

# MUSA 8

TRAIL RUNNING PACK

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# WHAT IS TRAIL RUNNING?

Originally a mode of transport, trail running competitively arose from strength tests and offshoots of various hunting sports.

Today trail running is a sport that spans from casual to competitive.



# Meet Gerald.

20

CASUAL TRAIL RUNNER  
UW STUDENT

## Likes

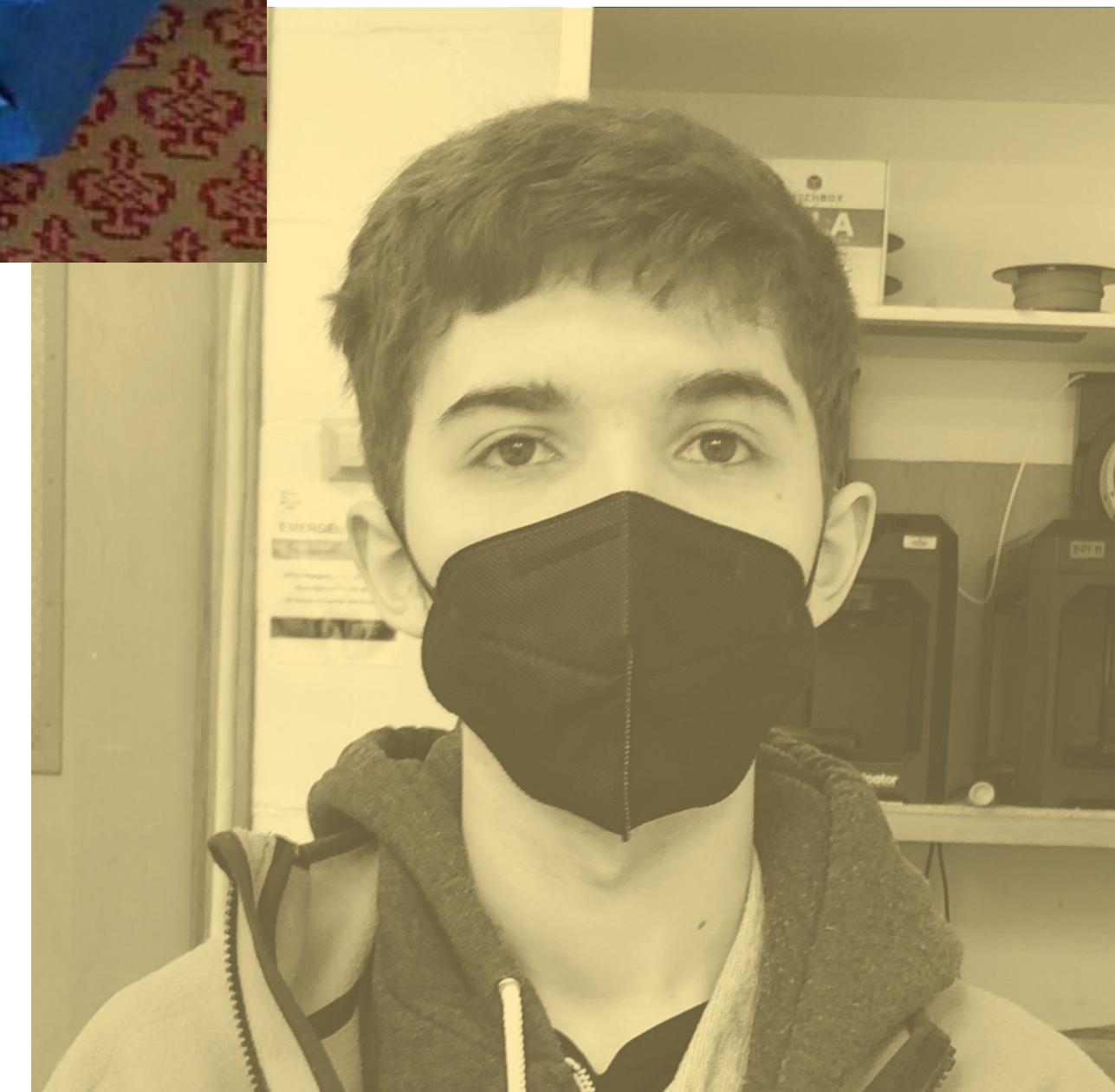
- eat/drink at slow speeds
- enjoy fit and breathability

## Dislikes

- bladder jostling around (water bladder)
- reaching back while running
- carrying poles or bear spray

## Gear

Trail shoes | Shorts | Synth long sleeve | Thin layers | Sweatshirt if cold | Water | Tangerine | Jerky | Electrolytes | Granola bar | Rain gear | Phone | Wallet | Keys



# Meet Anthony.

25

TRAIL RUNNER  
REI EMPLOYEE

## Likes

- carries water and phone in front straps
- 8 liters packs for 4-12 miles
- pack rain cover
- eating at summit



