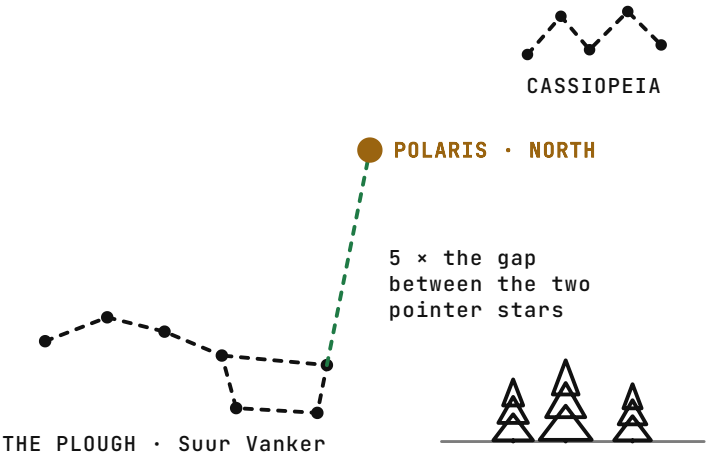


For when there is no signal

WILDERNESS GUIDE

What to do when you are lost, cold, hurt or caught out in the forests, bogs and on the shores of Estonia and the north.

MARFELDT.COM · EDITION 3 · NOVEMBER 2026

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112 Ambulance, rescue, police. Free, from any phone, over any network. **Say where you are first.** Your phone finds its position without mobile signal.

⚠ !

IF IT IS AN EMERGENCY NOW

Read this part first. Everything else can wait.

IN SHORT

1. Call 112 and say where you are first.
2. Your phone finds its position without mobile signal.
3. Cannot speak or no voice signal: text 112.

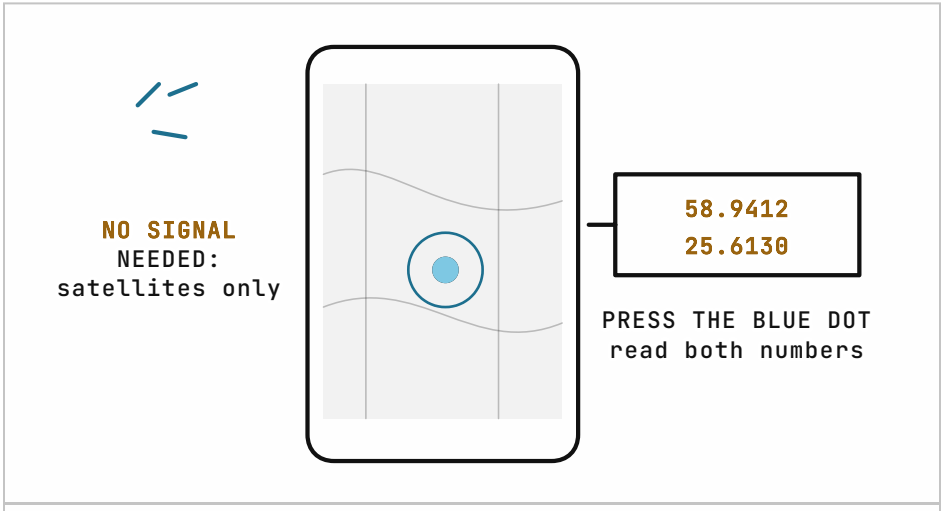
Call 112. One number for ambulance, rescue and police. It is free, it works from a locked phone, and the call goes out over any operator's network that reaches you, not only your own.

1. **Say where you are first**, in case the call drops: the nearest village, road or trail, what you can see, or coordinates.
2. **Say what happened** and how many people are hurt.
3. **Answer the questions and do not hang up** until you are told to. Help is already being sent while you talk.
4. **Keep the phone free and warm** afterwards. Rescuers may call back.

SAY IT IN THIS ORDER

WHERE	*I am at … (village, road, trail, what I see, or the two numbers from the map).*
WHAT	*… has happened. (fallen, lost, through the ice, not breathing)*
WHO	*… people, … hurt. Adult or child.*
YOU	*My name is …, calling from this number.*

Your position. During a 112 call your phone normally sends its position to the emergency centre on its own. Say it out loud anyway. Your phone can find its position from satellites **without any mobile signal**: open the map app and press on the blue dot, or open the compass app, and read the two numbers (for example 58.9412, 25.6130).



The map app shows where you are even with no bars: the position comes from satellites.

No voice signal, or you cannot speak? Send a text message to 112 with where you are and what happened. In Estonia this works in every mobile network; messages from numbers registered beforehand at sms.112.ee arrive without delay. One bar

of signal often appears on higher or more open ground: a hilltop, a bog, a lake shore, a clearing.

> A text to 112 from a number that has not been registered arrives with a delay. Call if you possibly can, and register your number at sms.112.ee before you need it.

Poisoning (mushrooms, berries, plants, chemicals): the Estonian poison information line is **16662**, day and night. If the person is unwell, call 112.

> This guide is a memory aid, not training and not medical advice. In a real emergency the instructions of the 112 operator come before anything written here.

01

THE FIRST TEN MINUTES

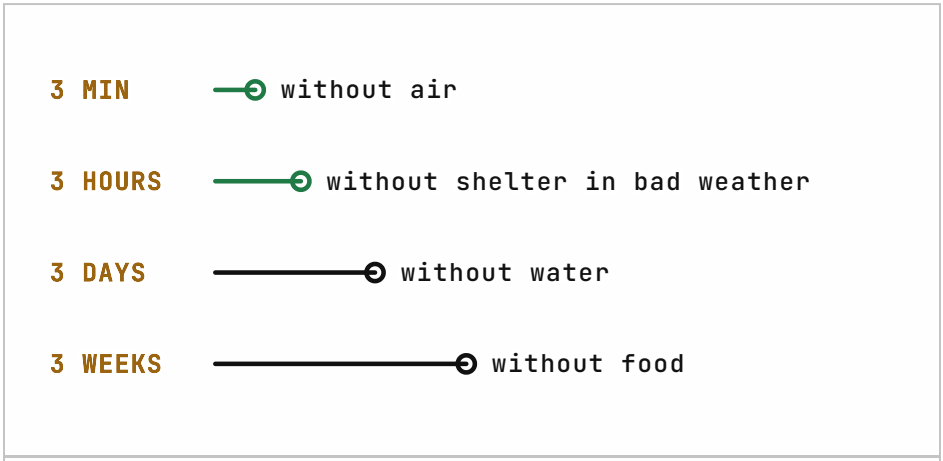
Most people who get into trouble outdoors make it worse in the first minutes, by hurrying.

IN SHORT

1. Stop walking and sit down.
2. First aid, shelter, signal, water, food: in that order.
3. If someone knows your route, stay where you are.

When you notice that you are lost, hurt or caught out by weather or darkness: **stop walking.** Sit down, eat or drink something, put on a layer. Then go through four words.

S **STOP** Sit down. Hurrying turns a small problem into a big one.	**T** **THINK** Where was I last sure? How much daylight, warmth, water, battery?
O **OBSERVE** Weather, wind, ground, sounds, what is in the pack and pockets.	**P** **PLAN** One next thing to do, and what would make me change my mind.



The rule of threes sets the order: cold and wet kill long before thirst, and thirst long before hunger.

1 FIRST AID → 2 SHELTER AND WARMTH → 3 BEING FOUND →

4 WATER → 5 FOOD

That is the order of work, almost always. In Estonia nobody is ever more than a day's walk from a road; the real dangers are cold, wet, water and injury, not starvation.

> **Stay or go?** Stay where you are if someone knows your route, if it is getting dark, if anyone is hurt, or if the weather is turning. Move only if you are sure of the direction, have daylight for it, and nobody is expecting to find you here.

WITH CHILDREN, OR IN A GROUP

- Teach a child one rule before every trip: **if you cannot see us, stop and hug a tree.** A child who stays by one tree is found quickly; a child who walks is not.
- Give every child a whistle and a bright hat, and a photo of them taken that morning stays in your phone.

- A child is missing: call 112 at once. Do not search for an hour first.
- In a group, the slowest person sets the pace and walks second, never last. Count heads at every stop.
- Never split up unless someone must go for help; then two go, with a written note of the place, the time and what is wrong, and one stays with the injured.

THE HEAD GAME

Fear is normal and useful for about a minute. After that, a small job helps more than anything: collect firewood, mark the spot, build the bed. People who keep busy, warm and together through the first night are almost always found well.

02

BEFORE YOU LEAVE

The cheapest rescue is the one that never has to happen.

IN SHORT

1. Tell one person your route and the hour to call 112.
2. Ten things in the pack cover an unplanned night.
3. Three layers, no cotton, one dry set kept sealed.

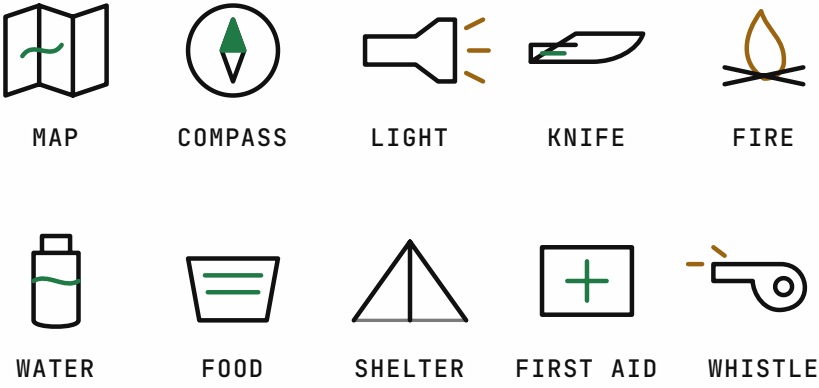
TELL ONE PERSON

- Where you are going and by which route.
- When you will be back, and **the hour at which they should call 112** if they have not heard from you.
- Where the car is parked and what you are wearing.

TRIP NOTE: FILL IT IN, PHOTOGRAPH IT, SEND IT TO ONE PERSON

Route	from, by way of, to
Setting off	day and hour
Back by	day and hour
Call 112 if you have not heard by	day and hour
Car	where it stands, plate number
People	names, phone numbers
Wearing	jacket and pack colours

TEN THINGS IN THE PACK



The ten essentials. Together they weigh a kilogram or two and cover a night out that you did not plan.

- **Map and compass** on paper and in the hand; the phone is a second copy, not the first.
- **Light**: a headlamp with fresh batteries. In November it is dark by four.
- **Fire**: a lighter and storm matches in a waterproof bag, plus a candle stub or cotton pads with petroleum jelly.
- **Shelter**: a foil blanket or bivvy bag, or a light tarp and cord.
- **Warm layer, hat and gloves**, even in summer, and a rain shell.
- **Water** and a metal cup or pot that can go on a fire.
- **Food** you do not have to cook: nuts, chocolate, bread.
- **First aid**: pressure bandage, plasters, tape, tweezers for ticks, your own medicines.
- **Knife**, and a **whistle** on a cord.
- **Phone** fully charged, in a waterproof bag, with a power bank.

WHAT THE SEASON ADDS

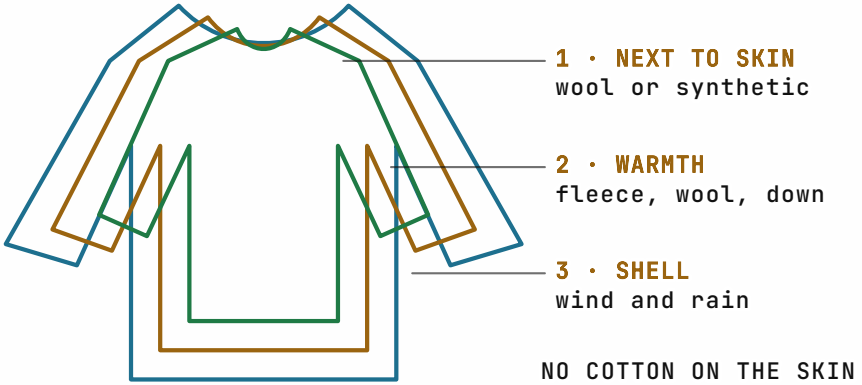
SEASON	ADD TO THE TEN
Spring	rubber boots, tick tweezers and repellent, a warm layer more than you think
Summer	more water, head net, sun hat, repellent, a light tarp
Autumn	spare headlamp batteries, a bright orange vest, a dry set of clothes
Winter	ice picks and a rope, a flask with a hot drink, a closed-cell mat, spare gloves and socks, a shovel in the car

FIVE QUESTIONS AT THE CAR

- [ ] Does someone know my route and my hour?
- [ ] Do I have light, fire and a warm layer?

- [ ] Is the map on the phone downloaded, and the battery full?
- [ ] What is the weather doing by evening?
- [ ] When do I turn round, whatever happens?

CLOTHES



Three layers. Take one off before you sweat, put it back on before you are cold.

Dress in three layers and take one off before you sweat: a thin layer next to the skin that dries fast (wool or synthetic, **never cotton**), a warm layer (fleece, wool, down), and a shell against wind and rain. Wet cotton takes the heat out of you; wool keeps warming when it is damp. Keep one set of dry clothes sealed in a bag for the night.

THE PHONE

- Download the map of the area for offline use, and save this guide on the phone.

