

Championing care for people with diabetes during and beyond COVID-19

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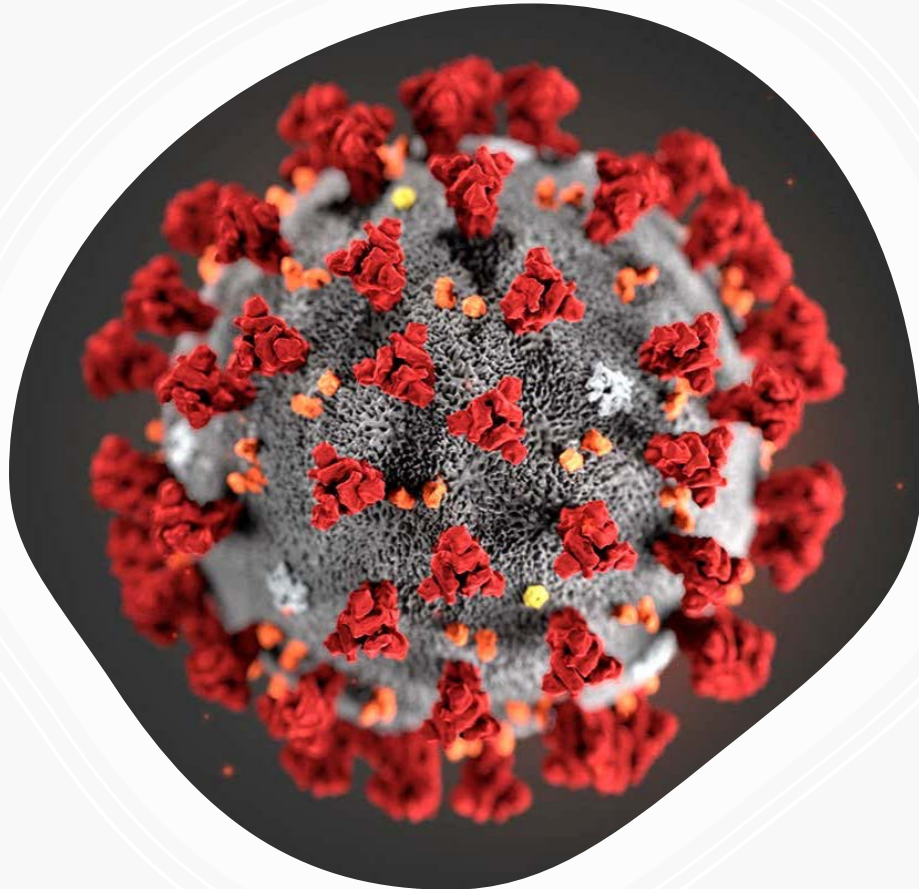
Guam Regional Medical City/ Pacific Chronic Disease Council

Learning Objectives

1. Brief overview of COVID-19
2. Identify areas of diabetes care and self-management affected by pandemic response efforts
3. Describe the ways to champion diabetes care and self-management during and beyond COVID-19 pandemic



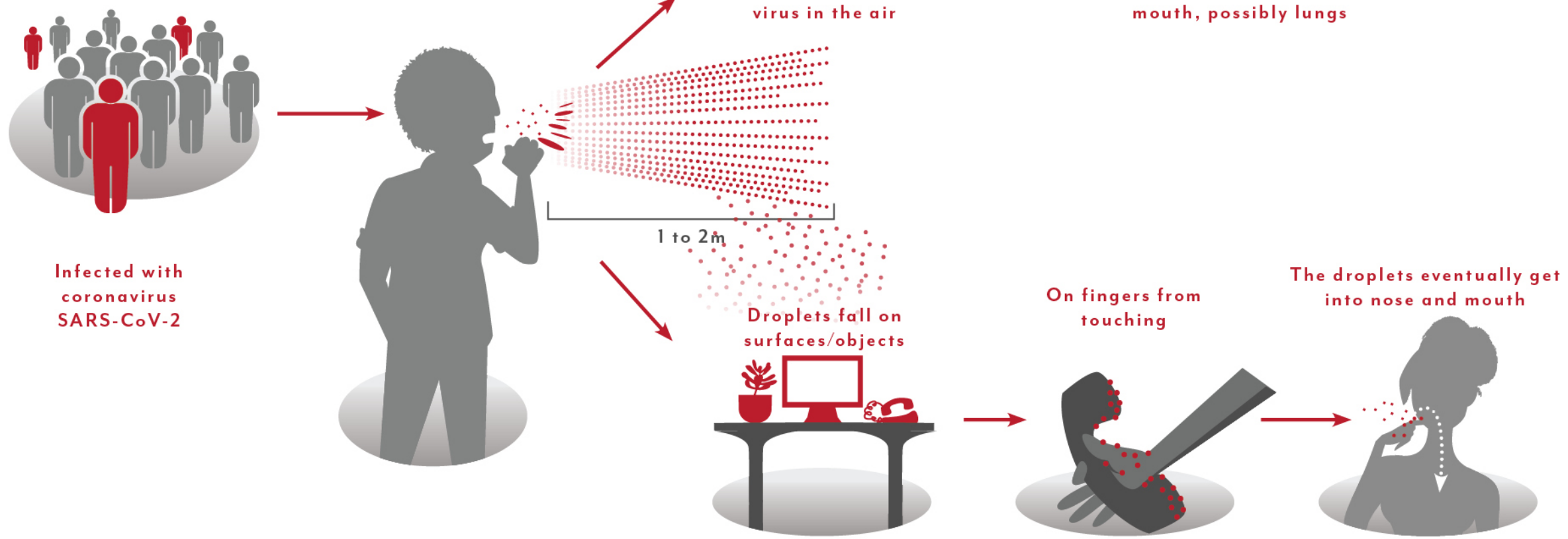
COronaVirus Disease 2019 (COVID-19) overview