## Dislikes

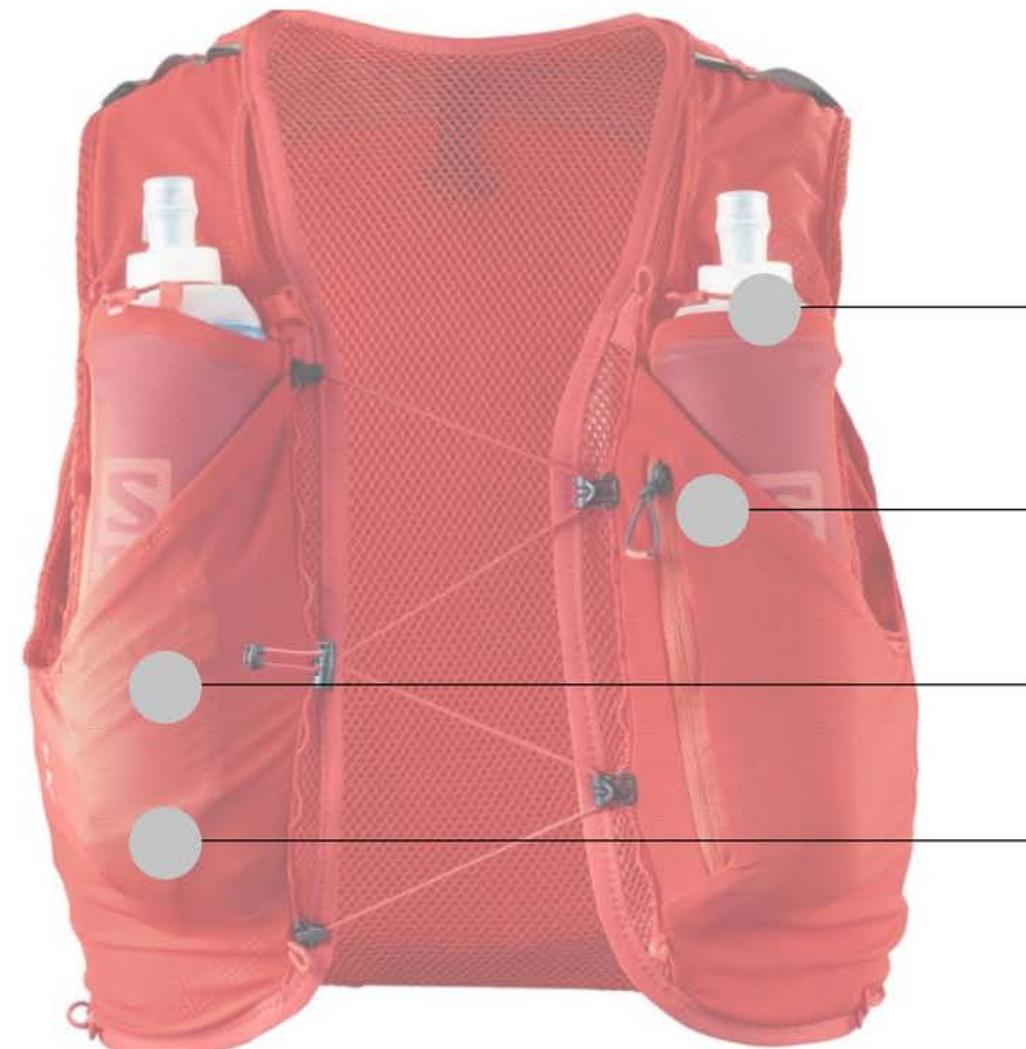
- bladder sloshing
- buckles

## Gear

Energy bars | Pocket Knife | Running Watch | Hat | 2x 500ml bottles | Dry Bags | First Aid | Shell Jacket | Extra Food | Phone | Wallet | Keys | Dog Bowl | Emergency Blanket



# EXPERT EQUIPMENT



## Water Bottle (Electrolyte)

- 500ml bottle with electrolytes

## Chest Pocket

- Phone
- Wallet

## Water Bottle (plain)

- 500ml bottle with water

## Chest Pockets (no zipper)

- Cliff Bars
- Candy gels

## Main Back Pocket

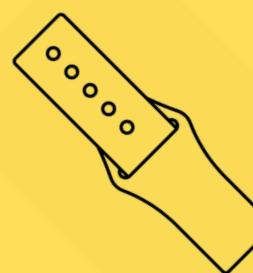
- (in dry bag)
- First Aid
  - Non-essential food
  - Shell
  - Dog bowl



## Side Pockets

- Snacks
- Pocket knife

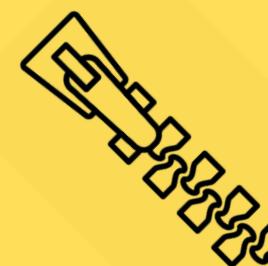
# MAIN PROBLEMS IDENTIFIED



Adjustable



Breathable



Storage

# ADJUSTABLE



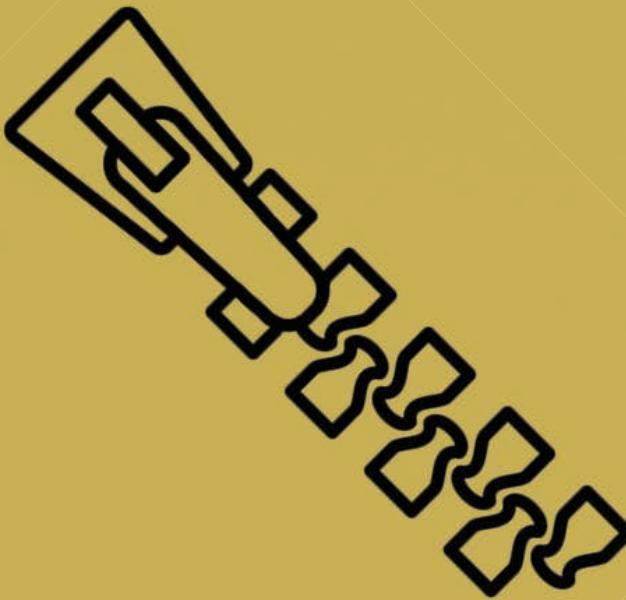
Fine tune the fit on the run.

# BREATHABLE



Cooling is key to a  
comfortable run.

# STORAGE



Take everything you need  
with you.



# Objective

Research and design a trail running pack that balances **comfort** and ease of **adjustability**.

# USER PERSONA

25 YEARS OLD  
CASUAL RUNNER



"I try to make it out to the trails every other week".

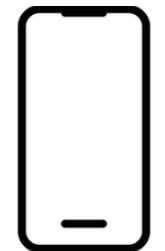
# PERFORMANCE CRITERIA



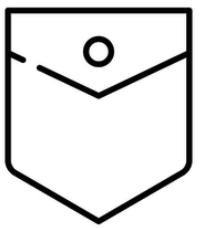
Comfortable to wear for long periods of time and adjust to different people