- Flight mode saves most of the battery. Satellites still find your position in flight mode.
- Cold empties a battery. Carry the phone in an inside pocket.
- Dim the screen, close the camera, and check the map in short looks.
- Register your number at sms.112.ee, so that a text to 112 goes straight through when you cannot call.

A WARM NIGHT

- Eat something fatty or sweet and drink something warm before you lie down.
- Go to bed warm: twenty squats first. A sleeping bag only keeps the heat you bring into it.
- Dry socks and a hat for the night; the damp day socks go inside your jacket to dry.
- A bottle of hot water in a sock at your feet or between your thighs works for hours.
- Do not breathe into the bag: the damp from your breath makes it colder by morning.
- Need to pee? Go. The body wastes heat keeping it warm.

SMALL THINGS THAT DO A LOT

- **A big bin bag:** raincoat, wind shell, ground sheet, pack liner, water carrier, or stuffed with leaves, a mattress.
- **Duct tape** wound round a lighter or bottle: blisters, torn shells, splints, a broken pole.
- **Three metres of cord:** a ridge line, a splint tie, a boot lace, a clothes line by the fire.

- **A foil blanket** weighs 50 grams and stops wind and rain; it warms only when something insulating is under it.

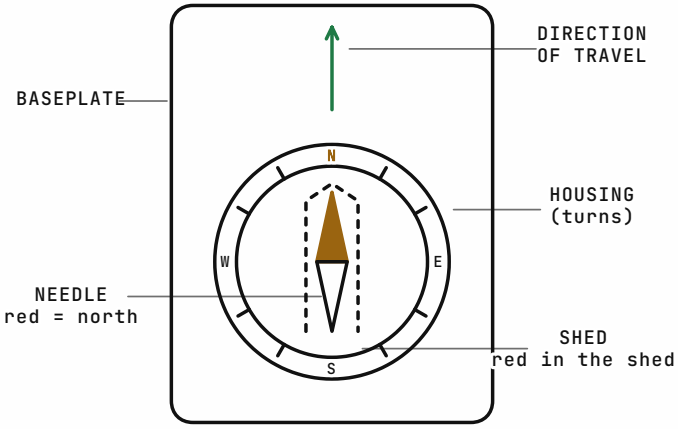
⌀ 03

FINDING THE WAY

A map and a compass never run out of battery. Ten minutes of practice at home is worth more than this whole chapter read in the dark.

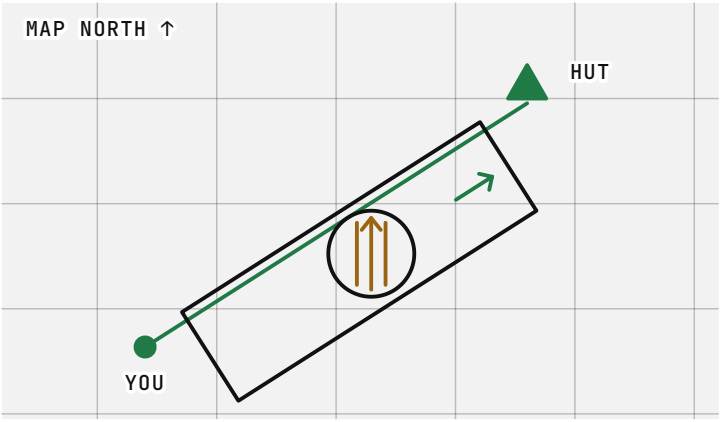
IN SHORT

1. Follow lines: paths, rides, ditches, shores.
2. The needle points about 10° east of true north here.
3. Lost and no line to follow: stop and camp while it is light.



The parts of a baseplate compass.

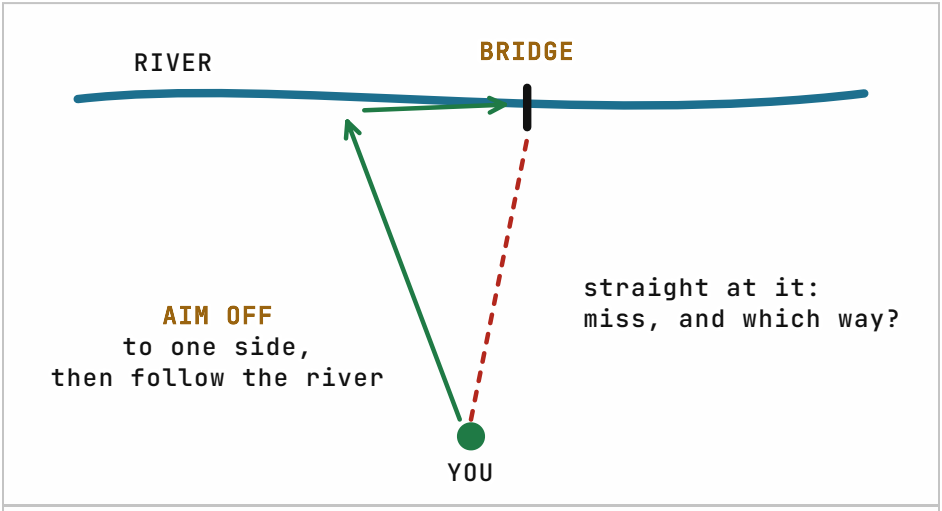
WALKING ON A BEARING



Lay the long edge from where you are to where you want to be, then turn the housing until its lines run along the map's north lines.

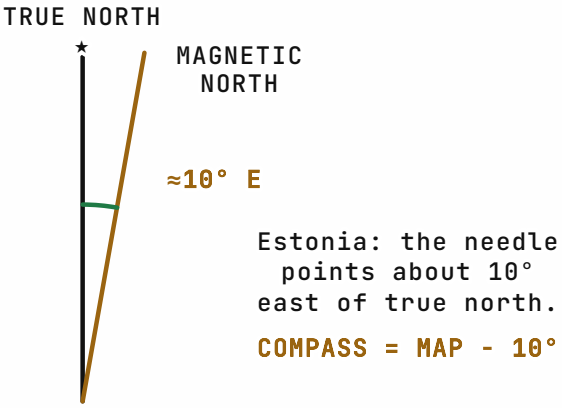
1. Put the edge of the compass on the map so that it joins where you are and where you are going, the travel arrow pointing at the goal.
2. Hold the baseplate still and turn the housing until the lines inside it run parallel to the north lines of the map, N to the top of the map.
3. Take the compass off the map and hold it flat at your waist. Turn your whole body until the red end of the needle sits in the red shed.
4. The travel arrow now points at your goal. Pick a tree or a stone on that line, walk to it, and repeat.

THREE HABITS THAT KEEP YOU FOUND



Aiming off: miss on purpose, so that you know which way to turn.

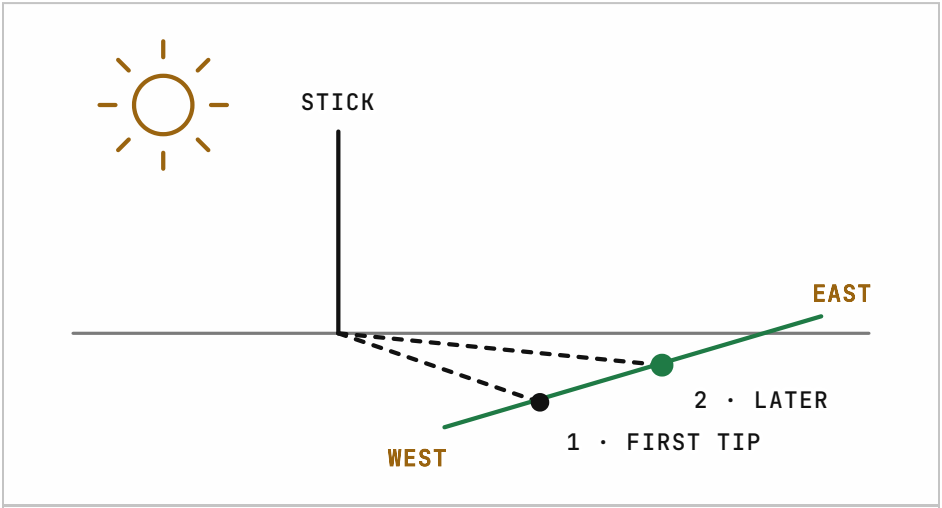
- **Follow a handrail.** A path, a ride, a ditch, a shore, a power line or the edge of a bog is easier and surer to follow than a bearing.
- **Pick a backstop.** Before you set off, find a line on the map behind your goal (a road, a river). Reach it, and you have gone too far.
- **Aim off.** Going to a bridge or a hut on a line? Aim clearly to one side of it. When you hit the line, you know which way to turn.
- **Count paces.** About 60–65 double steps make 100 metres on a path, more in rough forest. Count yours at home once.
- **Thumb the map.** Keep your thumb on where you are and move it at every feature you pass.



The needle does not point exactly at the map’s north.

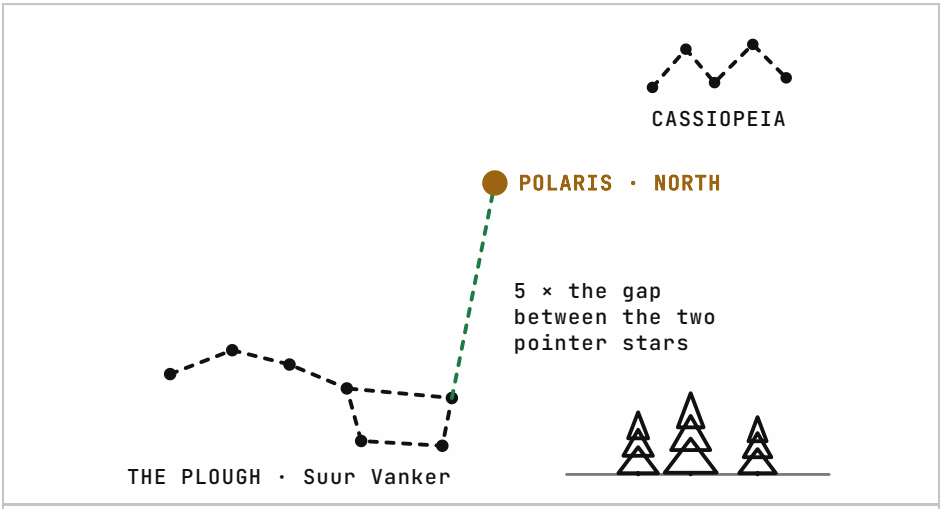
In Estonia the needle points about ten degrees east of true north (the exact figure is printed in the margin of a good map, and it grows a little every year). For a bearing taken from the map, subtract the ten degrees before you walk. Over one kilometre the uncorrected error is about 170 metres, enough to miss a hut.

WITHOUT A COMPASS



A stick, the sun and twenty minutes give an east–west line.

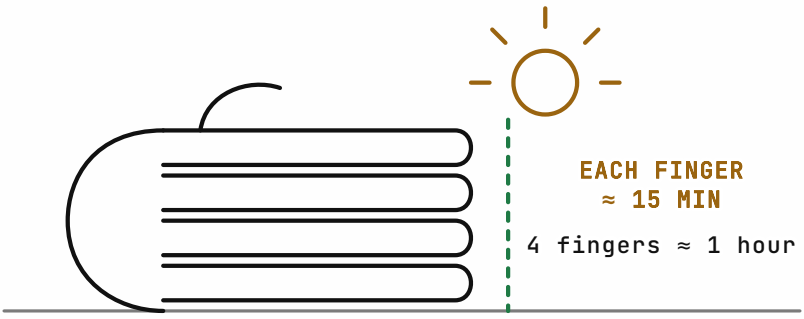
- **The sun** is due south at about 13:20 in summer time and 12:20 in winter time in Estonia. It rises in the east and sets in the west only around the equinoxes; in June it rises in the north-east and sets in the north-west, in December south-east and south-west.
- **Shadow stick:** mark the tip of a stick's shadow, wait twenty minutes, mark it again. The first mark is west, the second east.
- **At night** the North Star stands within one degree of true north, all night and all year.



From the two end stars of the Plough’s bowl, five times their distance, to the North Star.

Moss on trees, anthills and the shape of crowns are not reliable. Do not walk on them.

HOW MUCH DAYLIGHT IS LEFT



ARM STRAIGHT · count fingers from horizon to sun

Arm out straight: every finger between the horizon and the sun is about a quarter of an hour.

WHEN YOU ARE LOST

Is anyone hurt, or is it getting dark?

YES Stay. Shelter, warmth, signal.

↓ NO

Does somebody know your route?

YES Stay near the route, in the open, and signal. They will look there.

↓ NO

Are you sure of the way back to the last place you knew?

YES Go back along your own track, marking it.

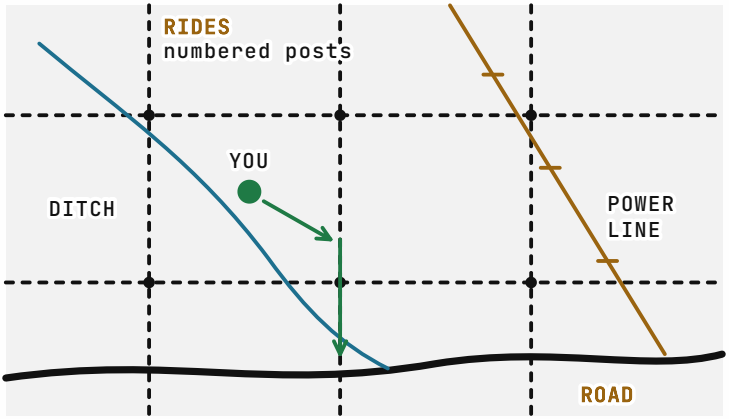
↓ NO

Can you hear or see a line: a ride, a ditch, a power line, a road?

