

Sports Science and Performance Center

**From Pipeline to Podium:
The Essential Role of High-
Performance Training for All Athletes**



**Sports Science &
Performance Center**





Our History

Lakeshore Foundation has a rich history rooted in providing opportunities for individuals with disability. From the transition of a tuberculosis sanatorium to a rehab hospital, to the first wheelchair basketball team in Birmingham, Lakeshore has continued to provide progressive changes to the health and wellness landscape for people with disability.



Our Campus

Today, we operate on a 45-acre campus, which includes outdoor spaces like the woodland trail and contemplative gardens and on-campus housing in our dorms and cottages. Our facility offers a fieldhouse with 3 full size courts and a 200-meter track, a fitness center, aquatics center, group exercise studio, climbing wall and indoor shooting range.



Our Teams

Lakeshore offers both competitive and recreational sports to youth and adults with disability. From swimming to track, from power soccer to football, Lakeshore offers a dozen different sports and even more activities. Lakeshore is also home to USA Wheelchair Rugby, US Para Powerlifting and Boccia United States.



SSPC

In 2024, Lakeshore opened a high-performance center designed to level the playing field for athletes with disability. SSPC offers exercise testing, sports nutrition, strength and conditioning and mental performance to help athletes with disability reach their true potential.

Our Story



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High Performance



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SSPC

Starts with Tailored Assessments:

Vo2 on personal and customized equipment

Resting Metabolic Rate (RMR)

DEXA

To sport specific testing

Currently offer:

Over **134** different assessments

Over a **dozen** different sport specific testing packages



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SSPC- combines science-driven services, expert knowledge, and cutting-edge facilities to achieve peak performance.

Athlete results

Current	142	79	63
Previous	128	78	84

Composition

DEXA Scan

Date of Scan	04/16/25	07/11/25	Difference
Total Mass (lbs)	197.1	190.0	-7.1
Total Fat Mass (lbs)	71.0	61.9	-9.1
Total % Body Fat	37.2	33.7	-3.5
Total Lean Mass (lbs)	119.7	121.8	+2.1
Estimated RMR (kcal/day)	1540	1557	+17
Bone Mineral Content (lbs)	6.4	6.3	-0.1
Bone Mineral Density Z-score	0.4	0.3	-0.1
Bone Mineral Density T-score	0.8	0.5	-0.3
Total Trunk Lean (lbs)	54.0	55.6	+1.6
Total Arms Lean (lbs)	17.0	17.0	0.0
Right Arm Lean Mass (lbs)	8.8	9.0	+0.2
Left Arm Lean Mass (lbs)	8.2	7.9	-0.3
Total Legs Lean (lbs)	41.2	41.5	+0.3
Right Leg Lean Mass (lbs)	21.0	21.2	+0.2
Left Leg Lean Mass (lbs)	20.3	20.2	-0.1

Note: This DEXA scan is not used for medical purposes. Any results discussed are for informational purposes only. Do not make any observations, or known correlations found in multiple exercise resources.



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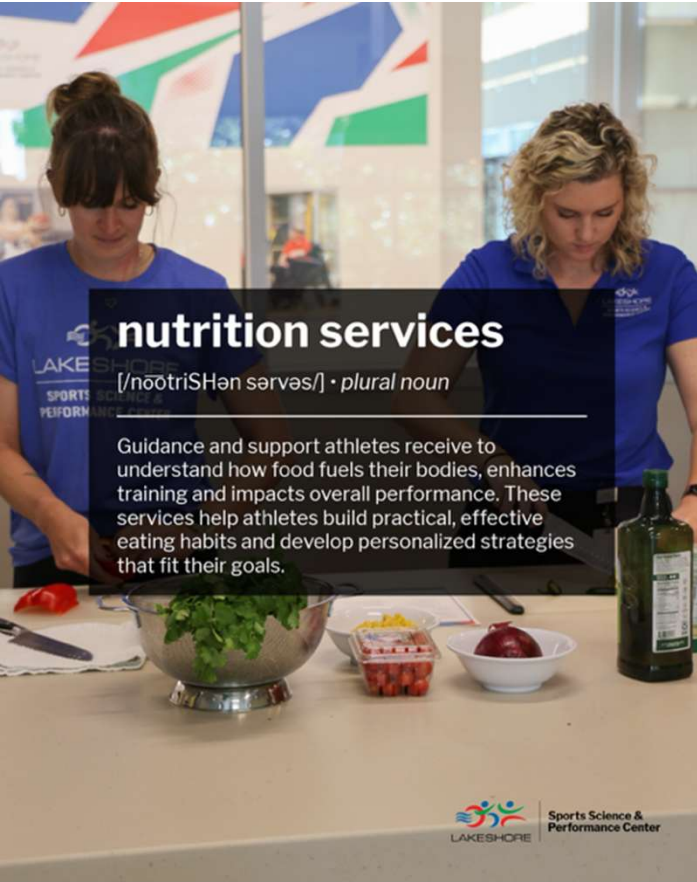
	(mmHg)	(mmHg)	(bpm)
Measures	116	74	60