Easily hold 2 soft bottles of water



Chest pockets for phone & snack storage



Large pockets on the back to hold essentials



Back pouch for the shell

# PROTOTYPES 1



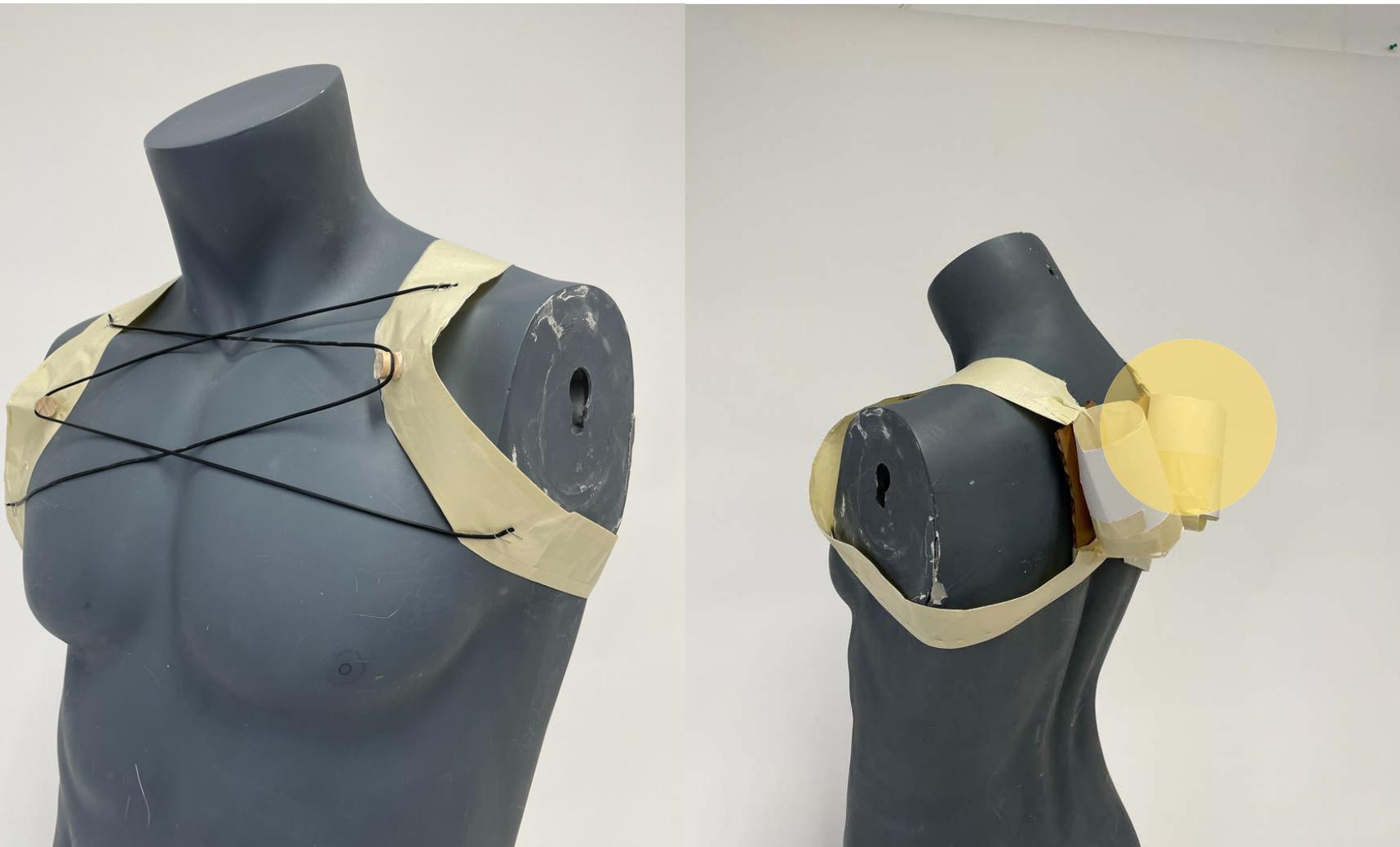
Goal: Test pocket forms and layouts

Insights: Fewer pockets are needed,  
especially with flexibility

Goal: Test back breathability

Insights: Two back pockets are good  
but need to be in a different style