YES Go to it and follow it. Downstream and downhill reach people sooner.

↓ NO

None of these: stop, make camp while it is light, and signal on the hour.



Lines that lead out. Forest rides cut state forest into blocks, mostly north-south and east-west; a ride always meets a road in the end.

- **Mark the spot** where you first noticed (a stick in the ground, a cloth on a branch), so that you can come back to it.
- **Ditches** run into bigger ditches, and those to roads and farmland. **Power lines** lead to buildings.
- Listen every few minutes: a road, a chainsaw, a dog and a church bell all carry far on a still evening.

> Without a line to follow, people walk in circles, usually within a few hundred metres. If you have no line, no light and nobody hurt, the safest move is to stop and make camp while it is still light.

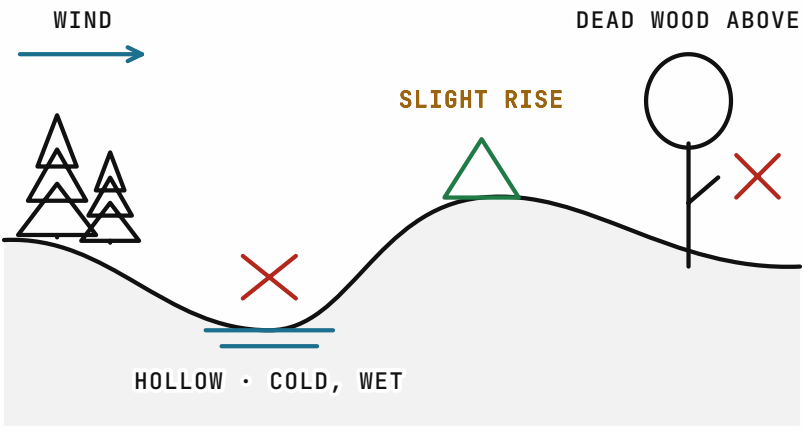
⚠ 04

SHELTER

A shelter is not a house. It only has to keep wind and wet off, and the ground from taking your heat.

IN SHORT

1. Start two hours before dark.
2. Build the bed first: 20 cm of boughs under you.
3. Small, low and out of the wind beats big.



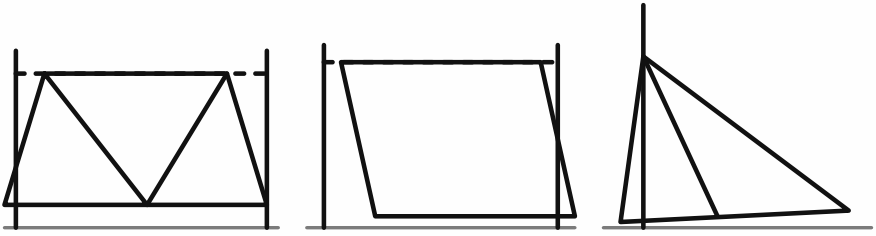
Where to sleep, and where not to.

- Start **two hours before dark**. Everything takes three times longer by headlamp.
- A slight rise, flat and dry. Not a hollow (cold air and water gather there), not a hilltop (wind).

- Look up: no dead trees or hanging branches. Spruce on wet ground falls first in a storm.
- Out of the wind, among young dense trees, 50 metres or more from water.

The ground steals more heat than the air. Build the bed before the roof: spruce boughs, dry grass, leaves or your rope and pack, pressed down to at least 20 cm, longer and wider than you are.

WITH A TARP, A PONCHO OR A FOIL BLANKET



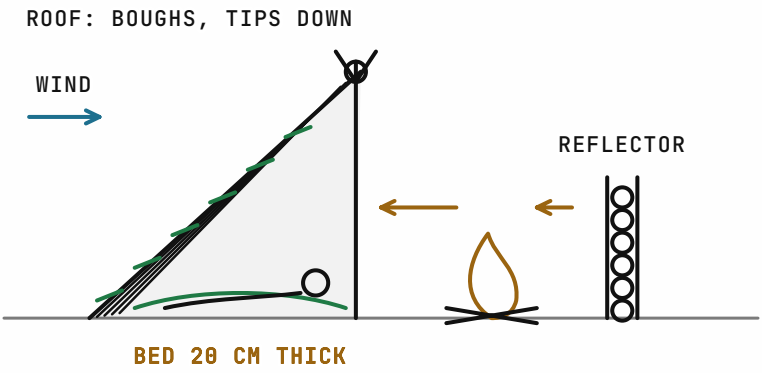
A-FRAME
rain and wind

LEAN-TO
fire in front

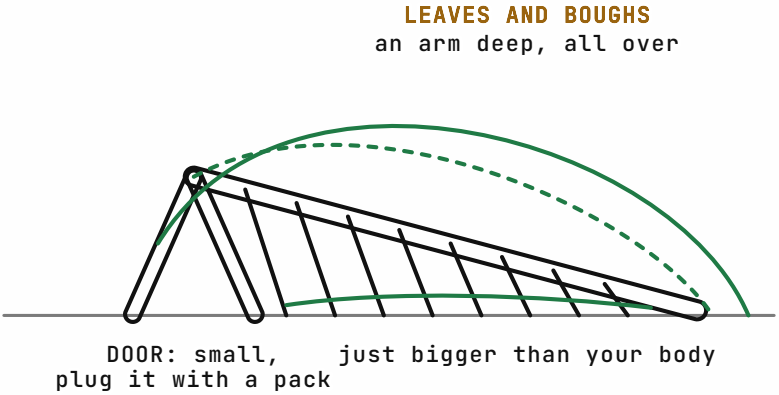
PLOUGH POINT
one tree, fast

Three ways to pitch a tarp with one line. Keep it low and tight; the lower edge towards the wind.

WITH NOTHING BUT THE FOREST



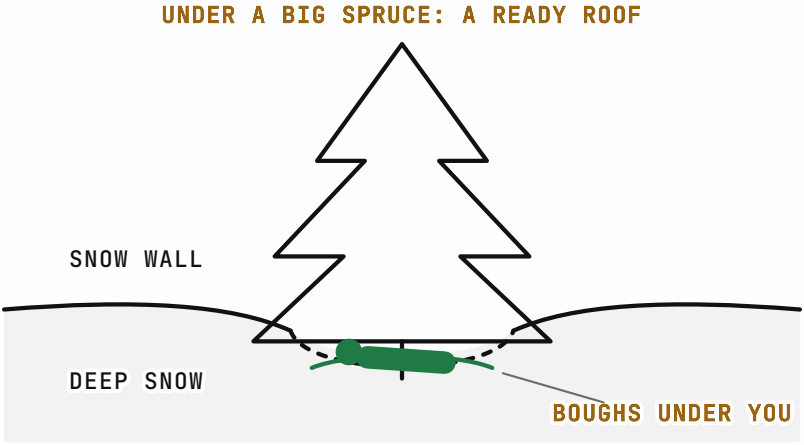
Lean-to: a pole between two trees or on a forked stake, a roof of boughs laid from the bottom up like tiles, the back to the wind.



Debris hut: for a cold night without fire. Your own body is the stove, so the hut must be small.

1. A ridge pole one and a half times your length, one end on the ground, the other knee-to-waist high on a stump or two crossed sticks.
2. Ribs along both sides, close together.
3. Small twigs over the ribs, then leaves, moss, boughs and forest litter **an arm's length thick** all over.
4. Fill the inside with dry leaves too, crawl in feet first, and close the door with your pack.

IN SNOW



A spruce in deep snow has a sheltered well around its trunk.

Snow is a good insulator. Under a big spruce the snow is shallow and the branches are a ready roof: dig down to the trunk's windless side and line the floor with boughs. In deep snow, pile a heap two metres high, let it settle for an hour, and hollow it out, with a fist-wide air hole in the roof and the sleeping bench higher than the door. Never sleep directly on snow, and mark the outside so that others can find you.

05

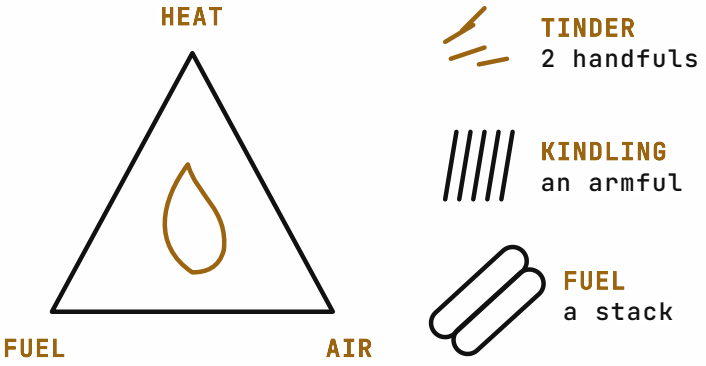
FIRE

Fire is warmth, dry clothes, safe water, light, a signal, and company.
It is also the one thing here that the law limits.

IN SHORT

1. Tinder, kindling, fuel: gather all three before the match.
2. Dry wood is on the tree, not on the ground.
3. By law only in a fireplace, unless life depends on it.

In Estonia an open fire may be lit only in a prepared fireplace (for example at an RMK campfire site) or with the landowner's permission. During a declared fire-hazard season, fire in forest and bog is forbidden outside those places, and in great fire hazard everywhere. Peat and forest floor burn underground and come up again days later. The rules give way only to a real threat to life.

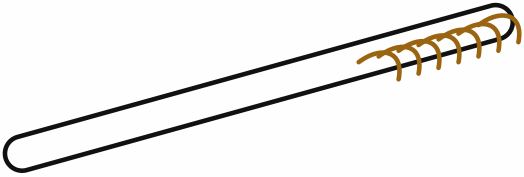


A fire needs heat, fuel and air. Most failed fires had too little tinder and too-thick kindling.

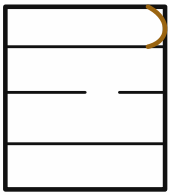
LIGHTING IT

1. Clear the ground to bare soil or sand, a metre across; on snow or wet ground build a floor of wrist-thick green logs.
2. Gather all three piles before you strike the first match: tinder, kindling, fuel. Then gather as much again.
3. Light the tinder on the windward side, low down. Feed it the thinnest twigs first, a few at a time, and let the flame climb.
4. Do not smother it. If it sinks, blow gently at the base and add thinner wood, not thicker.

FINDING DRY WOOD IN WET WEATHER



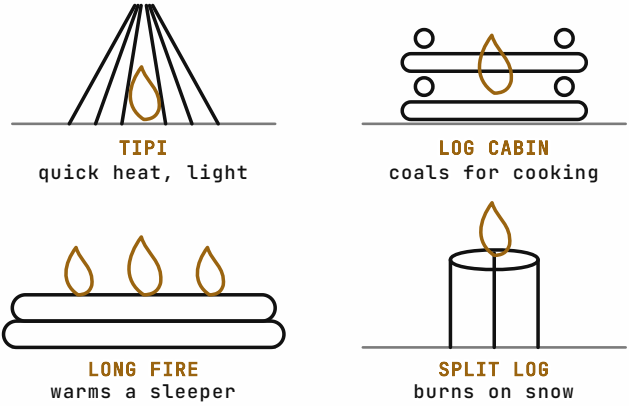
FEATHER STICK
curls left on dry wood



BIRCH BARK
lights even wet

Two things that light when everything else is wet.

- **Birch bark** burns even when wet. Take the loose, curling outer bark; do not ring a living tree.
- **Dead twigs still on the tree**, especially the thin lower branches of spruce, stay dry under the crown. Wood lying on the ground is wet.
- **Fatwood** (tõrvas): the resin-soaked heart of an old pine stump. Shavings of it burn like a candle.
- Split a thick dead branch: the inside is dry. Shave it into a feather stick.
- Dry grass, cattail fluff, old man's beard lichen, the lint in your pockets.



Four ways to lay a fire, each for a different job.

DO

- ✓ On bare soil, sand or stone, or a floor of green logs
- ✓ Small: a fire you can sit close to warms better than a big one
- ✓ Water or sand within reach before you light it
- ✓ Someone awake beside it, always

DO NOT

- ✗ On peat, moss, roots or dry needles
- ✗ Under branches or closer than three metres to a tent
- ✗ In strong wind
- ✗ Left smouldering "because it is nearly out"

STOVES, HUTS AND CARBON MONOXIDE

- Carbon monoxide has no smell and no colour. A grill, gas burner or glowing coals in a closed tent, car or hut can kill a sleeping person.

- Never take a grill or coals inside to keep warm, and do not cook in a closed tent.
- In a hut, close the stove damper only when the fire has burnt out completely: no flames and no glowing coals.
- A headache, dizziness, nausea or sleepiness in several people at once: get everyone out into fresh air and call 112.

PUTTING IT OUT

Let it burn down, spread the coals, pour water, stir, and pour again until you can hold your hand in the ashes. If it is too hot to touch, it is too hot to leave.