- Also known as SARS-CoV-2 or severe acute respiratory syndrome coronavirus 2
- Coronaviruses are large, enveloped, single-stranded RNA viruses found in humans and other mammals, such as dogs, cats, chicken, cattle, pigs, and birds.
- Distinctive spikes give the virions the appearance of the sun's corona
- First confirmed case in US on Jan. 20, 2020
- First confirmed case in Guam on Mar. 15, 2020

Coronavirus COVID-19

Transmission and infection



Infected with coronavirus SARS-CoV-2

Droplets containing virus in the air

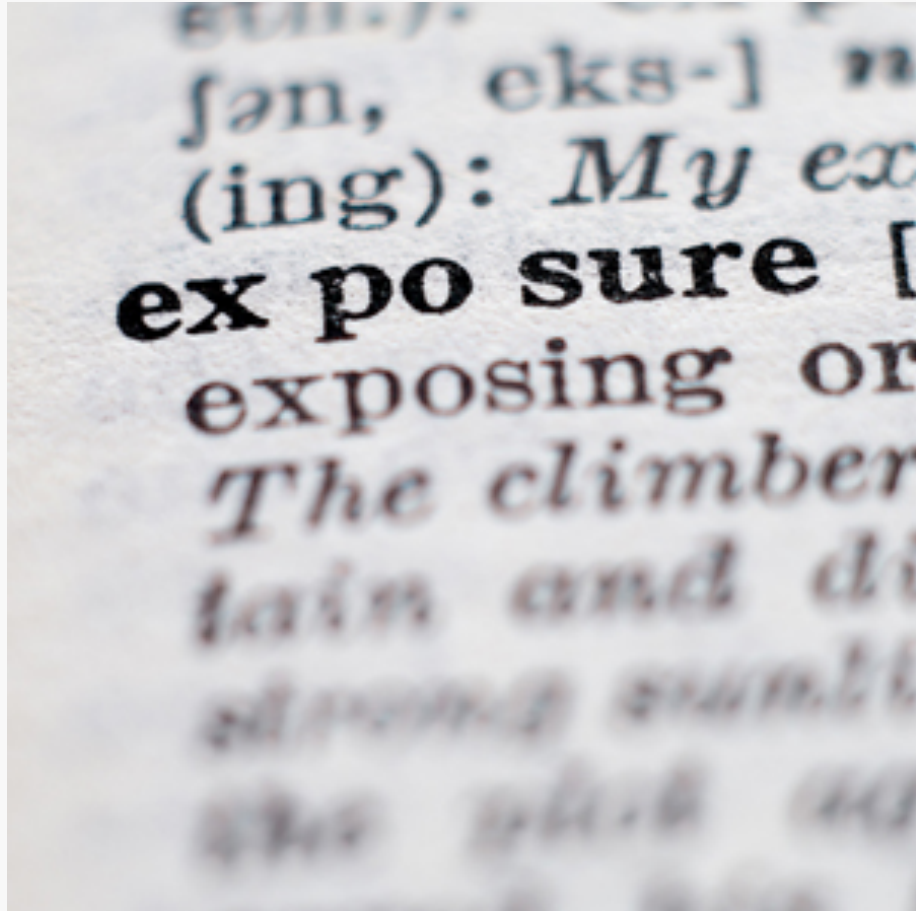
Droplets land in nose, mouth, possibly lungs

1 to 2m

Droplets fall on surfaces/objects

On fingers from touching

The droplets eventually get into nose and mouth



- Individual who has had close contact (within 6 feet for a total of 15 minutes or more) ¹
- Any domestic or international travel ²
- Attendance at large social or mass gatherings ²

¹ Centers for Disease Control and Prevention (2020, Oct. 21). *Community-related exposures*. Retrieved on Nov. 11, 2020 from <https://www.cdc.gov/coronavirus/2019-ncov/php/public-health-recommendations.html>

² Centers for Disease Control and Prevention (2020, Oct. 19). *Travel-associated exposures*. Retrieved on Nov. 11, 2020 from <https://www.cdc.gov/coronavirus/2019-ncov/php/public-health-recommendations.html>

SYMPTOMS OF CORONAVIRUS (COVID-19)

Know the symptoms of **COVID-19**, which can include the following:



Cough, shortness of breath, or difficulty breathing



Fever or chills



Muscle or body aches



Vomiting or diarrhea



New loss of taste or smell



CS318285-A

[cdc.gov/coronavirus](https://www.cdc.gov/coronavirus)



You may be tested with a swab that is placed inside your nose or throat. The swab is then tested to see if the virus is present.