# PROTOTYPES 1



**Goal:** Test back mounted bottles

**Insights:** Wearer must be able to see the bottle pockets

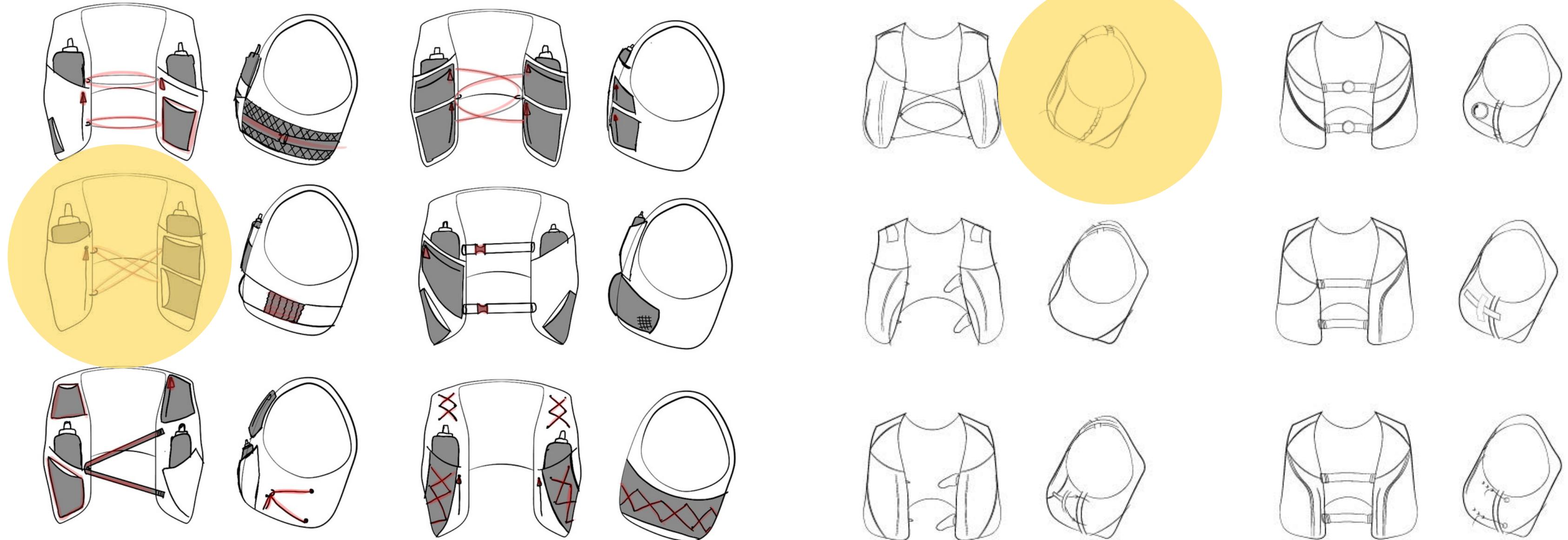


**Goal:** Test the fit on a model

**Insights:** Found that the tight fit was good on varying body sizes with some adjustments

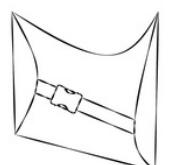
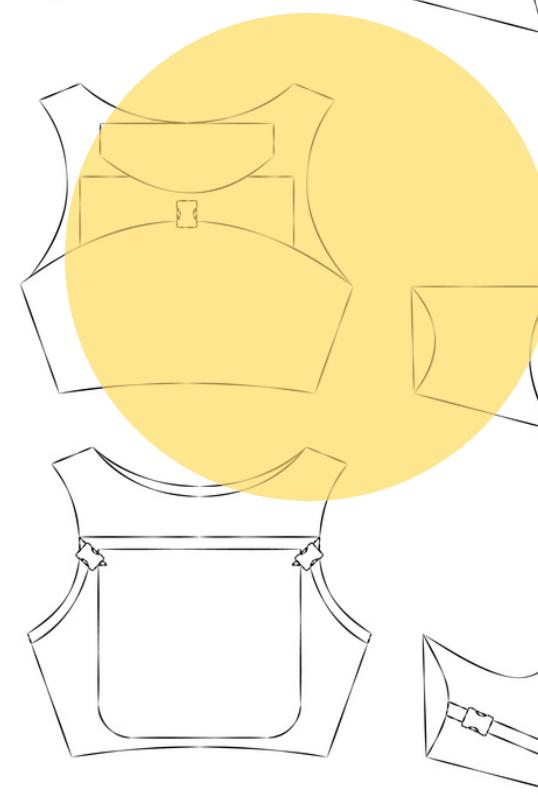
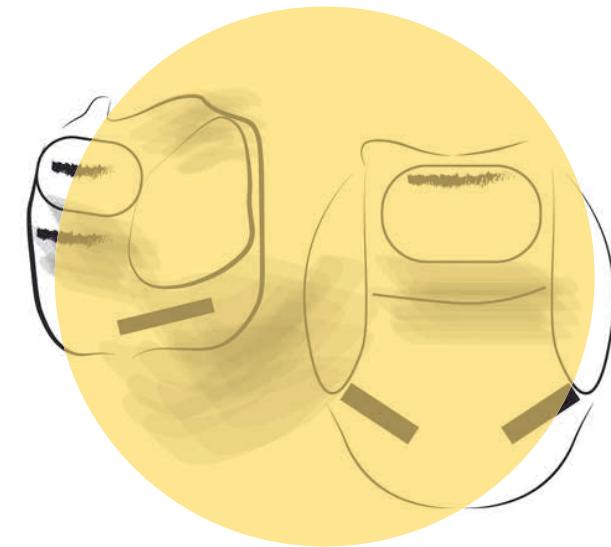
