

**By signing up for an event, members agree to the waiver included at the top of the Signup page and also agree to abide by the procedures for our activities.**

**THURSDAY, JANUARY 1 — South Mountain Reservation, Millburn, NJ – added hike**

*Leader:* Philip Ross, cell 732-221-9668, [skyking72@gmail.com](mailto:skyking72@gmail.com)

*Start:* 9:30 AM. Moderately strenuous 9-mile loop at brisk pace (2+ mph) with 1400ft elevation gain, possible water crossings and some steep ascents/descents. This hike is not for beginners. Early out possible. Portable facilities available. Boots/poles recommended. Bring: lunch, water, traction devices. Please note early start time.

*Directions:* See TSR Directions #4, Locust Grove.

**ALT. THURSDAY, JANUARY 1 – Watchung Reservation, Mountainside, NJ**

*Leader:* Ken Donhauser, cell 732-616-7409 to be used day of event only, [kendonhauser@gmail.com](mailto:kendonhauser@gmail.com)

*Start:* 10:00 AM. Pleasant hike, 3 to 4 miles at an easy pace, leader's choice of trails. Facilities available. Boots/poles recommended. Bring water.

*Directions:* See TSR Directions #1, Trailside Nature Center.

**FRIDAY, JANUARY 2 — Jockey Hollow National Park, Morristown, NJ**

*Leader:* Dianne Jones, cell 973-224-3967, [diannejones428@gmail.com](mailto:diannejones428@gmail.com)

*Start:* 10:00 AM. This is a 5- to 6-mile moderate hike at a moderate pace. We will take the Grand Loop, Outer Loop and Yellow trails. Mostly flat to rolling, except for the climb to Sugar Loaf. Facilities available. Boots/poles recommended. Bring: lunch, water, traction devices.

*Directions:* See TSR Directions #1, Visitor Center.

**SATURDAY, JANUARY 3 — Jockey Hollow National Park, Morristown, NJ**

*Leader:* Ed Taylor, cell 732-770-7858, [eltaylor1168@gmail.com](mailto:eltaylor1168@gmail.com)

*Start:* 10:00 AM. This is a 5 to 6 mile moderate hike at a moderate pace. We will take the Grand Loop, Outer Loop and Yellow trails. Mostly flat to rolling, except for the climb to Sugar Loaf. Facilities available. Boots/poles recommended. Bring: lunch, snack, water, traction devices.

*Directions:* See TSR Directions #1, Visitor Center.

**SATURDAY, JANUARY 3 — Princeton Battlefield State Park, Princeton, NJ – added hike**

*Leader:* Gordon Thomas, cell 609-977-0267, [TSRpresident3@gmail.com](mailto:TSRpresident3@gmail.com)

*Start:* 11:00 AM. Hike approx. 7 miles, 200' elevation gain; brisk 2.5 mph walking pace, but longer duration due to comments on the roles of indigenous people, Hessians, Quakers, farmers, Blacks, women and the King. The battle was on this day, 249 years ago. Facilities available. Bring: lunch, water. Please note later start time.

**SUNDAY, JANUARY 4 — Watchung Reservation, Mountainside, NJ**

*Leader:* Bill LaChance, cell 973-216-8748, [bill@wjladvisors.com](mailto:bill@wjladvisors.com)

*Start:* 10:00 AM. A 4+ mile hike at a moderate pace. 400 ft elevation gain. Facilities available.

Boots/poles recommended. Bring: snack, water, traction devices.

*Directions:* See TSR Directions #1, Trailside Nature Center.

**MONDAY, JANUARY 5 — South Mountain Reservation, Millburn, NJ**

*Leader:* Donna Burkat, cell 973-454-5635, [busybees813@yahoo.com](mailto:busybees813@yahoo.com)

*Start:* 10:00 AM. A 3 mile flat hike with nice views and some rocks. No facilities available.

Boots/poles recommended. Bring: snack, water, traction devices.

*Directions:* See TSR Directions #1, Dog Park.

**TUESDAY, JANUARY 6 — Pyramid Mountain, Montville, NJ**

*Leader:* Dianne Jones, cell 973-224-3967, [diannejones428@gmail.com](mailto:diannejones428@gmail.com)

*Start:* 9:30 AM. This is a 4- to 5-mile loop hike on the Turkey Mountain side at a moderate pace.

Expect over 600 feet of elevation gain, some sustained climbs, and a waterfall. Portable facilities available. Boots/poles recommended. Bring: lunch, water, traction devices. Please note early start time.

*Directions:* See TSR Directions #1, Visitor's Center.

**WEDNESDAY, JANUARY 7 — Cushtunk Mountain Preserve, Clinton Township, NJ**

*Leader:* John Infosino, cell 908-442-9318, [JInfosino@aol.com](mailto:JInfosino@aol.com)

*Start:* 10:00 AM. We will depart on the Yellow Trail, and take the Blue Trail to the Red Trail, eventually arriving at the picnic area next to the Round Valley Reservoir. We will break for a quick snack/lunch and then return on the camp road. Approximate distance will be about 5 miles, with around 873 feet of elevation. We will hike at a relaxed pace and as always no one will be left behind. No facilities available. Boots/poles recommended. Bring: lunch, snack, water, traction devices.