Composition

DEXA Scan

Date of Scan	03/27/26	05/28/25
Total Mass (lbs)	184.5	183.9
Total Fat Mass (lbs)	85.2	89.6
Total % Body Fat	47.5	48.6
Total Lean Mass (lbs)	94.2	91.8
Bone Mineral Density Z-score	0.2	0.2
Bone Mineral Density T-score	1.3	1.4
Total Trunk Lean (lbs)	43.2	39.6
Total Arms Lean (lbs)	10.3	9.3
Right Arm Lean Mass (lbs)	5.1	4.7
Left Arm Lean Mass (lbs)	5.1	4.7
Total Legs Lean (lbs)	34.4	34.3
Right Leg Lean Mass (lbs)	17.5	16.9
Left Leg Lean Mass (lbs)	16.9	17.3

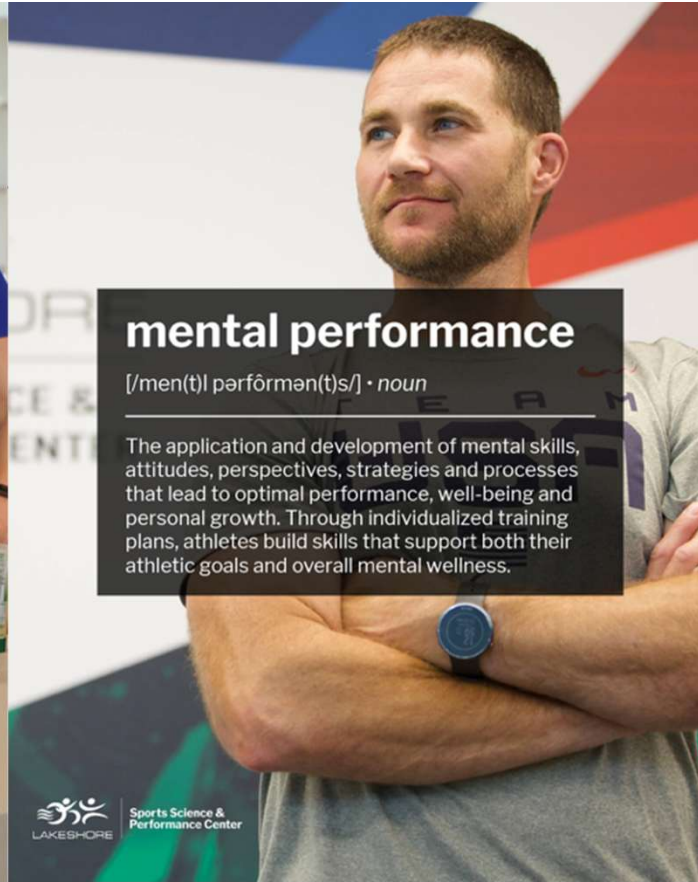
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nutrition services

[/nōōtriSHən sərˈvəs/] • plural noun

Guidance and support athletes receive to understand how food fuels their bodies, enhances training and impacts overall performance. These services help athletes build practical, effective eating habits and develop personalized strategies that fit their goals.



mental performance

[/men(t)l pərˈfɔrmən(t)s/] • noun

The application and development of mental skills, attitudes, perspectives, strategies and processes that lead to optimal performance, well-being and personal growth. Through individualized training plans, athletes build skills that support both their athletic goals and overall mental wellness.



strength & conditioning

[/streNG(k)TH an(d) kəndiSHəniNG/] • noun

Services that provide athletes with individualized training designed to develop strength and endurance. Through one-on-one work with certified specialists, athletes follow a holistic approach that supports performance, improves recovery and helps them reach their full athletic potential.



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Sports Nutrition- “Nutrition was the best part of this entire program. Being in the kitchen and cooking a meal was the best time I had, for real. I mean if you would have sent me this recipe in the email and said, ‘hey try cooking this,’ I would not have done it. But being here, it’s completely different, and you get first-hand information and hands-on experience on how to prepare a meal which fits your diet and nutrition goals.” — Veteran Participant



Strength and Conditioning- “The strength and conditioning program was instrumental in causing me to make gains in my climbing and both my strength and confidence when I am on the wall.”



Mental Performance- “I have been working with your mental performance coach, and I am excited to go shoot again. I can’t wait to put into practice what we have been working on.” — USA Archery Team Member



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Abby Sams

“In the past two months here as part of SSPC, with the nutrition that I’ve got from Lacey, the coaching for strength that I’ve got from Heather and the programming from Brandon, I have made more PR’s than I have in the past year of training and a totally new score, which has been crazy and I feel the difference.”



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https://www.youtube.com/watch?v=mvqpMvXxYiA&list=PLYWyM9fBQA-UZM1N0iWWgt4ZWIM_-kaLNn&index=21

Doc Jacobs

“Honestly, everyone had an instrumental part of our team's success on the World Cup tour and even my success in the national championships. Everything from sports psych to dieting and athletic training, and even just understanding the RMR, my resting metabolic rate, the DEXA scan and visceral fat and dieting. And you know how that plays into effect with the whole science of gravitational, you know, G-forces when you're on a track, and even the mentality of having a proper diet and how that affects your mind when you're in competition mode. So it's been great.”

I want to say the success rate. And I'm not just talking in sports. Learning a lot about dieting and nutrition and just training your body and your mind every day has helped out a lot as well. Because not only on the track have I had wins, but off the track too.



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Cost

Transportation

Knowledgeable staff


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Barriers To Access



Accessible Equipment

Access to a Village

Accessible Campus

SSPC- Addressing Barriers

Provide Scholarships

Resident

Champion

All-Star

Welcome Grants

VMAA

WSF training fund

Host Team Camps

Access to a Virtual Village



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Thank You

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