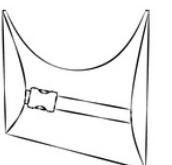
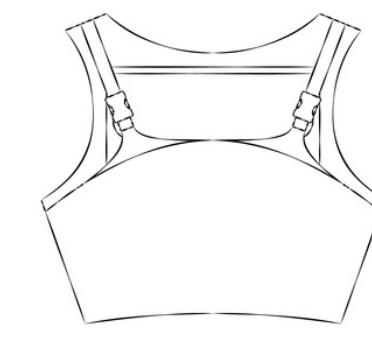
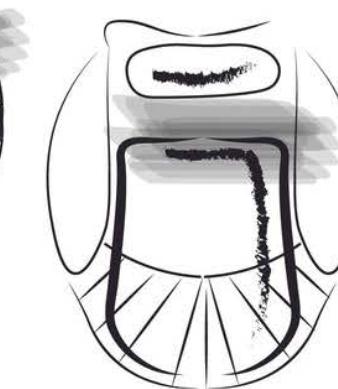
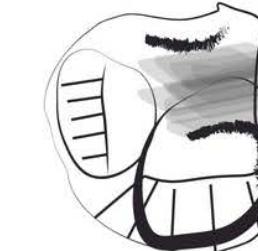
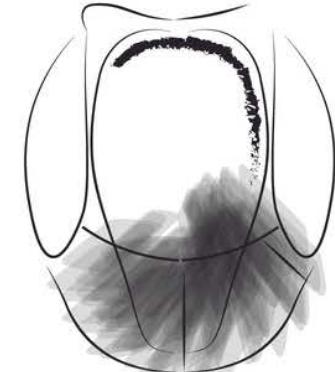
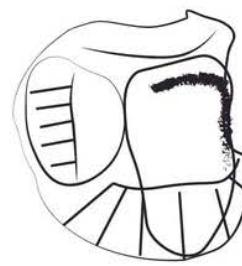
# REFINED SKETCHES

## Chest and side



# REFINED SKETCHES

Back and side

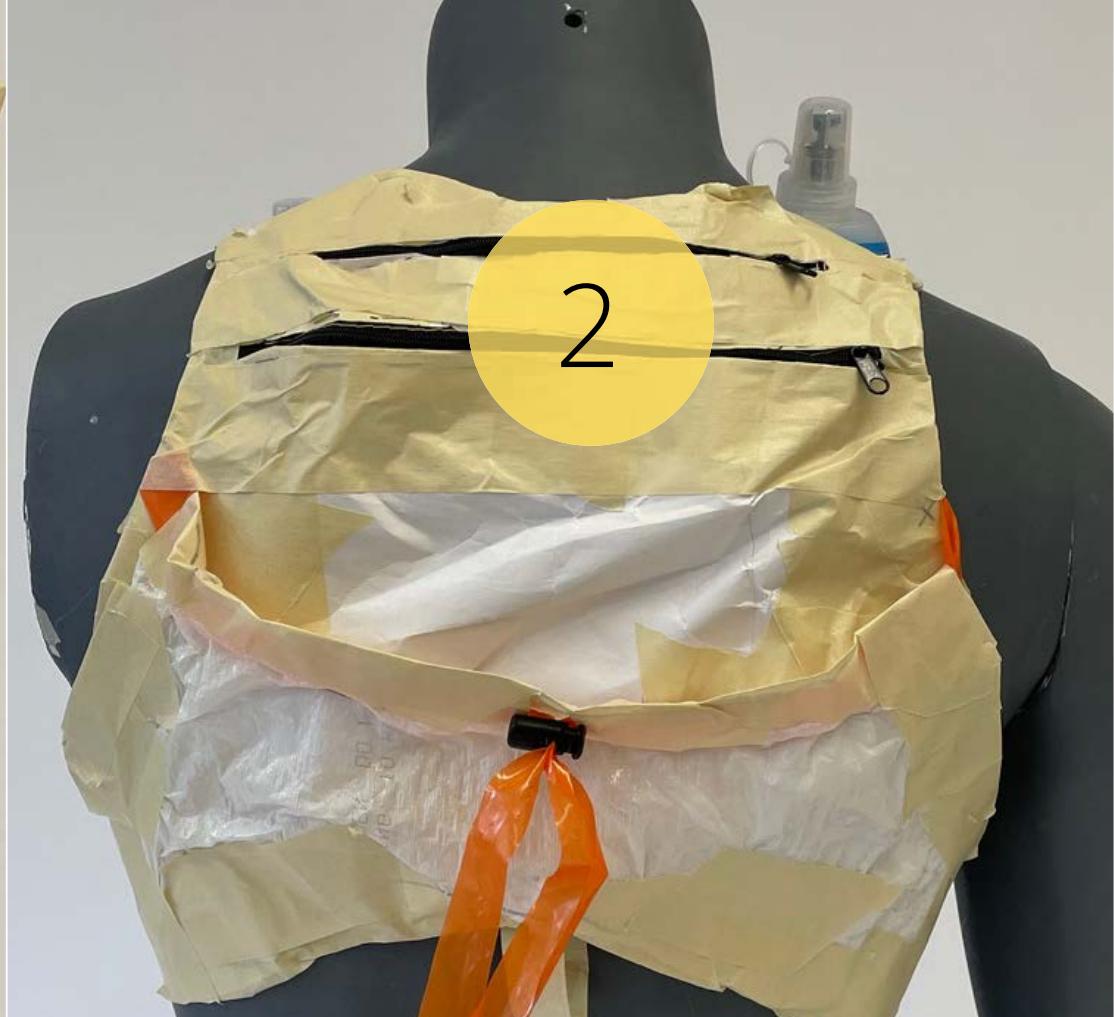
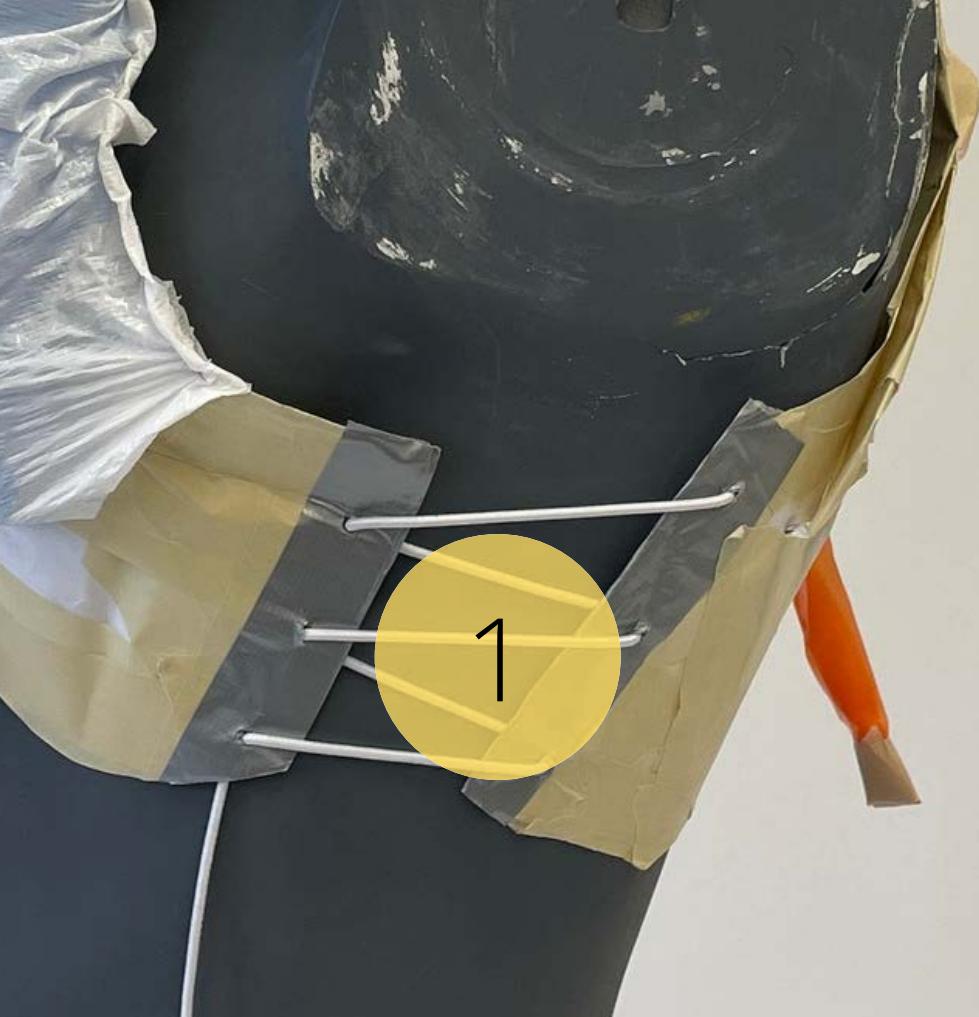


