

Diabetes and Your Recovery

Managing Blood Sugar to Support Healing and Rehab

1 How Diabetes Affects Healing

Elevated blood glucose levels can affect recovery in several important ways. High blood sugar impairs collagen synthesis — the building block of tendons, ligaments, and scar tissue — meaning repair is slower and less effective. It also reduces white blood cell function, increasing your risk of infection, and reduces blood flow to healing tissues by affecting small blood vessels.

Peripheral neuropathy — reduced sensation in the feet and legs — is common in long-standing diabetes. This means injuries such as blisters, pressure sores, or small wounds can go unnoticed and worsen without you being aware.

Even small improvements in blood sugar control can meaningfully speed up tissue repair and reduce your risk of complications during rehab.

2 Exercise and Blood Sugar

Exercise is one of the most effective tools for managing blood glucose — for both type 1 and type 2 diabetes. Understanding how different types of exercise affect your blood sugar helps you train safely and get the most from your rehab.

Exercise Type	What Happens	What It Means for You
During aerobic exercise	Muscles use glucose directly — blood sugar often falls	Monitor levels; have a snack available if needed
After resistance exercise	Insulin sensitivity improves for 24–48 hours	Consistent training has a lasting blood sugar benefit
High-intensity exercise	May temporarily raise blood sugar (adrenaline response)	Normal — levels usually settle within 1–2 hours

3 Foot Care During Rehab

Diabetes significantly increases the risk of foot ulcers, slow-healing wounds, and infection — particularly relevant during musculoskeletal rehabilitation. Proactive foot care is an essential part of your recovery.

Risk Factor	Why It Matters	What to Do
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Reduced sensation (neuropathy)	Blisters or pressure sores may not be felt	Check feet daily; report any changes immediately
Reduced circulation	Slower healing; higher infection risk	Keep feet warm; avoid tight footwear
Dry/cracked skin	Entry point for infection	Moisturise daily (not between toes)
Ill-fitting footwear	Pressure and friction without sensation	Always wear well-fitted, protective shoes

4 Practical Rehab Guidance

Topic	Guidance
Timing of exercise	After meals is often best for blood sugar management — discuss timing with your diabetes team
Hydration	Dehydration worsens blood sugar control — drink water before, during, and after exercise
Footwear	Always wear supportive, well-fitted shoes — never exercise barefoot
Monitoring	Check blood glucose before and after sessions, especially when starting a new programme
When to pause	If blood glucose is very high (>15 mmol/L) or very low (<4 mmol/L), do not exercise until stable

5 Key Takeaways

KEY TAKEAWAY 1

Blood sugar control directly affects how well you heal. High blood glucose slows collagen repair, weakens immune defence, and reduces blood flow to healing tissues. Even modest improvements in blood sugar control during your rehab period can meaningfully speed recovery and reduce complication risk.

KEY TAKEAWAY 2

Exercise is medicine — use it wisely. Regular physical activity improves insulin sensitivity and blood glucose control in both type 1 and type 2 diabetes. Monitor your levels before and after sessions, be prepared for falls in blood sugar during aerobic exercise, and talk to your diabetes team about the best timing for your workouts.

KEY TAKEAWAY 3

Foot care is non-negotiable. Check your feet every day — look for blisters, redness, cuts, or swelling. Always wear well-fitted, supportive footwear. Report any skin changes to your clinician promptly. In diabetes, small wounds can become serious problems quickly if left unaddressed.