Centers for Disease Control and Prevention (2020, Oct. 21). *Testing for COVID-19.*

Retrieved on Nov. 8, 2020 from <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/testing.htm>
!

Centers for Disease Control and Prevention (2020, Jan. 27). *About Quarantine and Isolation.*

Retrieved on Nov. 11, 2020 from <https://www.cdc.gov/quarantine/quarantineisolation.html>

COVID-19: Quarantine vs. Isolation

QUARANTINE keeps someone who was in close contact with someone who has COVID-19 away from others.



If you had close contact with a person who has COVID-19



- Stay home until 14 days after your last contact.



- Check your temperature twice a day and watch for symptoms of COVID-19.



- If possible, stay away from people who are at higher-risk for getting very sick from COVID-19.

ISOLATION keeps someone who is sick or tested positive for COVID-19 without symptoms away from others, even in their own home.



If you are sick and think or know you have COVID-19



- Stay home until after
 - 3 days with no fever and
 - Symptoms improved and
 - 10 days since symptoms first appeared



If you tested positive for COVID-19 but do not have symptoms



- Stay home until after
 - 10 days have passed since your positive test.



If you live with others, stay in a specific “sick room” or area and away from other people or animals, including pets. Use a separate bathroom, if available.





Treatments

- Supportive care and respiratory support ¹
- Dexamethasone decreases mortality ¹
- Remdesivir improves time to recovery ¹
- Convalescent plasma may be beneficial to patients with severe COVID-19 to boost their ability to fight the virus ²
- Bamlanivimab, an outpatient antibody treatment, reduces hospitalization or ER visits ³

1. Wiersinga WJ, Rhodes A, Cheng AC, Peacock SJ, Prescott HC. Pathophysiology, Transmission, Diagnosis, and Treatment of Coronavirus Disease 2019 (COVID-19): A Review. *JAMA*. 2020;324(8):782–793. doi:10.1001/jama.2020.12839

2. Anurag et al. (2020). JAMA Patient Page – Convalescent Plasma and COVID-19. doi:10.1001/jama.2020.10699

3. FDA (2020, Nov. 9). COVID-19 Update: FDA authorizes monoclonal antibody for treatment of COVID-19. Retrieved on Nov. 11, 2020 from <https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-authorizes-mono-clonal-antibody-treatment-covid-19>



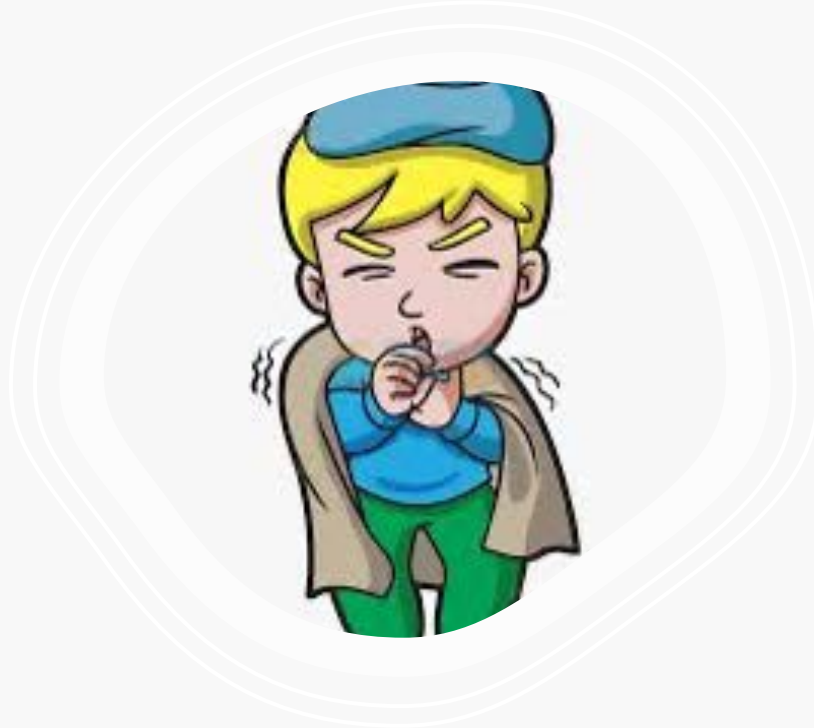
Centers for Disease Control and Prevention (2020, Oct. 14). *8 Things to Know.*

Retrieved on Nov. 11, 2020 from <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/8-things.html>



Poll 1

Are people with diabetes more likely to get COVID-19?