# PROTOTYPE 2

Goals: Simplify pockets, add more adjustability, and test front sternum strap

Design Decisions:

1. Side and sternum laced adjustability succeeded.
2. The back pouch should be lowered
3. Bottle pockets need lowering and two pockets should be accessed from the inner edge.
4. Front straps need lengthening



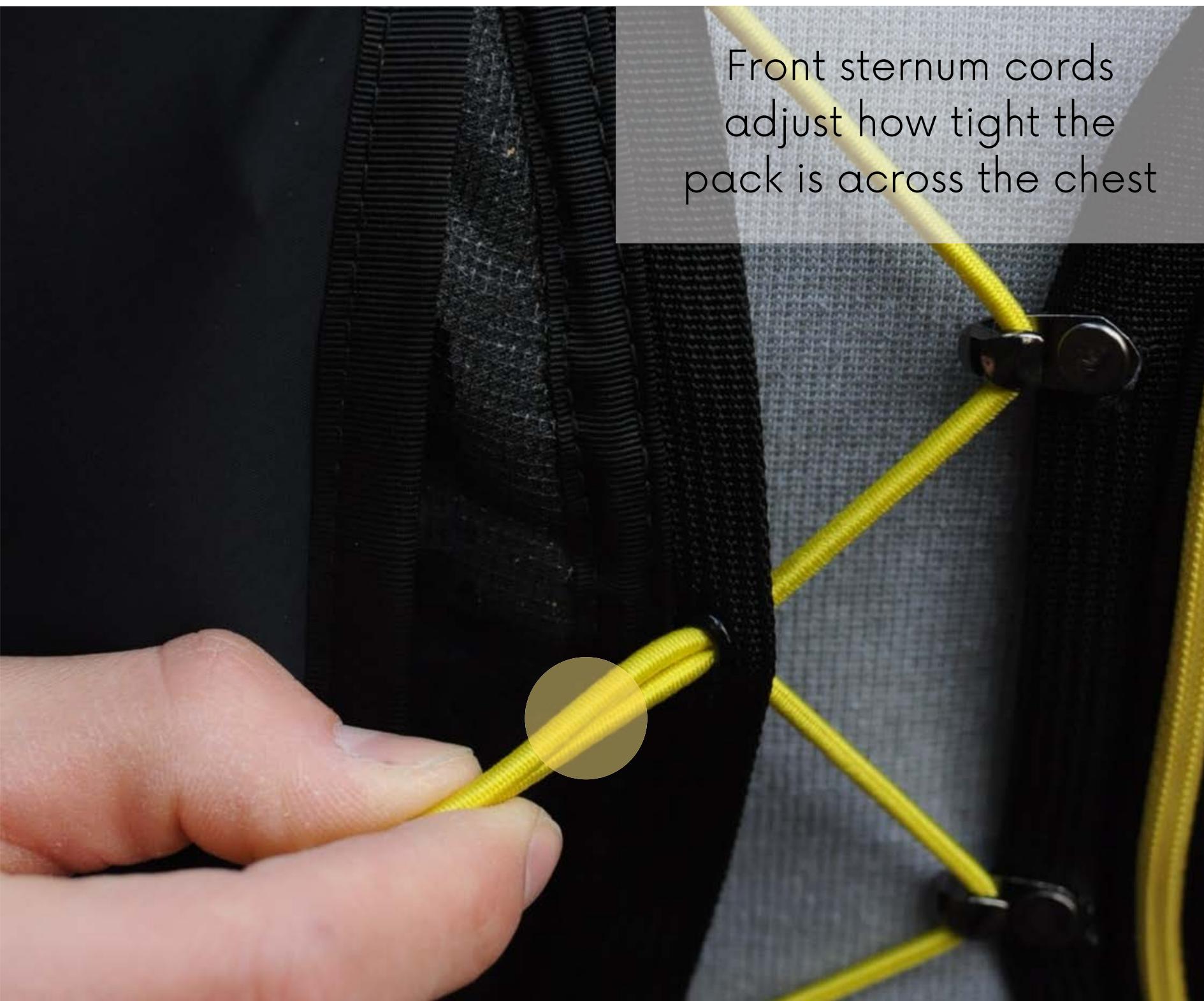