06

WATER

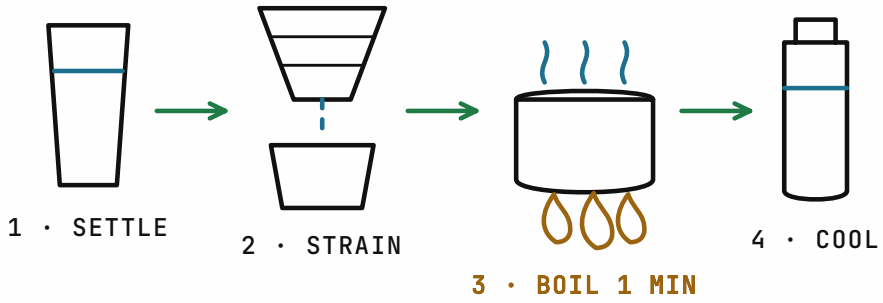
You can manage three days without water, but you will think badly after one. Drink before you are thirsty, and more in the cold than you want to.

IN SHORT

1. Finding water is easy here; cleaning it is the job.
2. A rolling boil for one minute.
3. Never ditch water by fields, never the sea.

2 L	1 MIN	1 DAY
a day at rest, twice that at work	rolling boil makes it safe	without water and you think badly

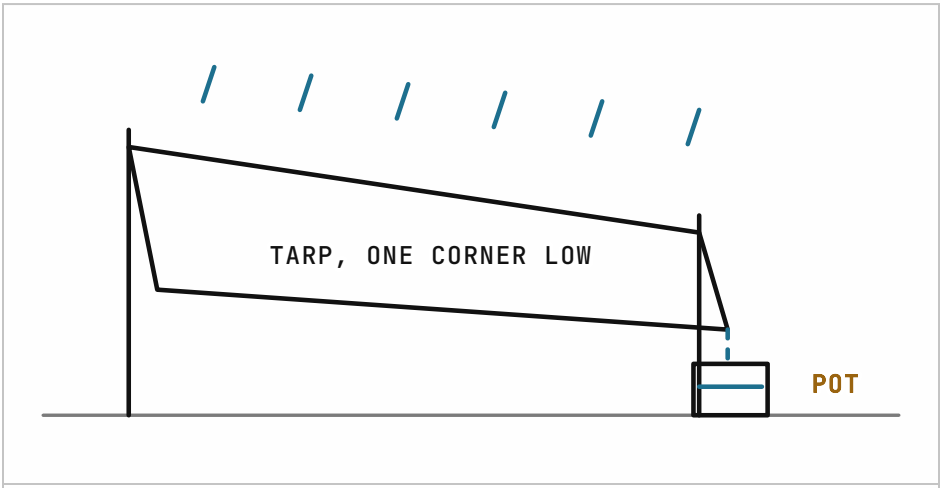
- An adult needs about **two litres a day** at rest, twice that when working or in heat.
- Dark urine, headache, tiredness and bad temper are the first signs of too little.
- Estonia is wet: springs, streams, lakes, bog pools, rain and snow are everywhere. The question is never finding water, only cleaning it.



Clear and running does not mean clean. Boiling is the sure way.

WHICH WATER

- **Best:** a spring where it comes out of the ground, rain caught on a tarp, fresh snow.
- **Good after boiling:** a running stream, a lake away from the shore.
- **Bog water** is brown from peat, sour and low in germs. It tastes bad but is safer than it looks; boil it all the same.
- **Avoid:** ditches beside fields and roads, still water near farms and towns, anything with a film, a smell or dead animals. Boiling does not remove fertiliser, fuel or the poison of blue-green algae.
- Sea water, also the brackish Baltic, makes thirst worse. Do not drink it.



Rain is the cleanest water there is. A shower fills a pot in minutes; let the first water rinse the tarp.

MAKING IT SAFE

1. Let muddy water stand until it clears, and pour off the top.
2. Strain it through cloth; a sock filled with layers of sand and crushed charcoal from the fire takes out more.
3. **Bring it to a rolling boil for one minute.** That kills what matters here.
4. No pot? Purifying tablets or a filter straw, by their own instructions. No fire and no tablets: if the choice is dirty water or none for a second day, drink. An upset stomach in three days is better than collapse tomorrow.

Do not eat snow as it is when you are cold; it costs body heat. Melt it first, with a little water already in the pot so that it does not scorch.

07

FOOD

Food comes last. A healthy adult can work for days and live for weeks without it. More people are harmed by what they ate in the forest than by not eating.

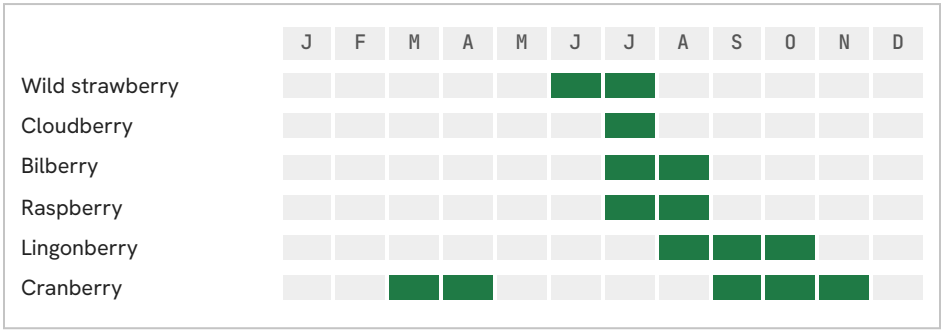
IN SHORT

1. Food comes last: you can go weeks without it.
2. Eat only what you can name without doubt.
3. Leave mushrooms alone.

> One rule: **eat only what you can name without any doubt.** If in doubt, go hungry. This guide deliberately has no drawings for telling plants or mushrooms apart; a small drawing is not enough to stake your liver on.

BERRIES ALMOST EVERYONE HERE KNOWS

BERRY	WHERE AND WHEN	NOTE
Bilberry (mustikas)	pine and spruce forest, July–August	blue flesh stains the fingers
Lingonberry (pohl)	dry pine forest, August–October	keeps under snow
Cranberry (jõhvikas)	bogs, September until spring	best after frost
Cloudberry (murakas)	bog edges, July	amber when ripe
Raspberry (vaarikas)	clearings, July–August	
Wild strawberry (metsmaasikas)	sunny banks, June–July	



LEAVE THESE ALONE

- **Lily of the valley** (maikelluke): red berries in late summer. All of the plant is poisonous.
- **Herb Paris** (ussilakk): one dark berry above four leaves.
- **Baneberry** (salu-siumari): shiny black berries in a cluster, in shady forest.
- **Mezereon** (näsiniin): red berries straight on the bare stem.
- **Bittersweet** (harilik maavits): red berries on a climbing plant near water.
- Any white berry, and any berry you do not know.

MUSHROOMS

Mushrooms give little energy and a few of them kill. The death cap, the destroying angel, the deadly webcap and the false morel grow in Estonian forests, look ordinary, and the first three give no warning for many hours, by which time the damage is done. Cooking does not make them safe. **In a survival situation, leave mushrooms alone** unless you have picked that exact kind for years.

WHAT ACTUALLY HELPS

- Eat what you carried, a little at a time, and keep something for the morning.
- Sweet food and warm drink before sleep help you stay warm through the night.

- Fish is the safest wild protein: a hook, line and worm at dusk in any lake or river. Cook it through.
- Do not waste strength hunting. The energy spent is rarely won back.

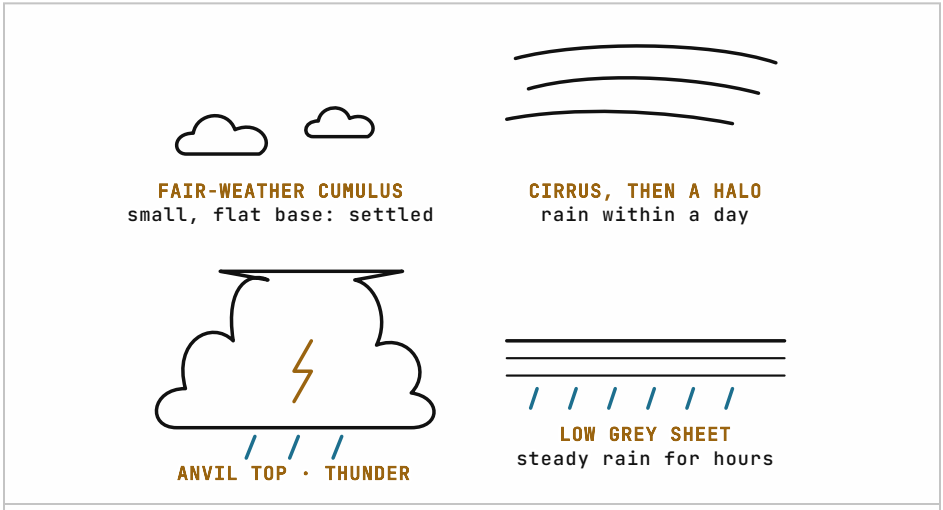
08

READING THE WEATHER

The sky gives half a day's warning to anyone who looks up every hour.

IN SHORT

1. Look up every hour.
2. Thin high cloud thickening: rain within a day.
3. Thunder under 30 seconds away: take cover.



Four skies worth knowing.

- **High thin streaks thickening to a milky veil**, a ring around the sun or moon: a warm front, rain or snow in 12–24 hours.
- **Wind backing and rising, pressure falling, distant sounds unusually clear:** weather is on its way.

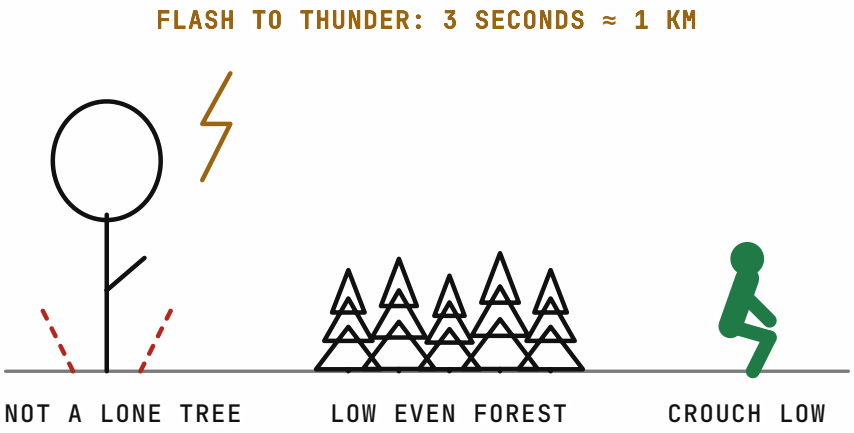
- **Heaps growing tall before noon** on a warm humid day: thunder by the afternoon.
- **A clear, still evening** in autumn or spring means frost by morning, and fog in hollows and over bogs.
- Red sky in the evening usually means a fair morning; red in the morning, a wet day. It is right more often than not, and no more than that.

WHAT THE WIND BRINGS

WIND FROM	USUALLY BRINGS
West and south-west	mild, damp air from the sea: most of the rain and most of the storms
The north	cold, clear air; showers of rain or snow on the north coast
The east	dry air: hard frost in winter, heat in summer
The south	warmth; in summer it often ends in thunder

Usual, not certain. A wind that swings round and strengthens matters more than where it comes from.

THUNDERSTORM



Lightning takes the tallest thing around. Do not be it, and do not stand beside it.

- Count seconds from flash to thunder and divide by three for kilometres. Under 30 seconds, take cover; stay there until 30 minutes after the last thunder.
- Get off open bog, shore, field and hilltop, and out of the water and the boat.
- A car or a building is safe. A tent, an open shelter and a lone tree are not.
- In forest, choose a stand of low even trees. Stay away from the tallest ones and from wire fences.
- Caught in the open: crouch on your pack or mat, feet together, head down. People in a group spread out, twenty metres apart.

WIND AND COLD

Wind makes cold colder, and wet makes it far worse: soaked clothes lose heat many times faster than dry ones. A wet, windy day at +5 °C is more dangerous than a dry, still one at −15 °C.

AIR	2 M/S light	5 M/S moderate	8 M/S fresh	12 M/S strong
+5 °C	+3	+1	0	-1
0 °C	-2	-5	-6	-8
-5 °C	-8	-11	-13	-14
-10 °C	-14	-17	-19	-21
-15 °C	-20	-24	-26	-28
-20 °C	-26	-30	-32	-35

How cold it feels on bare skin, in °C. The darker the cell, the less skin should show; in the darkest, bare skin can freeze.

09

COLD, WET AND HEAT

Hypothermia is the quiet killer of the north. It comes in summer rain as easily as in winter, and the person who has it is the last to notice.

IN SHORT

1. Wet and wind kill at +5 °C.
2. Out of the wind, wet off, dry on, insulated from the ground.
3. Through the ice: calm the breath, turn back, kick flat.

HYPOTHERMIA

MILD

Shivering hard, cold hands, clumsy fingers. Awake and making sense.

Shelter, dry clothes, warm sweet drink, food, movement.