Answer

There is not enough data to show whether people with diabetes are more likely to get COVID-19 than the general population.

Adults of any age with the following conditions **are at increased risk** for hospitalization from COVID-19



*Conditions include asthma, obesity, diabetes, chronic kidney disease, severe obesity, coronary artery disease, history of stroke and COPD.



The Guam Daily Post. (2020, March 20). *Editorial: Making sacrifices in a time of crisis*. Retrieved Nov. 11, 2020 from https://www.postguam.com/forum/editorial/making-sacrifices-in-a-time-of-crisis/article_b0c33c82-699f-11ea-b2b0-1ba4974c943e.html

Areas of diabetes care and self-management affected by pandemic response

THE CLINIC IS CLOSED UNTIL FURTHER NOTICE!!!

OUR NEXT SCHEDULED CLINIC IS APRIL 7 BUT PLEASE CHECK BEFORE SOME THAT





42

Factors that affect Blood Glucose

FOOD

- ↑↑ 1 Carbohydrate quantity
- ↑ 2 Carbohydrate type
- ↑ 3 Fat
- ↑ 4 Protein
- ↑ 5 Caffeine
- ↓↑ 6 Alcohol
- ↓↑ 7 Meal timing
- ↑ 8 Dehydration
- ? 9 Personal microbiome

MEDICATION

- ↓ 10 Medication dose
- ↓↑ 11 Medication timing
- ↓↑ 12 Medication interactions
- ↑↑ 13 Steroid administration
- ↑ 14 Niacin (Vitamin B3)

ACTIVITY

- ↓ 15 Light exercise
- ↓↑ 16 High-intensity & moderate exercise
- ↓ 17 Level of fitness/training
- ↓↑ 18 Time of day
- ↓↑ 19 Food and insulin timing

BIOLOGICAL

- ↑ 20 Too little sleep
- ↑ 21 Stress and illness
- ↓ 22 Recent hypoglycemia
- ↑ 23 During-sleep blood sugars
- ↑ 24 Dawn phenomenon
- ↑ 25 Infusion set issues
- ↑ 26 Scar tissue / lipodystrophy
- ↓↓ 27 Intramuscular insulin delivery
- ↑ 28 Allergies
- ↑ 29 A higher BG level (glucotoxicity)
- ↓↑ 30 Periods (menstruation)
- ↑↑ 31 Puberty
- ↓↑ 32 Celiac disease
- ↑ 33 Smoking

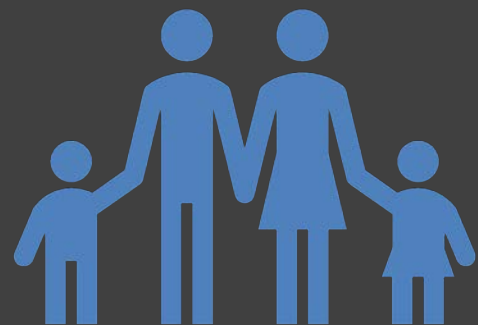
ENVIRONMENTAL

- ↑ 34 Expired insulin
- ↓↑ 35 Inaccurate BG reading
- ↓↑ 36 Outside temperature
- ↑ 37 Sunburn
- ? 38 Altitude