# MUSA 8

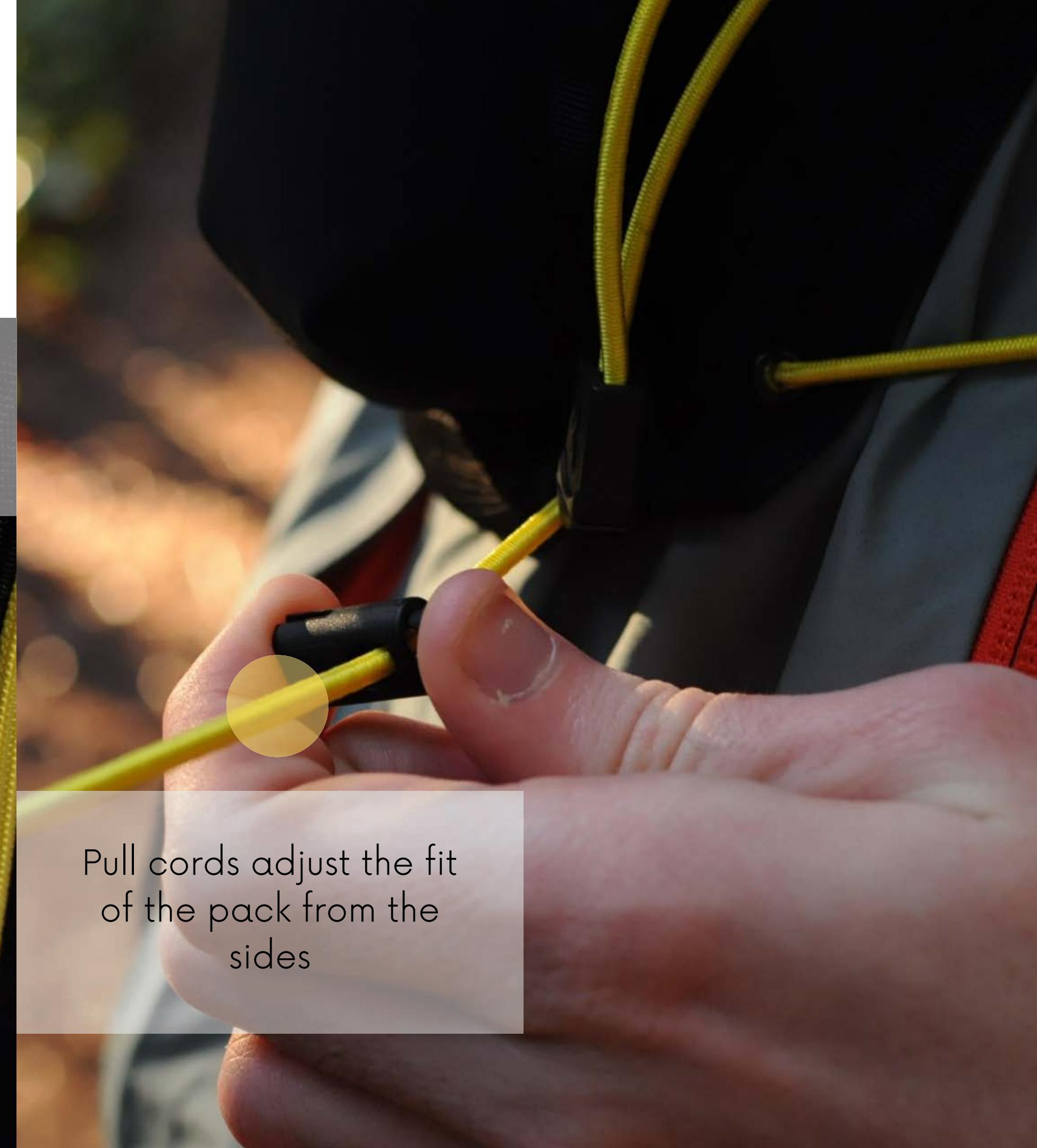
AN ULTRALIGHT TRAIL RUNNING PACK MADE TO  
HUG THE BODY



# ADJUSTABLE

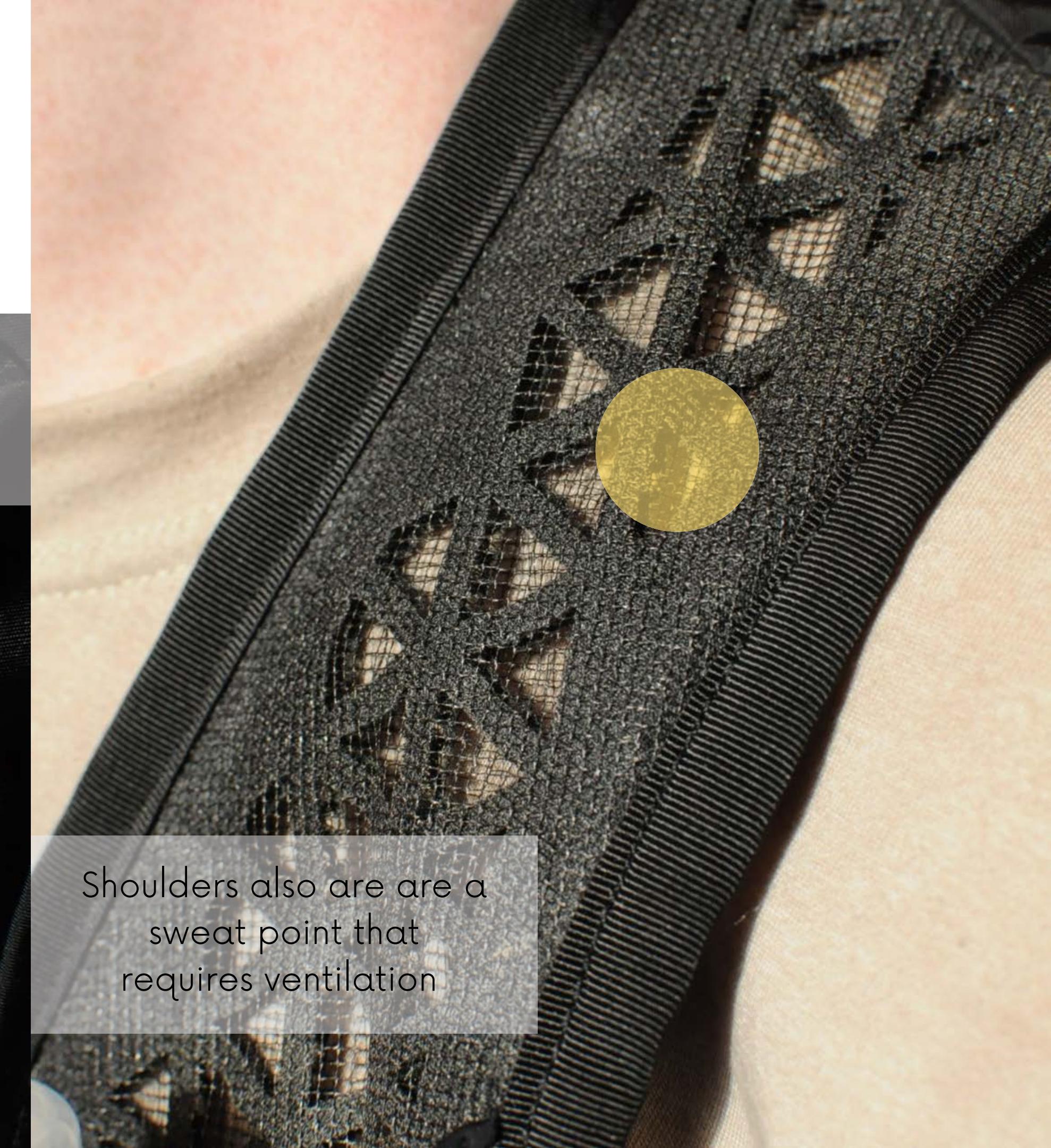


Front sternum cords  
adjust how tight the  
pack is across the chest



Pull cords adjust the fit  
of the pack from the  
sides

# BREATHABLE



# FRONT STORAGE



Quick access pocket for snacks etc.