*Directions:* See TSR Directions #1, Old Mountain Road.

**THURSDAY, JANUARY 8 — Lake Sebago Boat Launch, Harriman State Park, NY**

*Leader:* Bill Medeot, cell 914-844-7038, [billwp218@gmail.com](mailto:billwp218@gmail.com)

*Start:* 10:00 AM. 10-miles with about 1700 elevation gain at a vigorous (2+ mph) pace. We will start on the (B) Seven Hills to (Y) Buck to (W) Breakneck Mt to (Y) S-BM to the fire tower. We will return via the Long Path and the unmarked Pine Meadow Cranberry Trail. Note cell service is very poor/nonexistent at the trailhead. Portable facilities available. Boots/poles recommended. Bring: lunch, water, traction devices.

*Directions:* See TSR directions Harriman State Park, Locations off Seven Lakes Drive.

**ALT. THURSDAY, JANUARY 8 — Tourne Park, West Entrance, Denville, NJ**

*Leader:* Diane Willer, cell 973-713-3066, [dwiller34@gmail.com](mailto:dwiller34@gmail.com)

*Start:* 10:00 AM. We will hike 5-6 miles with some ups and downs, at a social pace. Portable facilities available. Boots/poles recommended. Bring: lunch, water, traction devices.

**FRIDAY, JANUARY 9 — Ramapo Valley County Reservation, Mahwah, NJ**

*Leader:* Will Obecny, cell 603-540-3148, [obecny@optimum.net](mailto:obecny@optimum.net)

*Start:* 10:00 AM. This is a moderate 7-mile loop hike around Bear Swamp with an elevation gain of approximately 800 feet. There is a steep initial climb past the falls and several rocky areas on the hike, which will take around 3.5 hours. Pace will be approximately 2 mph. Facilities available. Boots/poles recommended. Bring: lunch, snack, water, traction devices.

**SATURDAY, JANUARY 10**

No event is scheduled as of this printing. Leaders wishing to post an event are encouraged to do so at least two days prior to this date. Send the listing to [TSRregistration@outlook.com](mailto:TSRregistration@outlook.com).

**SUNDAY, JANUARY 11**

No event is scheduled as of this printing. Leaders wishing to post an event are encouraged to do so at least two days prior to this date. Send the listing to [TSRregistration@outlook.com](mailto:TSRregistration@outlook.com).

**~~MONDAY, JANUARY 12 — Central Park of Morris County, Parsippany Troy Hills, NJ - cancelled~~**

~~*Leader:* Tony Fanelli, cell 973-234-2632, [fanellit@verizon.net](mailto:fanellit@verizon.net)~~

~~*Start:* 10:00 AM. 3 miles on mostly flat, hardpan, paved and grass terrain. Facilities available. Boots/poles recommended. Bring: water, bug spray.~~

**MONDAY, JANUARY 12 — South Mountain Reservation, West Orange, NJ – added hike**

*Leaders:* Gail Waimon, cell 973-229-7414, [gswaimon@comcast.net](mailto:gswaimon@comcast.net) and Len Friedman, cell 973-229-7409, [lenf21@comcast.net](mailto:lenf21@comcast.net)

*Start:* 10:00 AM. A gentle hike of 3 miles on varied terrain at a social pace. Portable facilities available. Boots/poles recommended. Bring: water, traction devices.

*Directions:* See TSR Directions #6, Oakdale. (The lot is across from swan boats.) Meet in front of the bathrooms adjacent to the Boat Dock.

**TUESDAY, JANUARY 13 — Lake Skannatati, Harriman State Park, NY**

*Leader:* Rosie Brancato, cell 203-586-8131, [rosiehike@gmail.com](mailto:rosiehike@gmail.com)

*Start:* 10:00 AM. Moderate 5-mile loop hike, elev. gain 730 ft. Long Path to Times Square, RD, back on ASB. Note cell service is very poor/nonexistent at the trailhead. No facilities available. Boots/poles recommended. Bring: lunch, water, traction devices.

*Directions:* See TSR directions Harriman State Park, Locations off Seven Lakes Drive.

**TUESDAY, JANUARY 13 — Weequahic Park, Newark, NJ – added hike**

*Leader:* Yuriy Rakhlin and Maya Ruvinshtey, cell 973-634-0706, to be used on the day of the event only, [mruvinshteyn@yahoo.com](mailto:mruvinshteyn@yahoo.com)

*Start:* 10:00 AM. The hike is about 4 miles. We will walk around Weequahic Lake, the largest lake in Essex County. After finishing the loop, we will continue our walk to see a historic, Roman-style stone gazebo built in 1916 for Newark's 250th anniversary. Basically, a flat asphalt-paved trail, elevation 111 ft, pace 2-2.5mph. Sneakers are okay. Portable facilities are available. Bring: light lunch, water. This is not a typical Tuesday hike.