GETTING SERIOUS

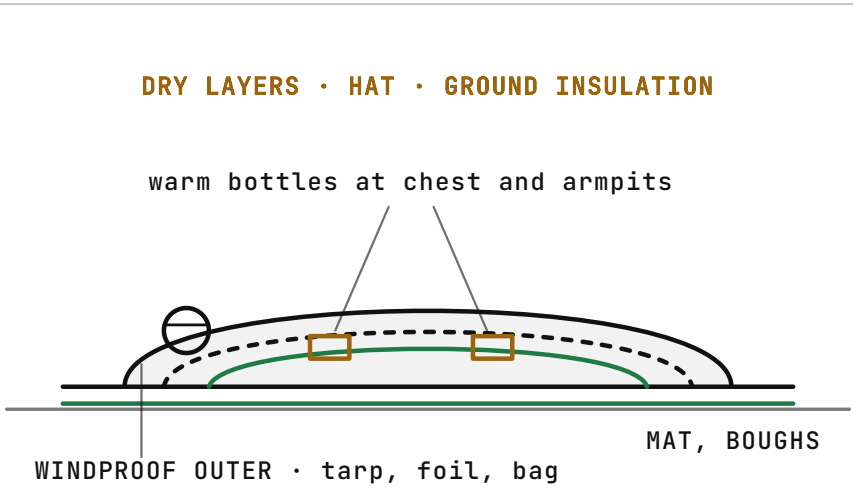
Stumbling, mumbling, fumbling, grumbling. Shivering comes and goes.

Stop now. Wrap up, warm bottles, call 112.

SEVERE

Shivering has stopped. Confused, sleepy, may undress or refuse help. Then unresponsive.

Flat, gentle, wrapped. 112. Check breathing for a full minute; CPR if none.



The wrap: dry, insulated from the ground, sealed from the wind.

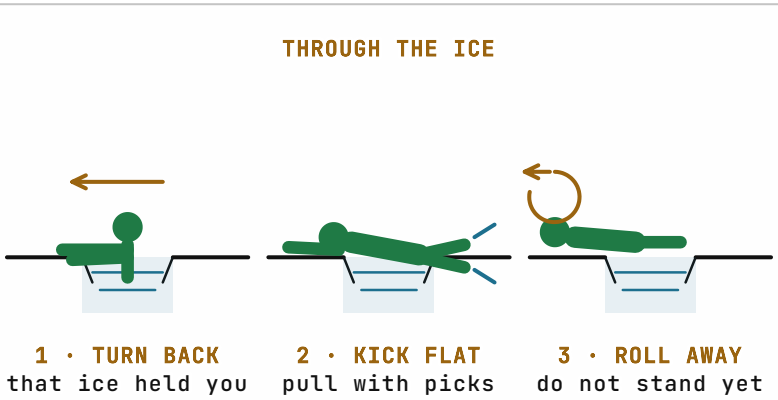
1. Stop and get out of wind and rain. Now, not at the next hut.
2. Take off wet clothes and put on dry ones; cover the head and neck.
3. Insulate from the ground, then wrap in a sleeping bag or blankets with a windproof layer on the outside.
4. If fully awake: warm sweet drinks and food. Warm bottles against the chest and armpits, wrapped in cloth.
5. If drowsy or confused: handle gently, keep lying flat, give nothing by mouth, call 112. Do not rub the limbs, and no alcohol.
6. Not responding: check for breathing for up to a minute, as it may be very slow. If there is none, start CPR and do not stop.

FROSTBITE

White, hard, numb skin on fingers, toes, nose, cheeks or ears. Warm it against warm skin (fingers in the armpits, a hand on the cheek). Do not rub it, with snow least of all, and do not thaw a frozen foot if you still have to walk on it or if it may freeze again.

IN COLD WATER

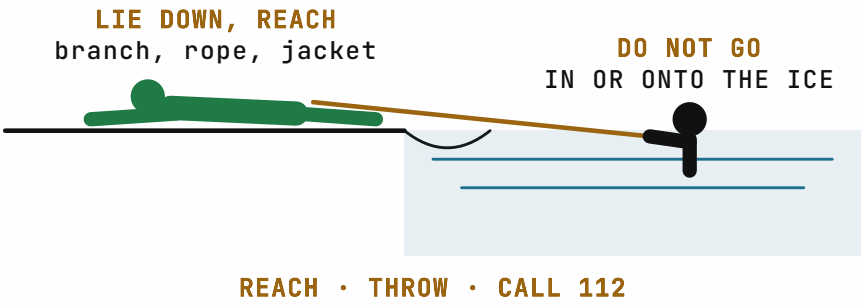
1 · 10 · 1. One minute to get the breathing under control: the gasping passes. Ten minutes in which arms and legs still obey: use them to get out. One hour before the cold itself puts you out, if you keep your face above water. Most deaths happen in the first minutes, from panic, not from cold.



Through the ice: back the way you came, flat, and roll.

1. Do not thrash. Hold the edge and breathe until the gasping stops.
2. Turn to face **the way you came**; that ice carried you a moment ago.
3. Arms flat on the ice, kick the legs up to the surface behind you, and pull and kick forward onto the ice. Ice picks (or a knife, or keys) give the grip.
4. Roll or crawl away from the hole before you stand up.
5. Get dry and warm at once: shelter, dry clothes, fire, movement.

Helping someone else: call 112 first. Do not walk to the hole. Lie down and reach from a distance with a rope, a long branch, a ski, a sledge or a jacket, and pull them out flat.



The rescuer who goes in becomes the second casualty.

HEAT

- **Heat exhaustion:** headache, dizziness, nausea, heavy sweating, cramp. Shade, rest with the legs raised, water in small sips with a pinch of salt, wet cloth on the skin.
- **Heat stroke** (confusion, collapse, hot skin): call 112 and cool at once by any means, best of all by lying the person in cool water up to the neck, otherwise soaked cloths and fanning. Go on cooling until help arrives.

10

FIRST AID

Look after yourself first, then the breathing, then the bleeding, then everything else.

IN SHORT

1. Your own safety, then breathing, then bleeding.
2. Not breathing: 30 pushes, 2 breaths, do not stop.
3. Bleeding: press hard and keep pressing.

NOT RESPONDING

Is it safe for you to go to them?

NO — Make it safe first, or stay back and call 112.

↓ YES

Do they answer when you shake the shoulders and speak loudly?

YES — Leave them as they are, find out what is wrong, keep them warm, get help.

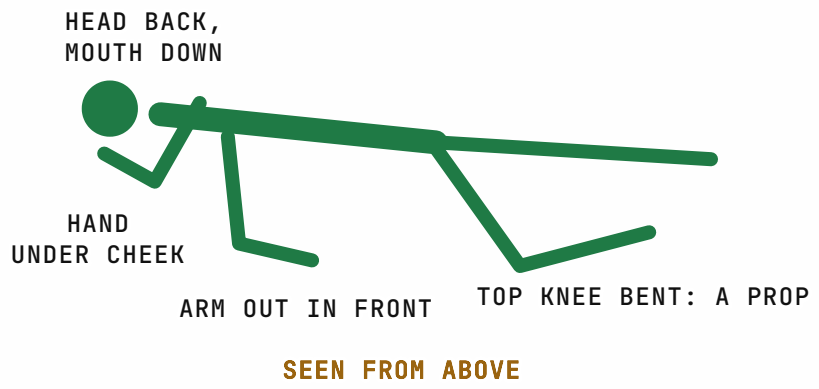
↓ NO

Head back, chin up. Are they breathing normally? Look, listen and feel for 10 seconds.

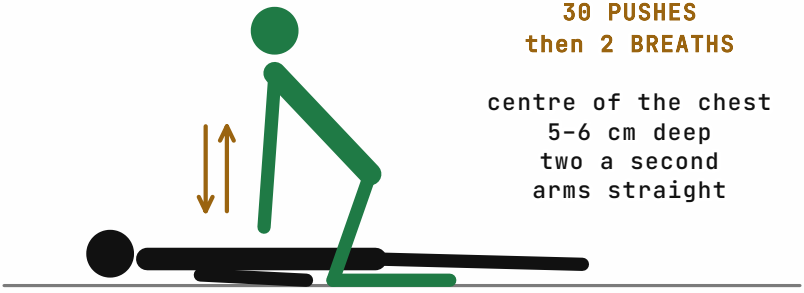
YES — Recovery position. Call 112. Check the breathing every minute.

↓ NO

Not breathing, or only gasping: call 112 on speaker and start CPR now.



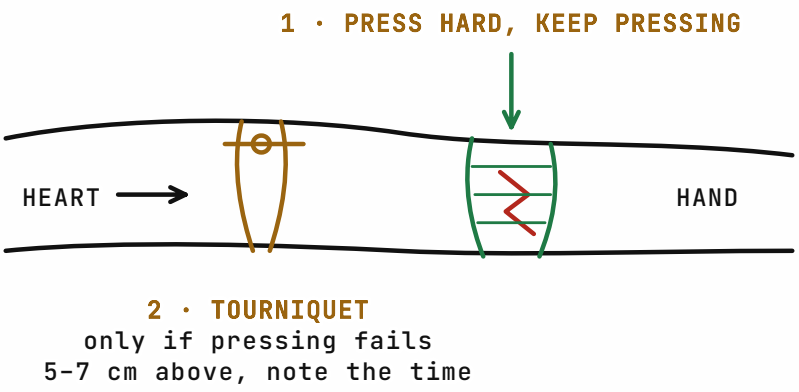
The recovery position keeps the airway open and lets fluid run out of the mouth.



CPR: hard and fast in the centre of the chest.

30 pushes on the centre of the chest, 5–6 cm deep, two a second, then 2 breaths; repeat. If you cannot or will not give breaths, push without stopping. After drowning, start with 5 breaths. Take turns every two minutes and go on until help takes over or the person breathes.

HEAVY BLEEDING



Pressure stops almost all bleeding.

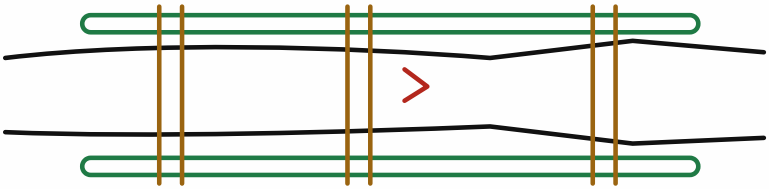
1. Press hard straight on the wound with a pad, a cloth or your hand, and keep pressing.
2. Bind a pressure bandage firmly over the pad. If blood comes through, add another on top; do not lift the first.
3. Lay the person down and keep them warm.
4. Bleeding from an arm or leg that pressure cannot stop: a tourniquet 5–7 cm above the wound, not on a joint, tightened until the bleeding stops. Note the time. Do not loosen it.

SHOCK

Pale, cold, clammy, a fast weak pulse, restless or faint, after blood loss or a bad injury. Lay the person flat, stop the bleeding, insulate from the ground, keep warm, give nothing to eat or drink, call 112.

SPRAINS AND BREAKS

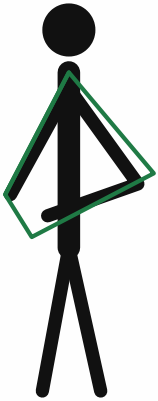
SPLINT: hold the joints on both sides still



PAD IT · tie above and below the break, not on it

A splint is anything stiff: sticks, a rolled mat, a trekking pole.

- Sprain: rest, cold (a wet cloth, a stream), a firm bandage, the limb raised.
- Suspected break: do not straighten it. Splint it as it lies so that the joints above and below cannot move, pad it well, and check that the fingers or toes stay warm and pink.
- An arm goes in a sling made from a jacket or scarf. A hurt leg can be bound to the healthy one.
- Pain in the neck or back after a fall: do not move the person unless you must. Call 112.



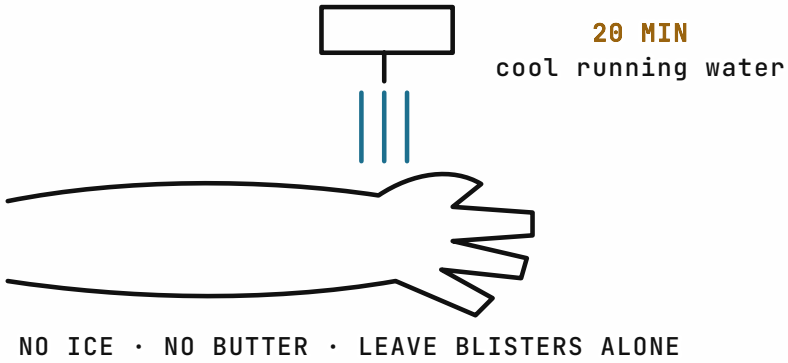
SLING
a scarf, a jacket, or the shirt hem pinned up

HAND HIGHER
than the elbow

A sling takes the weight off a hurt arm, wrist or collarbone.

BURNS

Cool under cool running or poured water for **20 minutes**, as soon as possible. Take off rings and watches before swelling starts. Cover loosely with something clean (cling film or a plastic bag is good). No butter, no creams, do not burst blisters. Anything larger than the person's palm, or on the face, hands or joints, needs a doctor.

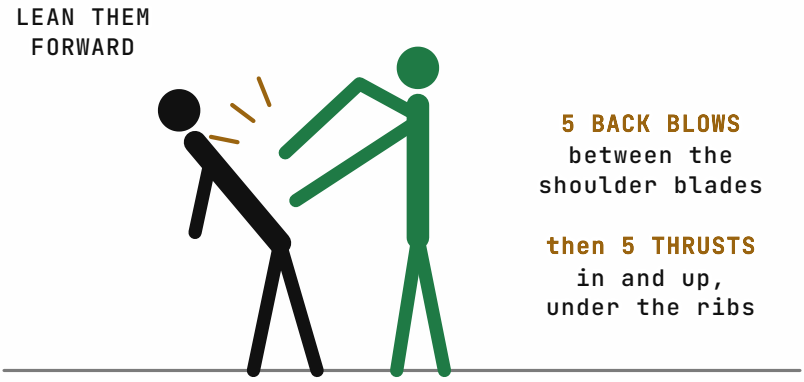


Twenty minutes of cool water is the whole treatment, and it works for up to three hours after the burn.

