

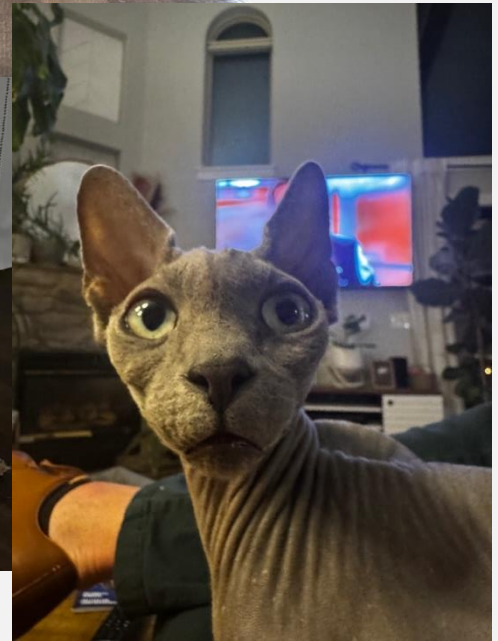
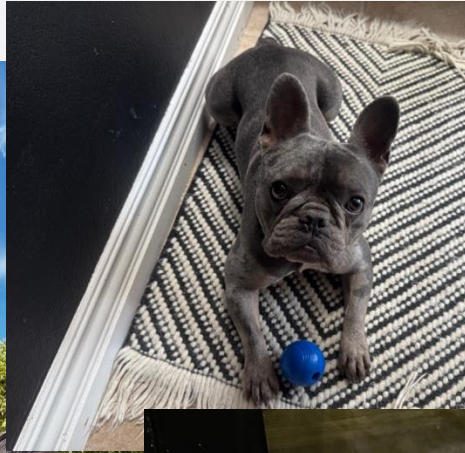
# UNDERSTANDING EXERCISE & HYPOGLYCEMIA IN DIABETES

For Patients with Type 1 and Type 2 Diabetes

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# ABOUT ME



## WHY EXERCISE MATTERS IN DIABETES

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Helps control blood sugar levels

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Improves insulin sensitivity

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Supports heart health reducing CV risks






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Helps with weight management

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Boosts energy and mood improving mental health

# WHY DOES EXERCISE CAUSE LOW BLOOD SUGAR?

-  Exercise increases insulin sensitivity, causing your cells to take in more glucose from your blood.
-  Muscles use more glucose during activity, especially during longer or intense workouts.
-  If insulin or medication levels are too high, your liver can't release enough glucose to keep up.
-  Low blood sugar may happen during, right after, or even several hours after exercise.
-  This is more common in people with Type 1 diabetes or those using insulin or sulfonylureas.

# HYPOGLYCEMIA RISK IN TYPE I DIABETES



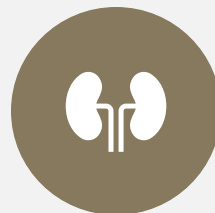
Exercise increases insulin sensitivity and glucose uptake by muscles



Can lead to low blood sugar during or after activity



Higher risk with prolonged cardio or missed meals/snacks







Blood sugar may drop hours after activity (delayed hypoglycemia)

## USING AN INSULIN PUMP DURING EXERCISE

- People using insulin pumps have more flexibility during exercise
- Adjusting insulin can help prevent exercise-related low blood sugar
- Changes depend on the type, timing, and intensity of the activity
- Always check blood sugar before, during, and after exercise

# OPTIONS TO PREVENT LOW BLOOD SUGAR

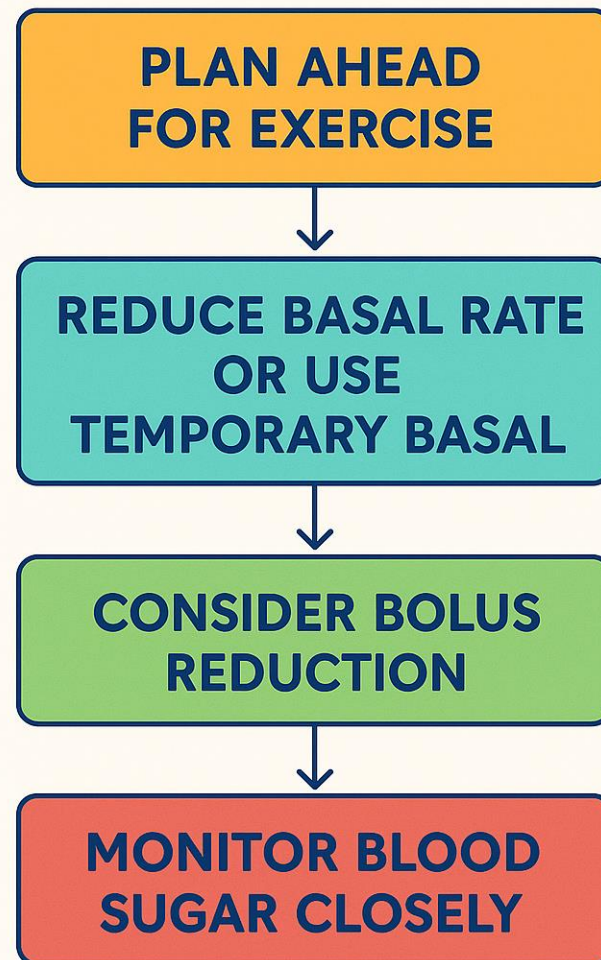
-  Lower basal rate: Reduce by 20–50% 60–90 minutes before activity
-  Suspend insulin during short, intense activity (with provider guidance)
-  Use temporary basal rate or exercise mode (if pump has it)
-  Eat a small carb snack if glucose < 100 mg/dL before activity