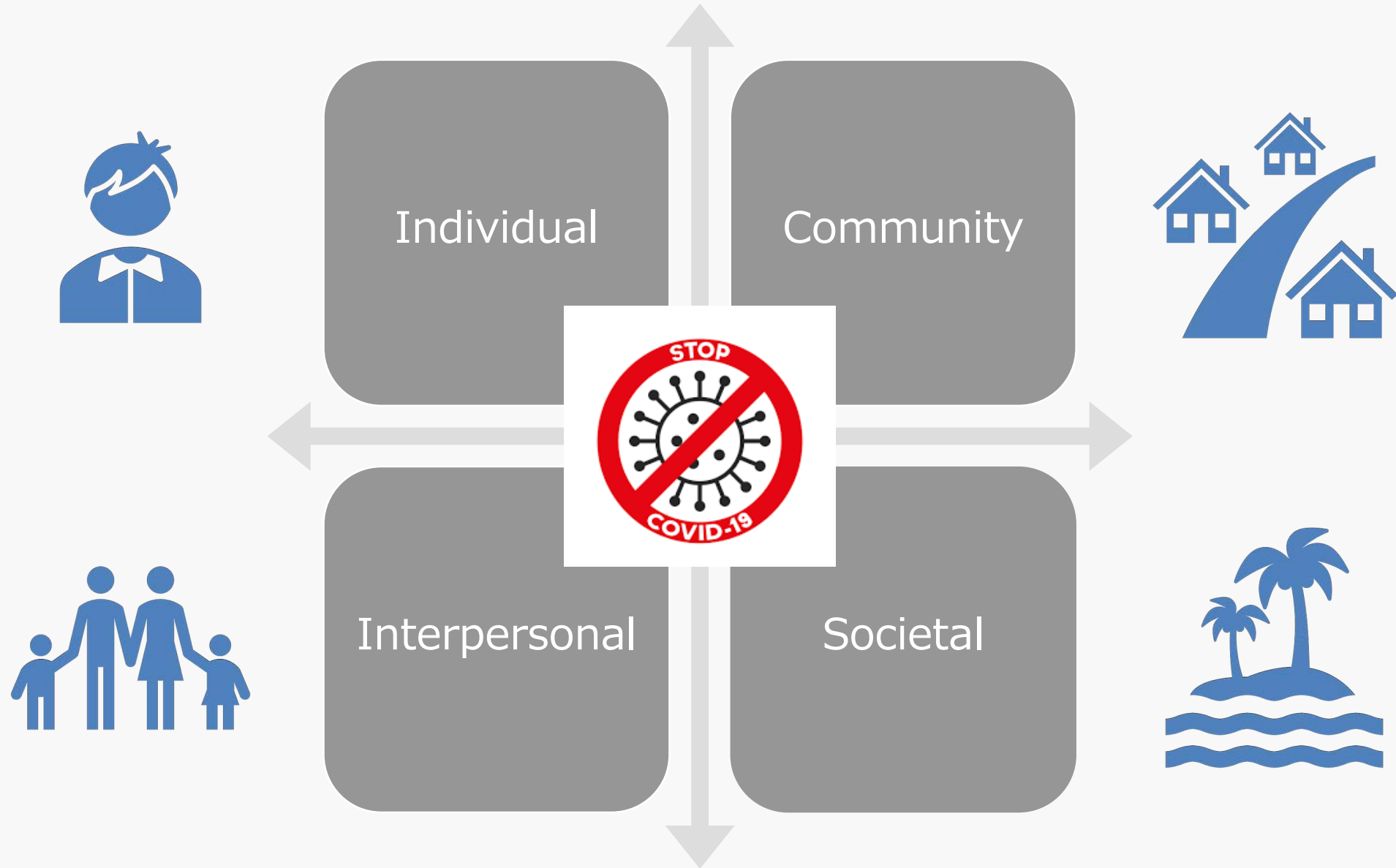
BEHAVIOR & DECISIONS

- ↓ 39 More frequent BG checks
- ↓↑ 40 Default options and choices
- ↓↑ 41 Decision-making biases
- ↓↑ 42 Family and social pressures

The arrows show the general effect these 42 factors seem to have on blood glucose based on scientific research and/or our experiences at diaTribe. However, not every individual will respond in the same way, so the best way to see how a factor affects you is through your own data: check your blood glucose more often with a meter or wear a CGM and look for patterns.



Ways to champion care for people with diabetes through COVID-19



Ways to champion care for people with diabetes through COVID-19



Reduce risk of illness



Prepare for sick day



Seek help as often as needed



Make technology work for you



Engage in collaborative diabetes care

Ways to champion care for people with diabetes through COVID-19

#1: Reduce the risk of getting COVID-19

- ✓ Minimize physical interaction with others
- ✓ Maintain strict personal hygiene
- ✓ Avoid touching face with unwashed hands
- ✓ Routinely disinfect high-touch surfaces in home
- ✓ Avoid any non-essential travel
- ✓ Extra precautions when out in public



WE'RE ALLOWED BACK TO WORK !

BUT! You've got to remember to:

AVOID MEN



M - mouth

E - eyes

N - nose

INSTEAD, FOLLOW WOMEN



W - wash your hands

O - obey social distancing

M - mask up

E - exercise and eat well

N - no unnecessary traveling

#ctto

We're Allowed
to be Back to Work!

But, Please **REMEMBER** to:

AVOID TOUCHING MEN



M - MOUTH



E - EYES



N - NOSE

INSTEAD, FOLLOW WOMEN

W - WASH YOUR HANDS

O - OBEY SOCIAL DISTANCING

M - MASK UP

E - EXERCISE AND EAT WELL

N - NO UNNECESSARY TRAVELING



Technolube LLC

PETRO



Add basic COVID-19 screening and education at every encounter

Ways to champion care for people with diabetes through COVID-19

Let's Stop COVID-19

Stay
Home
Stay Safe



Ways to champion care for people with diabetes through COVID-19

S SUGAR	I INSULIN	C CARBS	K KETONES
Check your blood glucose every 2 to 3 hours or as necessary!	Always take your Insulin! Not taking it could lead to DKA!	Drink lots of fluids! If sugars are high drink sugar-free liquids. If sugars are low drink carb-containing drinks.	Check your urine or blood ketones every 4 hours Take rapid-acting insulin if ketones are present.