SMALLER THINGS THAT END TRIPS

- **Blisters:** tape the hot spot as soon as you feel it, before it is a blister. Dry socks.
- **Wounds:** rinse with plenty of clean water, cover, keep dry. Red streaks, swelling, warmth and fever a day or two later mean infection: get out and see a doctor.
- **Something in the eye:** rinse with clean water from the nose outwards. Do not rub.
- **Nosebleed:** sit leaning forward and pinch the soft part of the nose for ten minutes without letting go.

CHOKING



If they can cough, let them cough. If they cannot speak or breathe, act.

Five sharp blows between the shoulder blades with the heel of the hand, the person leaning well forward. Not cleared: five thrusts in and up under the ribs, your fist in your other hand from behind. Repeat. If they go limp, lower them, call 112 and start CPR.

SUDDEN ILLNESS

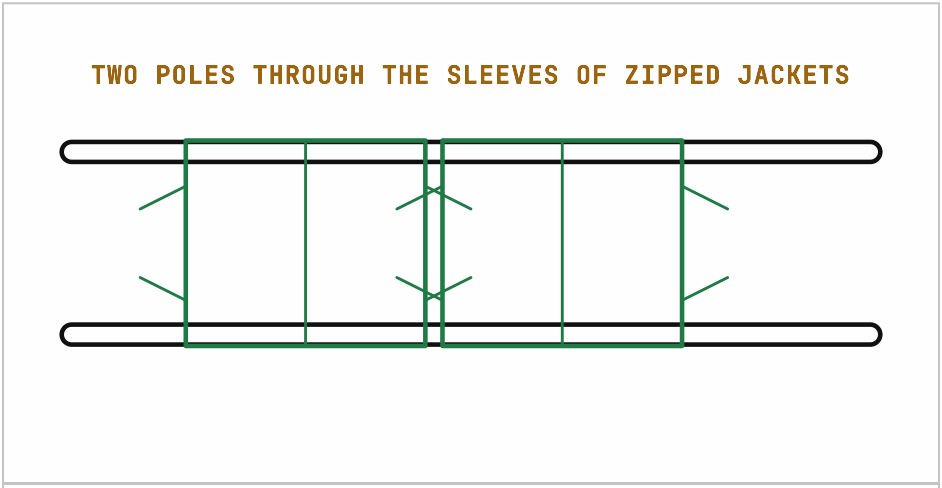
- **Stroke:** the face droops on one side, one arm cannot be held up, speech is slurred or strange. Any one of these: call 112 and note the time it began.
- **Heart:** pressing pain in the chest, perhaps into the arm, jaw or back, with sweating, nausea or breathlessness. Sit them half upright at rest, call 112, and loosen tight clothing.
- **Low blood sugar** in someone with diabetes (pale, sweaty, shaky, confused): if they can swallow, 15–20 g of sugar now (three or four sugar cubes, a glass of juice, sweets), and again after 15 minutes if no better. Then proper food.
- **Head injury:** growing headache, vomiting, drowsiness, confusion or unequal pupils in the hours after a blow mean 112, not sleep.

SEVERE ALLERGY

After a sting or food: swelling of the face or throat, wheezing, a rash all over, faintness. Call 112. If the person carries an adrenaline pen, use it in the outer thigh, through clothing if need be. Lying down with the legs raised, or sitting up if breathing is hard. A second pen after five minutes if no better.

MOVING AN INJURED PERSON

The best answer is usually **not to**: make them warm where they lie and bring help to them. Move them only out of danger (water, fire, falling trees, traffic), or when no help can come.



A stretcher from two poles and two or three jackets. Try it with a healthy person first; carry feet first, with four carriers if you have them.

- Short distance, one helper: drag them on a tarp, a groundsheet or their own jacket, pulling from the shoulders along the line of the body.
- A person who can hop: an arm over each helper's shoulders.
- Pain in the neck or back after a fall, numbness or tingling: do not move them at all unless life depends on it.

- Going for help: two go, one stays. Leave the injured person insulated, sheltered, with water, a light and a whistle, and write down the coordinates before you leave.

11

ANIMALS, TICKS AND THE ADDER

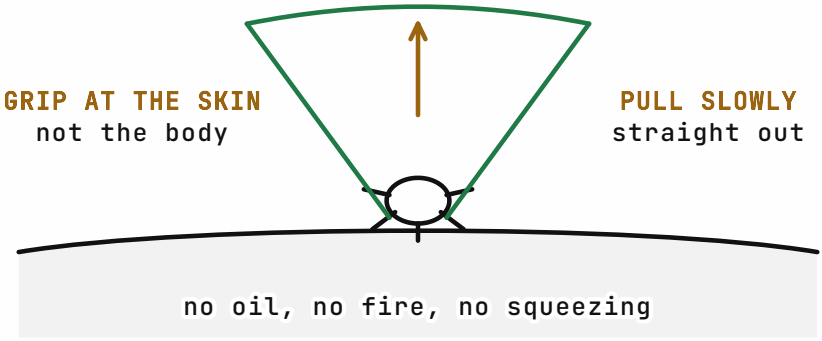
The animals most likely to hurt you in an Estonian forest are the smallest ones.

IN SHORT

1. Ticks are the real danger: check every evening.
2. Adder bite: keep still, call 112, no cutting or sucking.
3. A bear wants to leave. Do not run; back away.

TICKS

Active from April to November, whenever it is above freezing, in grass, bushes and forest edge. Estonia has some of the highest rates in Europe of both tick-borne encephalitis (there is a vaccine) and Lyme disease (there is none).



Take a tick out as soon as you find it.

- Long sleeves and trousers, trousers tucked into socks, light colours so that ticks show, repellent on clothes and skin.
- Check the whole body every evening: behind the knees, groin, waist, armpits, neck, hairline, behind the ears.
- Grip it with fine tweezers (or a loop of thread) right at the skin and pull slowly and steadily. Do not squeeze the body, and use no oil, alcohol or flame. Then wash the spot.
- A spreading red patch, fever, headache or aches in the following weeks: see a doctor and mention the tick.

THE ADDER

THE ONLY VENOMOUS SNAKE IN ESTONIA



ADDER · RÄSTIK · dark zigzag down the back, 50–70 cm

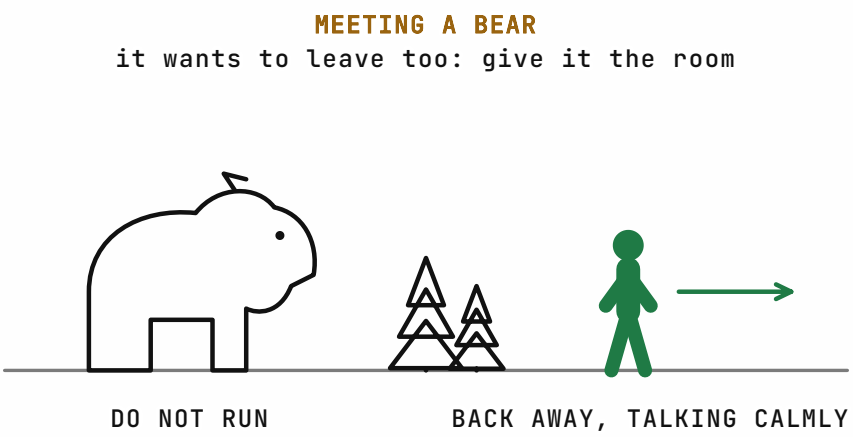
The grass snake, with yellow patches behind the head, is harmless.

Adders lie in the sun on bog edges, clearings, stone walls and paths, and bite only when stepped on or handled. About a hundred people are bitten in Estonia in a year; for a healthy adult a bite is painful and rarely dangerous, for a child, an elderly person or anyone bitten on the face or neck it is serious.

1. Keep calm and keep still. Movement spreads the venom.
2. Call 112.

3. Take off rings, watch and tight clothing from the bitten limb, and keep the limb still, like a broken one.
4. **Do not** cut, suck, squeeze, ice or burn the bite, and do not put on a tourniquet or a tight bandage.
5. If you can, be carried rather than walk.

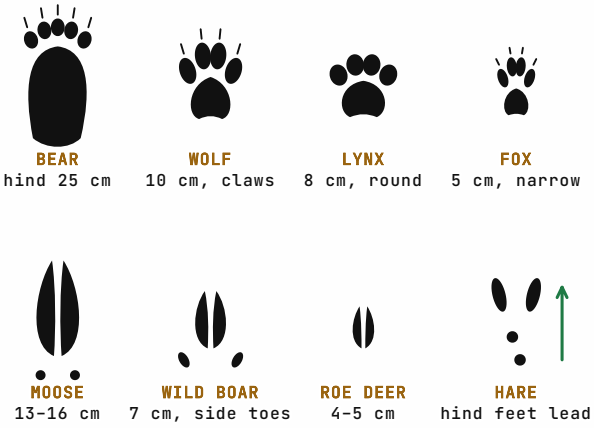
LARGE ANIMALS



Estonia has around a thousand bears and almost no attacks. Nearly every meeting ends with the bear leaving.

- **Bear:** avoids people. Make noise in thick forest and near berry patches. If you meet one: do not run, talk calmly, back away the way you came. Never go between a mother and cubs or near a carcass. In the very rare attack, lie face down, hands over the neck, pack on, and keep still.
- **Wolf and lynx:** you will be lucky to see one. No special danger; keep a dog close.
- **Wild boar:** a sow with piglets, or a wounded animal, may charge. Step behind a tree or climb onto something.

- **Moose:** dangerous in the autumn rut and when a cow has a calf, and on the road at dusk. Give it room; put a tree between you.
- Any bite from an animal: wash with soap and running water for fifteen minutes and see a doctor.



Whose track is it? Sizes are the length of the print.

A wolf's track is like a large dog's but longer and narrower, and the trail runs in a straight purposeful line; a dog's wanders. A lynx print is round and shows no claws.

WASPS, BEES AND MOSQUITOES

Scrape a bee's sting out sideways with a nail; cool the place. A sting in the mouth or throat, or signs of severe allergy, are an emergency. Against mosquitoes and midges: smoke, wind, long sleeves and a head net; they are worst at dusk near water.

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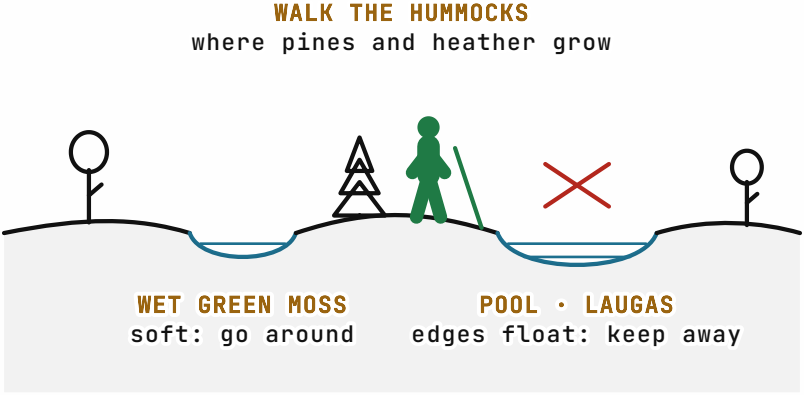
BOGS, RIVERS AND ICE

Water is the terrain that kills here: dozens of people drown in Estonia every year, many of them through ice or from a boat.

IN SHORT

1. On a bog, walk where the dwarf pines grow.
2. Cross a river where it is wide and shallow.
3. No ice is safe by its looks. Measure it: 10 cm or more.

BOGS



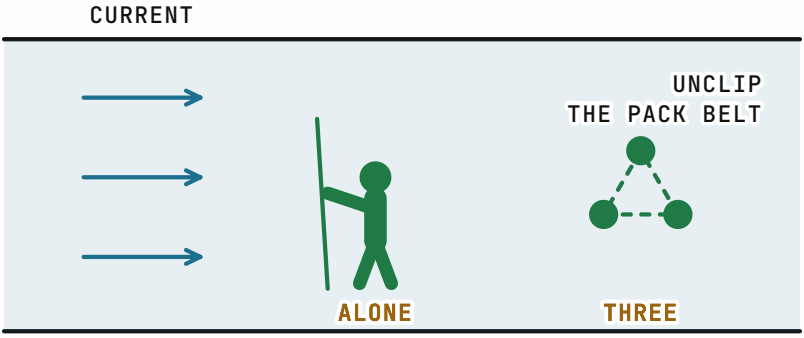
On a bog the dry-looking colours carry and the bright green ones do not.

- Keep to boardwalks and marked trails where there are any. A raised bog is a maze of pools; plan the route from the map, not by eye.

- Walk where dwarf pines, heather and cotton grass grow. Avoid bright green or reddish wet moss lawns, black peat mud, and the edges of pools, which are floating mats.
- Carry a long pole and probe ahead. Bog shoes or snowshoes spread the weight.
- Fog comes down fast on a bog and every direction looks the same. Walk on a compass bearing.

