AND EFFECTIVE WAY”.
THE LAST BUT NOT LEAST

• BEING SICK AWAY FROM HOME AND FAMILY
• FEEL SICK AND BLOOD SUGAR OVER 300 – CHECK KETONES
• GIVE YOURSELF INSULIN BOLUS, DRINK PLENTY OF WATER (NON-SUGAR BEVERAGES)
• RECHECK IN AN HOUR – NO CHANGE OR GOING UP, USE SYRINGE TILL BLOOD SUGAR STARTS COMING DOWN
• CHECK INFUSION SET, REPLACE IT
• **Negative-to-mild or <0.6 mmol/L blood and elevated BG** – take 5-10% of total daily dose of insulin as a rapid acting insulin, or increase recommended bolus amount by 10%, re-check in 1-2 hours

• **Moderate or blood 0.6-1.5 and BG >250-300** – take 10% of total daily dose of insulin as a rapid acting insulin, or increase recommended bolus amount by 10-15%, re-check in 1-2 hours

• **Moderate-high or high or blood >1.5** – take 15-20% of total daily dose of insulin as a rapid acting insulin, or increase recommended bolus amount by 15-20%, re-check in 1-2 hours
QUESTIONS AND CHEERS

GOOD LUCK TO ALL OF YOU