#2: Prepare for sick days



Planning for Coronavirus

People of any age who have serious health issues such as diabetes might be at higher risk for severe illness from COVID-19, the new coronavirus disease that is now a global pandemic. There is plenty you can do to protect yourself, however.

Gather supplies and information, including:

- Phone numbers of your doctors and health care team, pharmacy, and insurance provider
- A list of all medicines you take (including vitamins and supplements) and their doses
- Simple, easy-to-digest carbohydrates such as regular soda, honey, jam, or hard candy to help keep your blood glucose up if you are at risk for lows and too ill to eat
- Extra refills of your medicines so you do not have to leave the house
- Extra supplies such as rubbing alcohol and soap to wash your hands
- Glucagon and ketone strips, in case of blood glucose lows and highs
- Enough groceries to be able to stay at home for long periods of time

Take everyday precautions.

- Avoid close contact with people who are sick.
- Wash your hands often with soap and water for at least 20 seconds, especially after spending time in public places.
- Avoid touching high-touch surfaces in public, such as elevator buttons, door handles, and handrails.
- Avoid touching your face, nose, and eyes.
- Clean and disinfect your home to remove germs, especially frequently touched surfaces such as doorknobs, light switches, faucets, handles, and cell phones.
- Avoid crowds. If you must be around people you don't live with, wear a mask over your mouth and nose, stay at least 6 feet away from others, and don't shake hands.
- Avoid traveling.

IF YOU GET SICK, CALL YOUR DOCTOR. HERE ARE SOME COMMON SELF-CARE TIPS:

- Drink lots of fluids. If you're having trouble keeping water down, have small sips every 15 minutes or so throughout the day.
- If you have low blood glucose (below 70 mg/dL or your target range), eat 15 grams of simple carbohydrates and recheck in 15 minutes to make sure your glucose level is rising. Check extra times throughout the day and night.
- Be on the lookout for continued high blood glucose levels that could lead to diabetic ketoacidosis (DKA). Take quick action if DKA develops. (See details on the next page.)
- Be aware that some continuous glucose monitoring sensors (Dexcom G5, Medtronic Enlite, and Guardian) are affected by acetaminophen (Tylenol). Check your blood glucose with a meter to ensure accuracy.
- Wash your hands and clean your injection/infusion and fingerstick sites with soap and water or rubbing alcohol.

Coronavirus Q&A

Q. Are people with diabetes more likely to get COVID-19?

A. We don't yet know whether people with diabetes are more likely than others to get COVID-19. But if they do get it, they may be more likely to have severe symptoms or even to die.

In general, the more health conditions someone has (for example, diabetes and heart disease), the higher their chance of becoming seriously ill from COVID-19. Your risk of getting very sick is likely to be lower if your diabetes is well managed.

Q. Do I need to worry about DKA if I get COVID-19?

A. When sick with a viral infection, people with diabetes, especially those with type 1 diabetes, face a higher risk of DKA. If your blood glucose is higher than 240 mg/dL for more than two checks in a row, check for ketones. Call your doctor's office right away if you have medium or large ketones (or if you have been told to call with even trace or small ketones). DKA can make it challenging to get enough fluids and electrolytes, but doing so is important for avoiding sepsis, a serious complication of COVID-19.

Q. Is COVID-19 different from seasonal flu?

A. Yes. All of the routine safety measures you would take to avoid illness are even more important when dealing with this virus.

Q. What warning signs should I be watching out for, and what should I do if I have them?

- A. Watch for possible COVID-19 symptoms such as fever, dry cough, and shortness of breath. If you have them, call your doctor.
- Have your blood glucose reading available.
 - Have your ketone reading available.
 - Keep track of how much fluid you are drinking and tell the doctor.
 - Be able to clearly describe your symptoms. Are you nauseated? Coughing? Do you just have a stuffy nose?

- Ask about how to manage your diabetes while sick.
- Ask about options for seeing a doctor through telehealth (over a computer or smartphone) if you need care.

Q. What are the emergency warning signs, and what should I do if I experience them?

- A. Get medical attention immediately if you have:
- Difficulty breathing or shortness of breath
 - Persistent pain or pressure in the chest
 - New confusion or inability to arouse
 - Bluish lips or face

Q. What should I do to prevent the spread of COVID-19 at home?

A. In the home of a person with a health condition such as diabetes, healthy household members should act as if they could give the less healthy person COVID-19, even if they feel fine. They should wash their hands before feeding or caring for them and clean all utensils and surfaces regularly. If possible, people at high risk should have a protected space at home. If someone in your home gets sick, give them their own room, if possible, and keep the door closed. Learn more about how to keep your home safe online at <https://www.cdc.gov/coronavirus/2019-ncov/downloads/workplace-school-and-home-guidance.pdf>.