> **Sinking in?** Do not struggle upright. Drop the pack, lie back or forward to spread your weight, put the pole or pack under your chest, and work the legs out slowly, one at a time, then crawl back the way you came.

CROSSING A RIVER



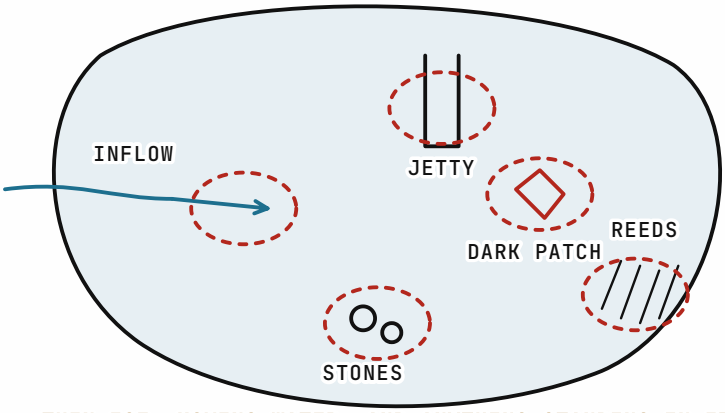
face upstream, pole in front

Cross where the river is wide and shallow, not where it is narrow.

- First ask whether you must cross at all. A bridge an hour away is the better answer.

- Choose a wide, shallow, even stretch with a way out on the far bank. Deeper than the knee in fast water is too deep.
- Undo the hip belt and chest strap so that you can drop the pack. Keep boots on.
- Face upstream, lean on a pole, and move one foot or the pole at a time, shuffling sideways.
- Fallen in: on your back, feet first downstream, and steer for the bank.

ICE



A lake seen from above: the places where ice stays thin.

- The Estonian Rescue Board's rule: do not go on ice thinner than **10 cm**. Clear dark ice is the strongest; white or grey ice with snow in it is about half as strong.
- Ice is never the same thickness everywhere. It is thin over current, at river mouths and bends, near reeds, stones, jetties and bridges, under snow, and in spring even when it is thick.

- Nobody can judge ice from the shore or from a photograph. Measure it, close to the shore first, and again as you go.
- Never alone. Carry ice picks around your neck, a whistle and a rope, and keep several metres between people.

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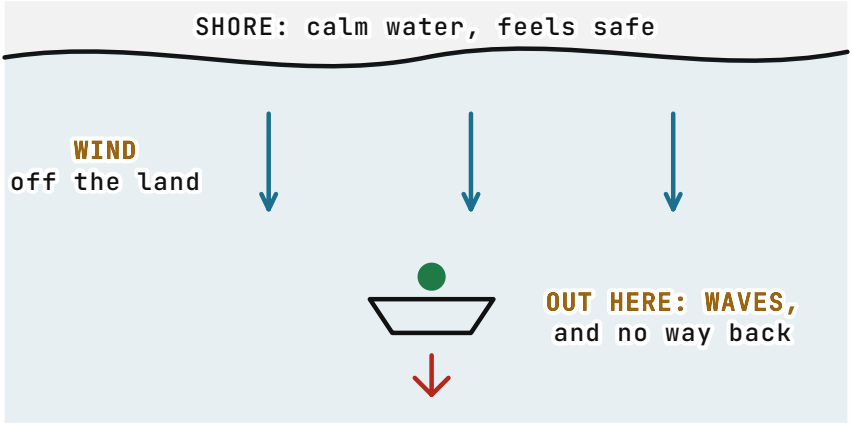
SEA, LAKES AND BOATS

The Baltic looks gentle and is cold all year. Most people who drown here never meant to be in the water.

IN SHORT

1. Lifejacket on, done up, before you leave the shore.
2. Wind off the land carries you out.
3. Capsized: stay with the boat.

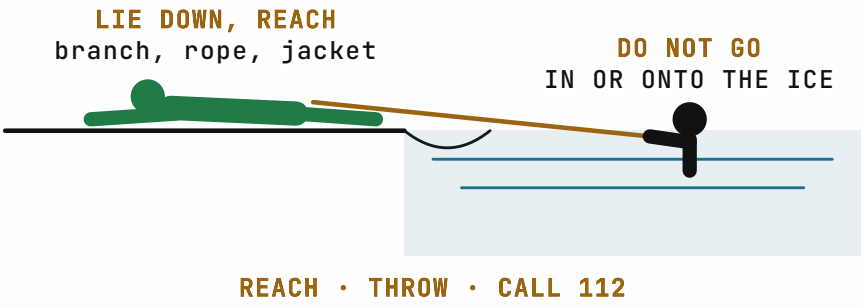
+4 °C	1 MIN	ON
the sea in April, when the air is already warm	of gasping when you fall in: hold on and wait	a lifejacket works only when worn



An offshore wind makes flat water at the beach and carries anything that floats out to sea.

- **Wear the lifejacket**, done up, from the shore. Nobody puts one on in the water.
- **Check the wind before you launch** a board, a kayak, an inflatable or a small boat. Wind off the land is the dangerous one, however calm it looks.
- Dress for the water, not the air: in spring the air may be +18 °C and the sea +5 °C.
- Phone in a waterproof pouch on your body, not in the boat. Tell someone where you launch and when you will be back.
- **Capsized:** stay with the boat. It floats, it is seen from far, and swimming for a shore that looks close kills strong swimmers.
- In the water with no boat: keep clothes on, cross your arms, draw the knees up and keep still. A group huddles together.
- Fog and dusk come fast on the water. Turn back while you can still see the shore.
- **Shore ice and ice floes:** on Lake Peipus and along the coast, a wind off the shore breaks the ice sheet loose and carries people out on it. Watch the wind, and stay off when a crack has opened between you and the shore.

SOMEONE ELSE IN THE WATER



Reach or throw. Do not go.

1. Shout to them, point at them, and keep your eyes on the spot. Call 112.
2. **Reach** from the shore lying down: a branch, an oar, a rope, a jacket, a lifebuoy from the beach post.
3. **Throw** anything that floats: a buoy, a closed canister, a ball, a pack with a sealed bag inside.
4. Do not swim out unless you are trained and have something that floats between you and them.
5. Out of the water and not breathing: five breaths first, then CPR.

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STORM, FLOOD AND FOREST FIRE

Three things that arrive faster than you can walk away from them. Each has one move that matters.

IN SHORT

1. Storm: get out from under old trees.
2. Flood: never into moving water you cannot see through.
3. Fire: sideways out of its path, then into the wind.

STORM IN THE FOREST

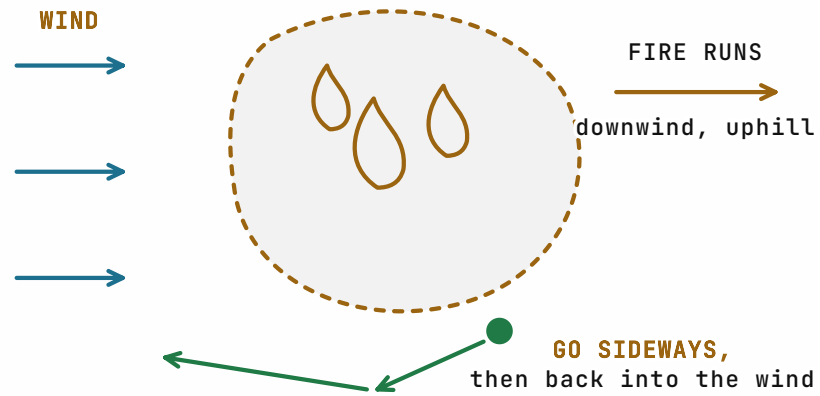
- Trees start to fall in storm gusts of about 20 m/s and more, spruce on wet ground first. **Get out from under old trees:** to a clearing, a young stand, a road or open bog.
- In a tent among tall trees when a storm comes at night: get out and move to open ground. Tents are no protection.
- After the storm, bent and stacked trunks are under tension and spring when cut or stepped on. Go around windfall, not through or over it.
- Hanging broken branches fall for days afterwards. Look up before you stop.

FLOOD

- In spring the rivers of Soomaa and other low country rise over meadows, roads and forest: the “fifth season”. It is slow, wide and cold.
- Do not walk or drive into moving water you cannot see the bottom of. Knee-deep moving water takes a person off their feet; half a metre floats a car.

- Camp well above the river, not on the meadow beside it. Rain upstream raises it overnight.

FOREST AND BOG FIRE



Fire runs with the wind and uphill. Do not try to outrun it that way.

1. Call 112 at the first smoke: the place, the wind, what is burning.
2. Work out the wind. Move **sideways out of the fire's path**, then round behind it into the wind.
3. Head for what does not burn: a lake or river, a wide road, a ploughed field, wet open bog, ground that has already burned.
4. Smoke: get low, cover mouth and nose with a wet cloth.
5. Keep off smoking peat. A peat fire burns underground and the surface caves in over hot hollows.

A small fire that has just started in grass or litter can be beaten out with a green spruce branch, sweeping the flames back into the burnt area. Anything knee-high or moving faster than you walk: leave and call.

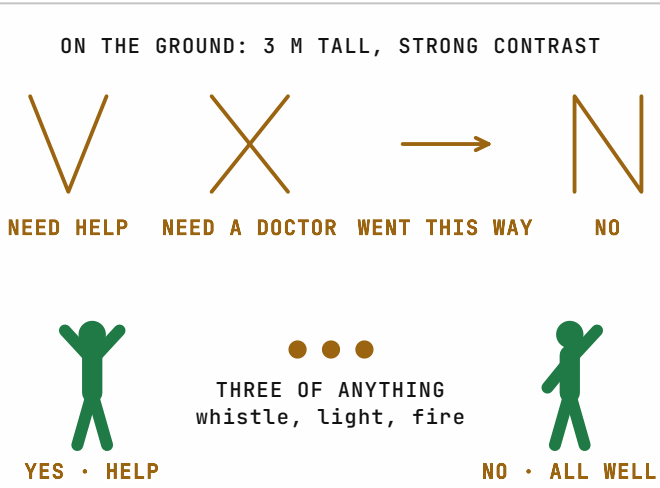
15

BEING FOUND

A person who stays in one place, visible and audible, is found many times faster than one who walks.

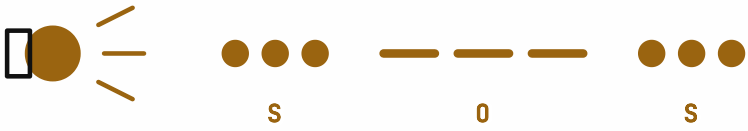
IN SHORT

1. Stay in one place, in the open.
2. Three of anything means help.
3. Both arms up to a helicopter: yes, we need help.



Signals that rescuers understand everywhere.

SOS WITH A LIGHT OR A WHISTLE



three short · three long · three short
pause, then again

SOS in light or sound: the one signal everyone knows.

- **Whistle:** three blasts, pause, repeat. (The mountain signal is six in a minute, then a minute's silence; the answer is three.) A whistle carries much further than a voice and never goes hoarse.
- **Light:** three flashes at night. A headlamp is seen for kilometres from the air.
- **Fire and smoke:** by day, green boughs or wet leaves on a hot fire give white smoke. In open ground, three fires in a triangle.
- **Colour and shape:** spread a bright jacket, foil blanket or tarp in a clearing. Straight lines and sharp corners do not exist in nature and catch the eye.
- **Mirror:** a mirror, a phone screen or a knife blade flashed at an aircraft is seen from very far in sunshine.
- **To a helicopter:** both arms raised in a Y means yes, we need help. One arm up and one down means no. Hold loose things down and keep clear until signalled.
- **SOS:** three short, three long, three short, with a lamp, a whistle or knocks. Pause and repeat.

HELP THE SEARCHERS

- Move to the nearest open place: a clearing, a ride, a shore, a bog edge.
- Leave signs where you have been: arrows of sticks, a note with the time and your direction.
- Answer every shout, whistle and engine sound, and keep signalling on the hour.
- Save the phone: switch it on for five minutes at each full hour rather than leaving it on.

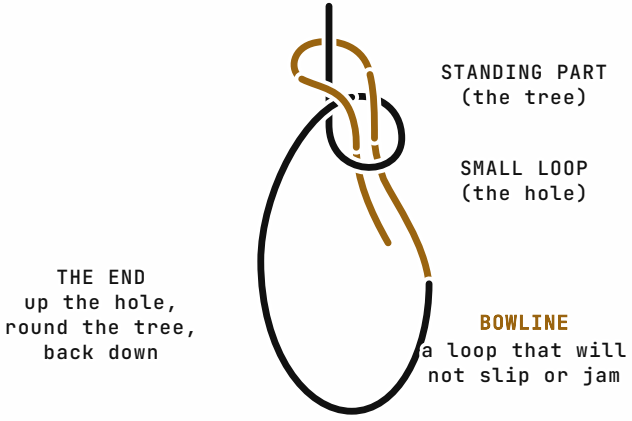
16

FIVE KNOTS

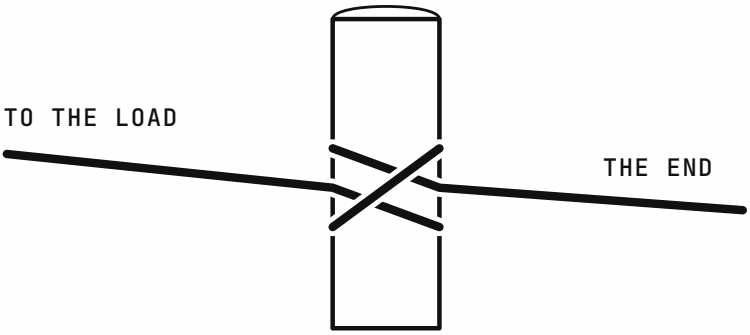
Five knots do nearly everything a night out asks for. Tie each one ten times at home.