# PUMP ADJUSTMENT TIPS




- Start small: test changes with moderate activity first
- Avoid stacking insulin from corrections before exercise
- Have quick-acting glucose available at all times
- Discuss an exercise insulin plan with your care team



- Work with your diabetes team regarding your specific pump.



## HYPOGLYCEMIA RISK IN TYPE 2 DIABETES

- ✓ Less common unless on insulin or sulfonylureas
-  Exercise still increases glucose use by muscles
-  Monitor blood sugar if on medications that lower glucose
-  Stay hydrated and don't skip meals around workouts

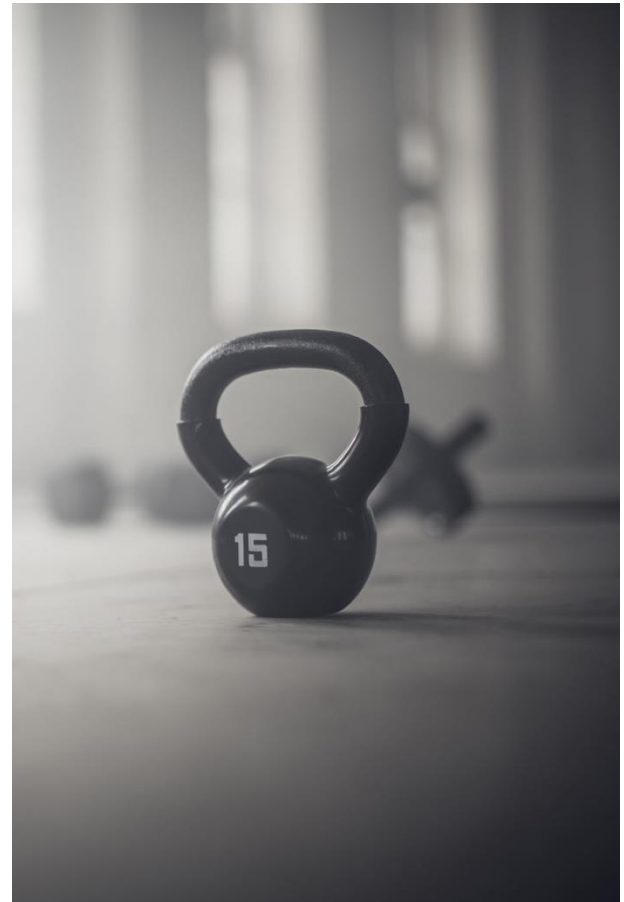
## EXERCISE TYPES AND HYPOGLYCEMIA RISK

🏋️ Weight Training: Lower risk;  
can raise BG slightly during  
activity

🏃 Running/Cardio: Higher risk  
due to sustained glucose use

🚴 HIIT (High-Intensity Interval  
Training): Variable risk

🧘 Yoga/Pilates: Low risk but  
still beneficial



## TIPS TO PREVENT LOW BLOOD SUGAR

- Check blood sugar before, during, and after exercise
- Have a snack if BG < 100 mg/dL before activity
- Carry fast-acting glucose (like glucose tabs or juice)
- Adjust insulin doses based on activity level
- Talk to your care team about safe workout plans





# THE DIABETES PREVENTION PROGRAM (DPP)

- Large study in 2002 with over 3,000 people with prediabetes
- Compared lifestyle changes vs. metformin (a diabetes medication)
- Lifestyle group: exercise + healthy eating
- Results: 58% reduction in diabetes risk (vs 31% with metformin)






## WHAT IT MEANS FOR YOU

- Exercise is one of the most powerful tools to prevent or manage diabetes
- It works better than some medications in preventing type 2 diabetes
- Even small amounts of activity can help
- Staying active is safe with good planning and awareness

# BEST FORM OF EXERCISE FOR DIABETES

- No one-size-fits-all approach — combination is best!
-  Aerobic exercise (walking, biking, swimming) improves heart and blood sugar health
-  Resistance training (weights, bands) builds muscle and improves insulin sensitivity
-  Flexibility and balance exercises (yoga, stretching) support mobility and reduce falls
-  Light daily movement (post-meal walks) helps reduce blood sugar spikes

# EXERCISE GUIDELINES FOR PEOPLE WITH DIABETES

-  At least 150 minutes/week of moderate aerobic activity (e.g., brisk walking)
-  Spread over at least 3 days per week, with no more than 2 days off in a row
-  Add resistance training 2–3 times per week (non-consecutive days)
-  Try short walks after meals to help reduce post-meal blood sugar
-  Choose exercises you enjoy to stay consistent



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