Q. Will COVID-19 affect my access to insulin and other diabetes supplies?

A. So far, manufacturers report that COVID-19 is not affecting their ability to make and distribute insulin and other diabetes supplies. If you are struggling to pay for insulin or know someone who is, the American Diabetes Association has resources to help. Learn more online at [InsulinHelp.org](https://www.diabetes.org/insulinhelp).

Q. Do I have special legal rights as a person with diabetes during the COVID-19 pandemic?

A. Yes. More information is available online at <https://bit.ly/3c2X92g>.



Your diabetes kit can be stored in an easy-to-carry waterproof bag or container to hold the documents, information, and supplies that you will want to have with you.

Important Information to Keep In Your Kit - Write down or copy the following:

- Type of diabetes you have
- Other medical conditions, allergies, and previous surgeries
- Current medications, doses, and time you take them. Include your pharmacy name, address and phone number.
- Previous diabetes medications you have taken
- A letter from your diabetes care team with a list of your most recent diabetes medications, if possible.
- A copy of your most recent laboratory result, like A1C results
- Make, model and serial number of your insulin pump or CGM. Include pump manufacturer's phone number in case you need to replace your device.
- Doctor's name, phone number, and address
- Phone numbers and email addresses for your family, friends, and work. Include out-of-town contacts.
- A copy of your health insurance card
- A copy of your photo ID
- Cash



Diabetes kit

Preparing for emergency or natural disaster

Source: <https://diabetesdisasterresponse.org/diabetes-preparedness-plan>



#3: Seek help as often as needed

- Ask support from family and friends
- Take advantage of community resources
- Talk to a diabetes care and education specialist
- Call your doctor if you get sick
- Get emergent care if needed

Is It Safe to Go to the Emergency Room During the COVID-19 Pandemic?

Safety of patients and
frontline staff is our priority.



Ways to champion care for people with diabetes through COVID-19

#4: Make technology work for you



Increase in telehealth visits from 2019 to 2020

AMONG ADULTS AGE 50–80

4%

ever as of
May 2019



26%

in the period
March to
June 2020

Concerns about telehealth visits

AMONG ADULTS AGE 50–80 SURVEYED IN JUNE 2020

75%

Health care providers not able to conduct a physical exam



67%

Quality of care is not as good in telehealth visits compared to in-person visits



45%

Not feeling personally connected to the health care providers



25%

Having difficulty seeing/hearing health care providers

24%

Privacy concerns

Prepare for a telehealth visit

Location

- Find a comfortable space without interruption

Medical records

- Be ready to provide your glucose results and a list of current medications

Vital signs

- Home weight, blood pressure and pulse



Continuous glucose monitoring (CGM)

- Wearable device that tracks blood glucose levels day and night
- Reduced limitations of A1c and fingerstick blood glucose test
- Check your health insurance for coverage

Ways to champion care for people with diabetes through COVID-19



Ways to champion care for people with diabetes through COVID-19



Reduce risk of illness



Prepare for sick day



Seek help as often as needed



Make technology work for you



Engage in collaborative diabetes care



#5: Engage in collaborative diabetes care

Diabetes Self-management Education and Support in Adults With Type 2 Diabetes: A Consensus Report of the American Diabetes Association, the Association of Diabetes Care & Education Specialists, the Academy of Nutrition and Dietetics, the American Academy of Family Physicians, the American Academy of PAs, the American Association of Nurse Practitioners, and the American Pharmacists Association



7 Self-Care Behaviors*



1 HEALTHY EATING

Focus on healthful eating and understand how the foods you eat affect your blood glucose.



2 BEING ACTIVE

Get at least 30 minutes of exercise daily. It can positively influence your body, mood, and diabetes care.



3 MONITORING

Check your blood glucose levels as directed by your doctor—doing so provides information that you can use in your daily diabetes care.



4 TAKING MEDICATION

Take insulin, pills, or other medications as directed to reach your health targets and reduce your risk of complications.



5 RISK REDUCTION

Take action, such as getting an annual dilated eye exam, to reduce your risk for diabetes-related complications.



6 PROBLEM SOLVING

Diabetes is unpredictable, so practice problem solving when preparing for and dealing with this challenging condition.