IN SHORT

1. Bowline for a loop, clove hitch for a pole.
2. Sheet bend to join ropes, reef knot for bundles.
3. Taut-line hitch for anything you want to tighten.



Bowline: a fixed loop for a rescue line, a ridge line or hauling a pack.



CLOVE HITCH

two turns, the second crossing over the first

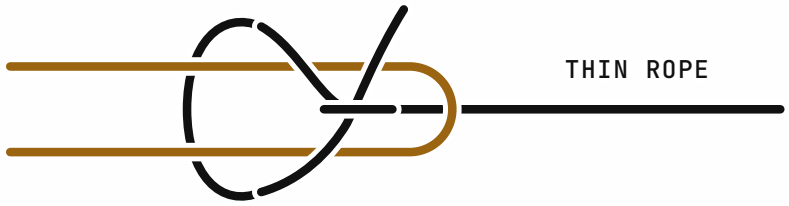
Clove hitch: starts and finishes a lashing, holds a line to a tree.



REEF KNOT

left over right, then right over left

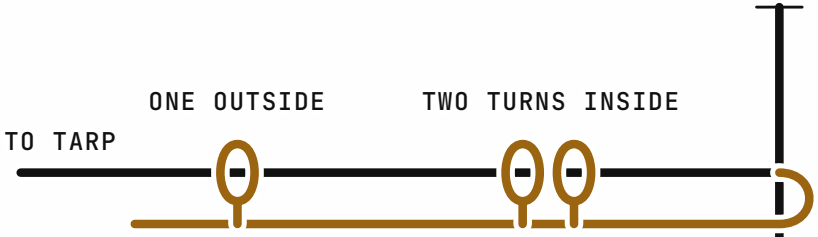
Reef knot: flat and easy to undo. Not for joining ropes that carry weight.



SHEET BEND

joins two ropes of different thickness

Sheet bend: the knot for joining two ropes, also a rope to the corner of a tarp.



TAUT-LINE HITCH

slides by hand, holds under load

Taut-line hitch: for a tarp or tent line that you want to tighten or slacken. Round the tree, two turns round the standing line inside the loop, one more outside it.

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NUMBERS WORTH REMEMBERING

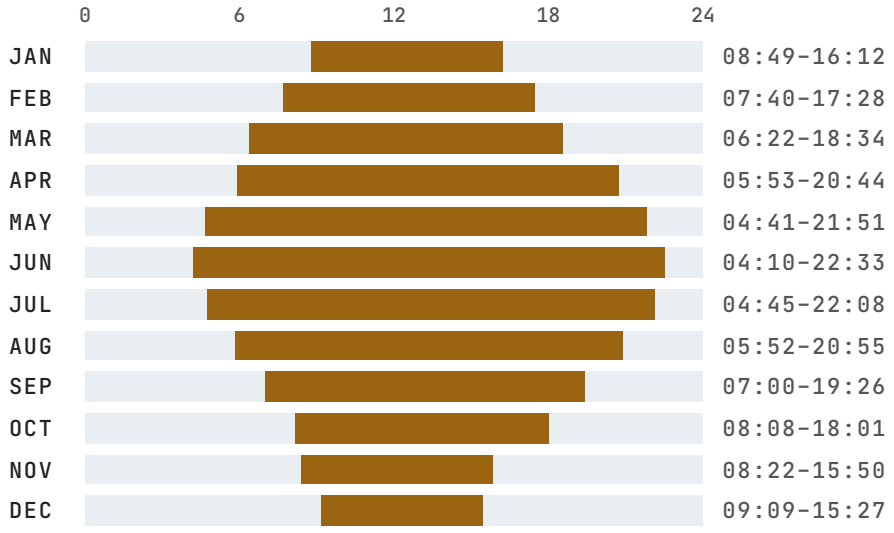
For when there is no signal to look them up.

IN SHORT

1. 112, and 16662 for poisoning.
2. In December there are six hours of daylight.
3. Ticks from April to November.

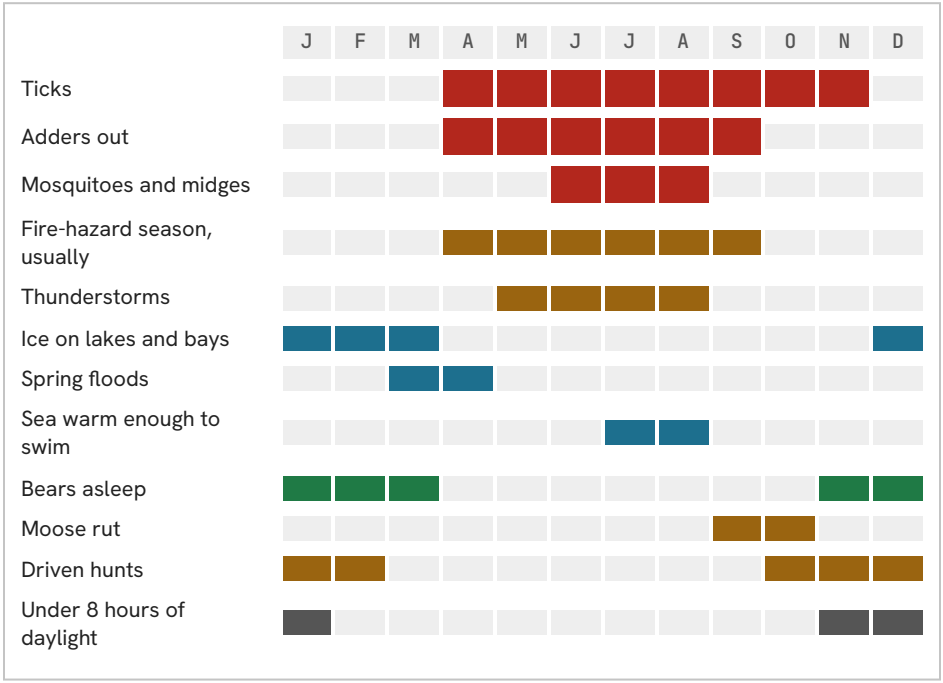
112	16662	1247
emergency	poison information	state helpline, not urgent

DAYLIGHT THROUGH THE YEAR



Clock times for the middle of Estonia on the 21st of each month; the west of the country is about ten minutes later, the east ten earlier. Usable twilight adds roughly 45 minutes at each end in winter and more than an hour in summer; around midsummer it never gets fully dark.

THE YEAR AT A GLANCE



Typical months, not promises: a mild winter or a dry spring moves all of these by weeks.

RULES OF THUMB

WHAT	NUMBER
Walking pace on a trail	4–5 km an hour
Off trail, in forest	2–3 km an hour
On bog or in deep snow	1–2 km an hour

WHAT	NUMBER
Your own double pace	about 60–65 to 100 m; count yours at home
A finger at arm's length	15 minutes of sun
Flash to thunder	3 seconds = 1 km
Water to boil	1 minute at a rolling boil
Cooling a burn	20 minutes
CPR	30 pushes, 2 breaths, two pushes a second
Tourniquet	5–7 cm above the wound, note the time
Ice to walk on	10 cm or more, measured
Compass in Estonia	needle about 10° east of true north
Bed of boughs	20 cm thick, pressed down

WORDS USED IN THIS GUIDE

Bearing	a direction given as an angle from north, 0–360°.
Declination	the angle between where the compass needle points and true north; about 10° east in Estonia.
Handrail	a long feature you can follow: a path, ditch, shore, ride or power line.
Ride	a straight cleared line through state forest that separates two blocks (kvartalisiht).
Hummock	a small dry mound on a bog, usually with heather or a dwarf pine.
Tinder, kindling, fuel	the three sizes of firewood: hair-thin, pencil-thin, wrist-thick.
Hypothermia	the body's core cooling below 35 °C.
Recovery position	lying on the side so that the airway stays open.

Tourniquet	a band tightened round a limb to stop bleeding that pressure cannot stop.
CPR	pushing on the chest and breathing for someone whose heart has stopped.

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ESTONIA: RIGHTS, RULES AND LOCAL HAZARDS

Everyman's right lets you walk almost anywhere. It comes with a short list of duties, and the land has a few surprises of its own.

IN SHORT

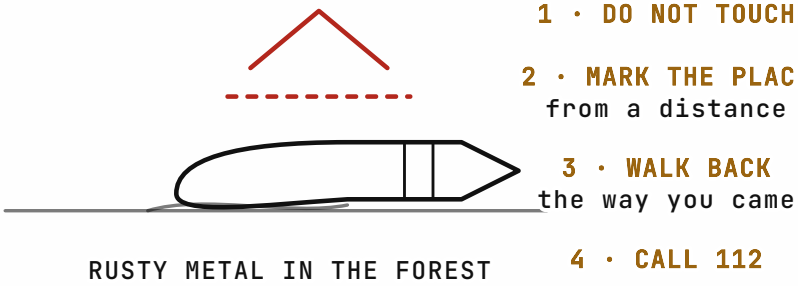
1. Walk almost anywhere; camp and light fires only where allowed.
2. Old explosives: do not touch, call 112.
3. Bright orange in the autumn forest.

WHAT YOU MAY DO

- You may walk, ski, cycle and boat on land and water that is not fenced or marked, from sunrise to sunset on private land, and pick berries, mushrooms, nuts and flowers that are not protected.
- Camping for a night and lighting a fire on private land need the owner's permission. In state forest use the RMK campsites and campfire sites, which are free.
- In nature reserves and national parks, follow the signs: some areas are closed in the nesting season or all year.
- Shores of the sea, lakes and rivers have a public path, usually four metres wide, even across private land.
- Take all rubbish out. Bury human waste 50 metres from water. Leave gates as you found them and dogs on a lead.
- RMK forest huts are open to anyone and cannot be booked: leave them cleaner than you found them, with dry firewood by the stove for the next person.

This is a summary, not the law. Rules change; the Environmental Board and RMK publish the current ones.

THINGS PARTICULAR TO THIS COUNTRY



Shells, mines and grenades from two world wars still turn up in forests, bogs and on beaches every year.

- **Old explosives:** anything that looks like a shell, a grenade or a rusty metal cylinder: do not touch or move it, however old. Mark the place from a distance, walk back the way you came, call 112. The bomb squad comes for every find.
- **Hunting:** driven hunts run mainly from October to the end of February, mostly at weekends. Wear something bright orange in the autumn forest, keep the dog on a lead, and turn back at a “Ettevaatust, jaht!” sign.
- **Military training areas** are closed while an exercise is on: barriers, red flags and signs at the roads. Do not go round them.
- **The eastern border:** near the Narva river, Lake Peipus and the south-east border, carry an identity document and keep well on the Estonian side of the marked line, on land, water and ice.
- **Mobile signal** is good along roads and weak in large bogs, deep forest, on small islands and at sea. Do not plan on it.

- **Winter roads and tracks:** forest roads are not ploughed. A car stuck ten kilometres from a main road at −15 °C is its own emergency: a shovel, a blanket and a full tank.

Edition 3 · November 2026. Written and drawn for marfeldt.com. A memory aid, not training and not medical advice: take a first aid course, and practise the skills before you need them. First aid follows the European Resuscitation Council's 2025 guidelines; Estonian numbers and rules are from the Emergency Response Centre, the Rescue Board, the Health Board and RMK. Tell me what is wrong or missing through the contact page.

THE SHORT VERSION

EMERGENCY

Call **112**. Say where, then what.
No voice: text 112.
Position: map app, press the blue dot.
Works without signal.
Poison line 16662.

FIRST

Stop. Think. Observe. Plan.
First aid → shelter → signal → water → food.
Lost: stay put, or follow a ride, ditch or power line.

COLD

Out of the wind. Wet off, dry on. Hat.
Insulate from the ground: 20 cm of boughs.
Warm sweet drink if awake. No alcohol, no rubbing.

FIRE

Tinder, kindling, fuel: gather all first.
Birch bark, dead twigs still on the tree, fatwood.
Only in a fireplace, unless life depends on it.

WATER

Boil 1 minute.
Spring, rain, snow first; never ditch or sea.

BLEEDING

Press hard, keep pressing, bind.
Tourniquet 5–7 cm above only if pressing fails.

NOT BREATHING

30 pushes, 2 breaths, 100–120 a minute.
Breathing but out: on the side.

THROUGH ICE

Calm the breath. Turn back. Kick flat, pull, roll.
1 min · 10 min · 1 hour.

ADDER

Keep still. 112. Limb still. No cutting, sucking, ice or band.

SIGNAL

Three of anything. Whistle, light, fire.
Y = yes, help. Open ground, bright colour.

NORTH

Needle 10° east of true north.
Sun south 13:20 summer, 12:20 winter.
Plough's end stars × 5 → North Star.

THUNDER

3 s = 1 km. Under 30 s: cover. Crouch, feet together.