Secure pocket for keeping phone or other valuables safe

# BACK STORAGE



Large back pocket to store equipment or large food items

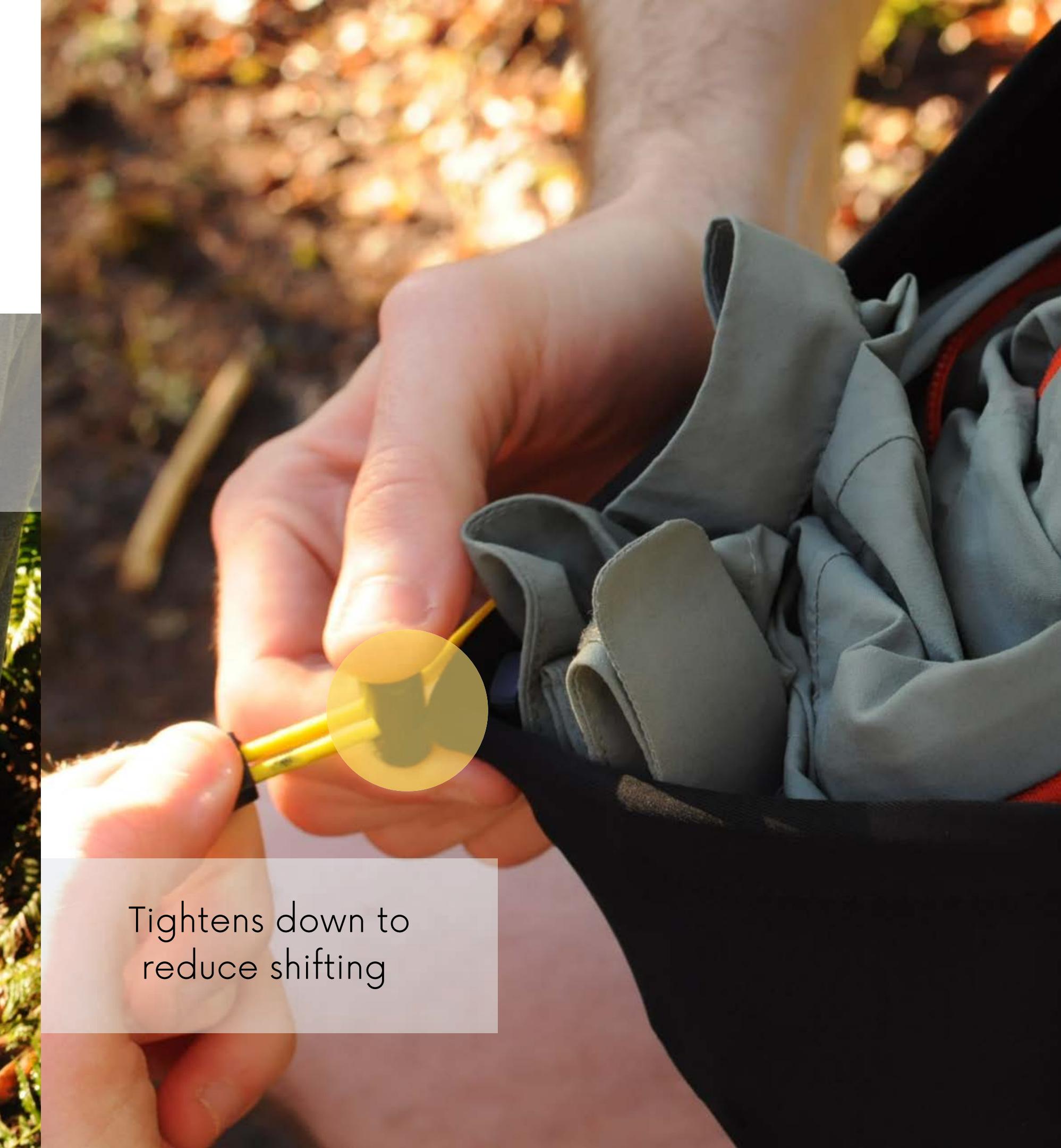


Secure quick access pocket to hold wallet keys etc

# POUCH STORAGE



Back pouch for securing  
raincoats, running poles  
or any other gear



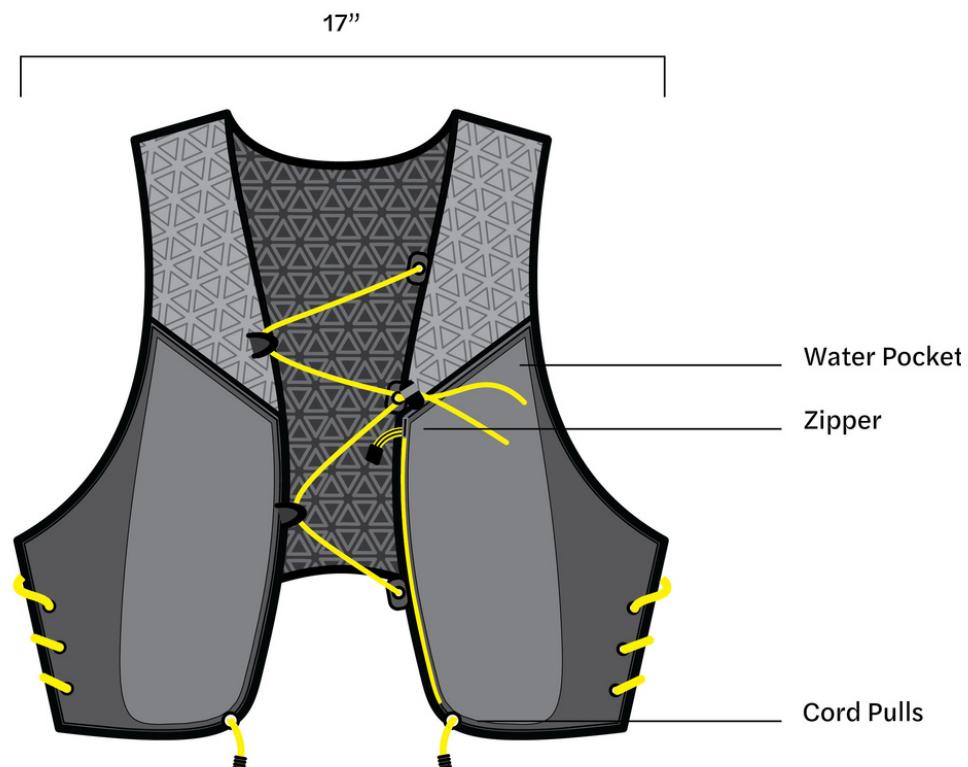
Tightens down to  
reduce shifting

# DEMO

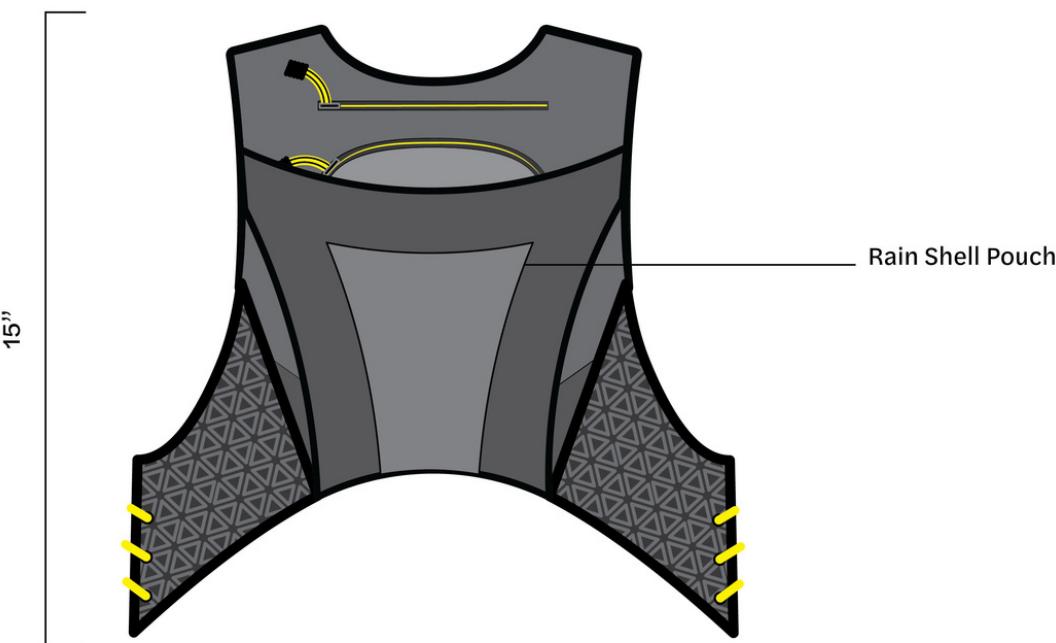


# TECH PACK

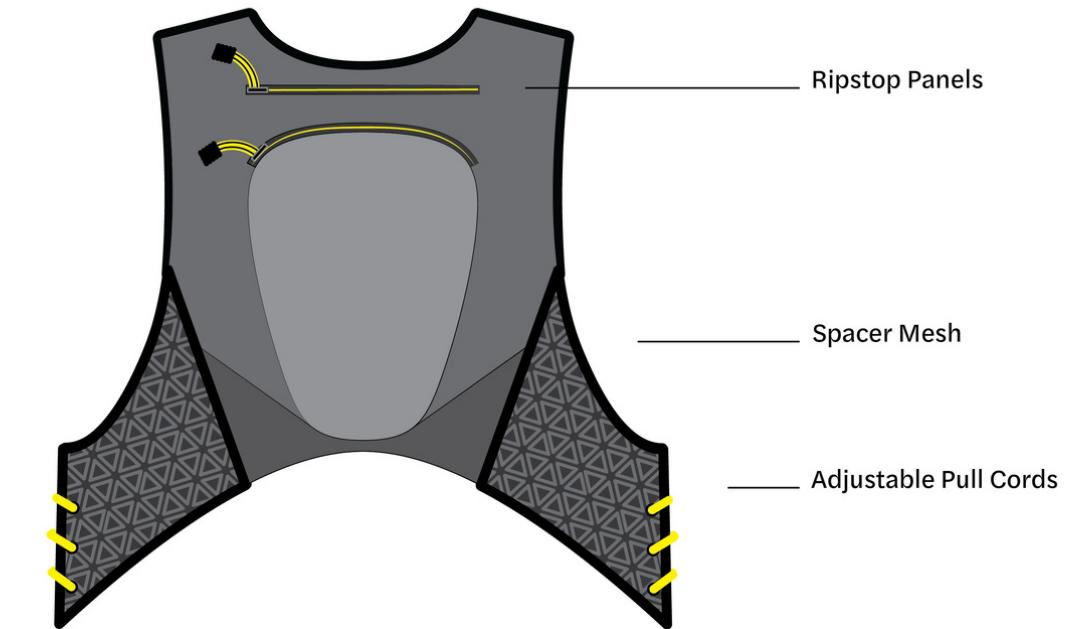
Front



Pack with Pouch



Back



# MUSA 8



Adjustable



Breathable



Storage



A photograph of a person walking away from the camera on a dirt path through a dense forest. The person is wearing a white t-shirt, dark shorts, and a black backpack. The path is lined with large green ferns and fallen leaves. Sunlight filters through the trees, creating bright highlights on the fern fronds and the person's back. The overall atmosphere is peaceful and natural.

**THANK YOU!**