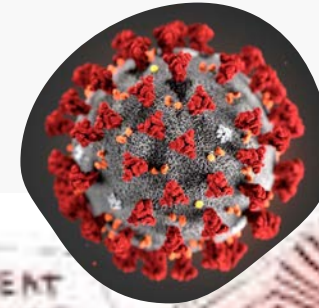
7 HEALTHY COPING

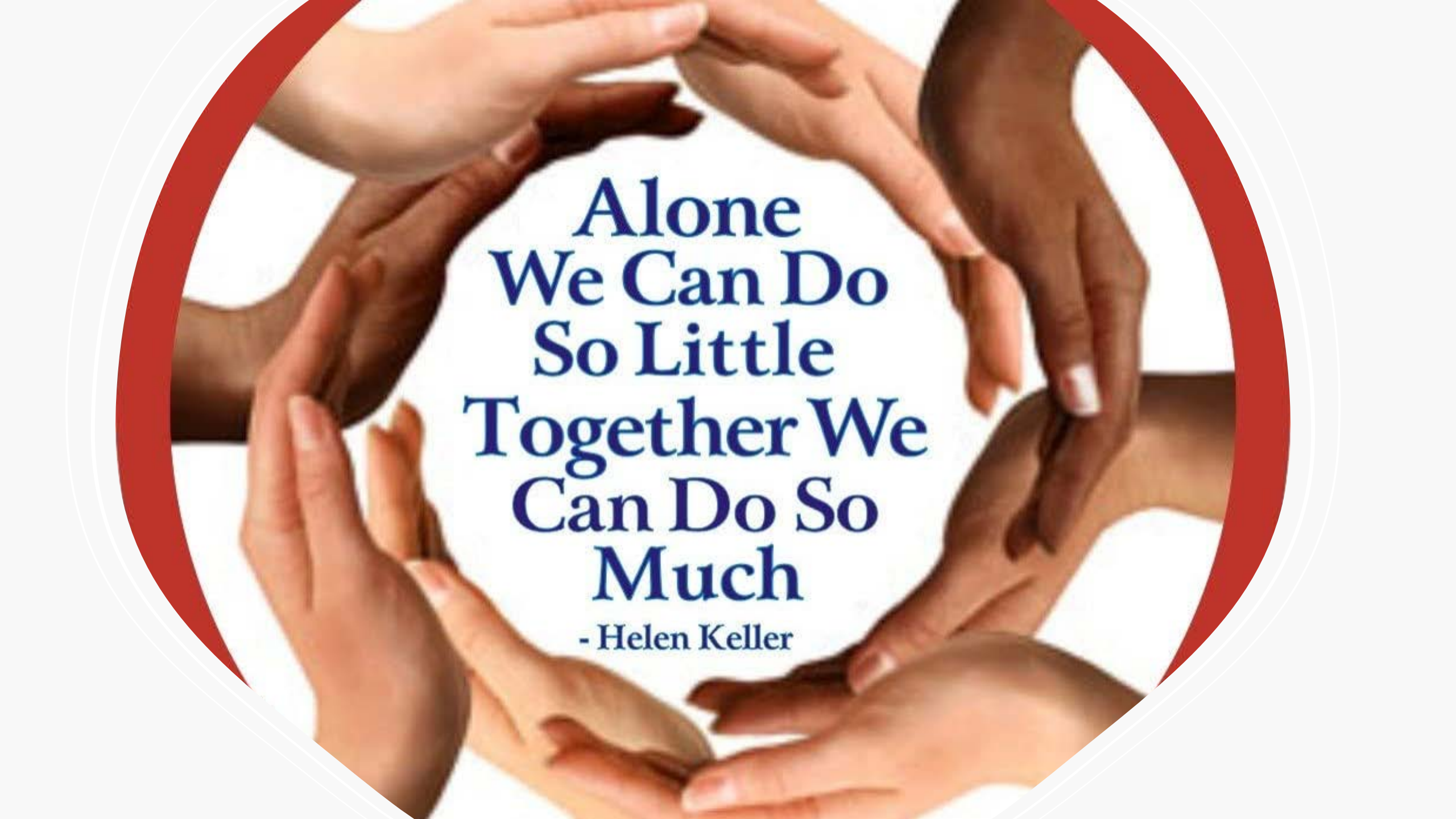
Recognize that having mixed emotions about diabetes management is normal. Make sure the negative emotions don't affect your self-care.

*These behaviors, defined by the American Association of Diabetes Educators and the American Diabetes Association, address the skills needed in diabetes self-management education.

Diabetes is complicated!

Russell, L.B., D.C. Suh, and M.A. Safford, *Time requirements for diabetes self-management: too much for many?* J Fam Pract, 2005. **54**(1): p. 52-6.





**Alone
We Can Do
So Little
Together We
Can Do So
Much**

- Helen Keller

Summary



- ✓ No clear evidence that the risk of getting COVID-19 is greater for people with diabetes
- ✓ But if people with diabetes develops COVID-19 infection, there is evidence that they have higher risk of severe illness
- ✓ Lockdown has a negative impact on diabetes care and self-management
- ✓ We have the power to choose among many ways to stay healthy with diabetes during and beyond the pandemic



**The presentation
increased my
knowledge about
diabetes care and
self-management
through the
pandemic.**

Poll 2



- #1: Reduce risk of illness
- #2: Prepare for sick day
- #3: Seek help as often as needed
- #4: Make technology work for you
- #5: Engage in collaborative diabetes care



world **diabetes** day

14 November