*Directions:* Entrance to the park is located at the intersection of Thomas Carmichael Dr. and Elizabeth Ave. in Newark, or across from the church at 761 Elizabeth Ave. The parking lot is located on the right side of the entrance.

**WEDNESDAY, JANUARY 14 — Duke Farms, Hillsborough, NJ**

*Leader:* Gordon Thomas, cell 609-977-0267, [TSRpresident3@gmail.com](mailto:TSRpresident3@gmail.com)

*Start:* 11:00 AM. Hike 5 miles, dirt paths, elev. 200'; relaxed pace <2mph; walk to Eagle Cam and through orchid greenhouse. Facilities available. Boots/poles recommended. Bring: snack, water. Please note later start time.

*Directions:* Meet at entrance to Welcome Center.

**WEDNESDAY, JANUARY 14 — Eagle Rock Reservation, West Orange, NJ – added hike**

*Leader:* Ron Pate, cell 973-965-7578, [ronpate31@verizon.net](mailto:ronpate31@verizon.net)

*Start:* 11:00 AM. This will be a 4-5 mile hike with 400 feet elevation gain. Pace will be around 2 mph. We will break mid hike for lunch. Boots/poles recommended. Bring: lunch, water, traction devices. Please note later start time.

*Directions:* Meet at the 911 Memorial parking area.

**THURSDAY, JANUARY 15 — Lake Sebago Boat Launch, Harriman State Park, NY**

*Leader:* Bill Correa, cell 917-656-3015, [correa.bill@gmail.com](mailto:correa.bill@gmail.com)

*Start:* 10:00 AM. This is a 7 mile hike at a vigorous pace with 1200 elevation gain. We will climb up the Seven Hills trail, down the Yellow to the Pine Meadow and Kakiat trails. Return via the HTS and Seven Hills trails. Note cell service is very poor/nonexistent at the trailhead. Portable facilities available. Boots/poles recommended. Bring: lunch, water, traction devices.

*Directions:* See TSR directions Harriman State Park, Locations off Seven Lakes Drive.

**THURSDAY, JANUARY 15 — Lake Tiorati, Harriman State Park, NY – added hike**

*Leaders:* Will Obecny, cell 603-540-3184, [obecny@optimum.net](mailto:obecny@optimum.net), and Nancy Sierra, cell 908-347-0690, [nsmd\\_solo@yahoo.com](mailto:nsmd_solo@yahoo.com)

*Start:* 10:00 AM. This will be a hike of about 6.5 miles and 1100" elevation along the AT, bottle cap and Long Path trails. There will be a short walk on Arden Road at the end of the hike before

heading back into the woods to the parking lot. Pace will be moderate, about 2 mph. We will break about mid-hike for lunch. Boots/poles recommended. Bring: lunch, water, traction devices.  
*Directions:* See TSR directions Harriman State Park, Locations off Seven Lakes Drive.

**ALT. THURSDAY, JANUARY 15 — Jonathan Woods, Denville, NJ**

*Leader:* Diane Willer, cell 973-713-3066, [dwiller34@gmail.com](mailto:dwiller34@gmail.com)

*Start:* 10:00 AM. We will hike 5-6 miles on a variety of trails with some ups and downs, at a social pace. No facilities available. Boots/poles recommended. Bring: lunch, water, traction devices.

**FRIDAY, JANUARY 16 — South Mountain Reservation, West Orange, NJ**

*Leader:* Donna Burkat, cell 973-454-5635, [busybees813@yahoo.com](mailto:busybees813@yahoo.com)

*Start:* 10:00 AM. Hike 5 miles at a moderate pace over varied terrain with 500 feet of elevation gain. Portable facilities available. Boots/poles recommended. Bring: snack, water.

*Directions:* See TSR Directions #8, Tulip Springs.

**SATURDAY, JANUARY 17 — Great Swamp National Wildlife Refuge, Morris County, NJ**

– **added hike**

*Leader:* Ken Donhauser, cell 732-616-7409 to be used day of event only, [kendonhauser@gmail.com](mailto:kendonhauser@gmail.com)

*Start:* 10:00 AM. 3-mile flat stone pathway and boardwalk. Portable facilities available. Boots/poles recommended. Bring water.

*Directions:* See TSR Directions #1, Morris County Outdoor Education Center, Chatham, NJ.

**~~SUNDAY, JANUARY 18 — Sourland Mountain Preserve, Hillsborough, NJ - cancelled~~**

~~*Leader:* Udi Cohen, cell 732-543-4624, [udic2000@gmail.com](mailto:udic2000@gmail.com)~~

~~*Start:* 9:00 AM. Come enjoy an 8.5 mile hike in the Sourland Mountain Preserve, under 800 feet of elevation gain at a moderate pace with some hills. Scale the valley of rocks and see the Devils half acre. Be prepared for a great view of NYC. We will see small waterfalls and streams along the way. Portable facilities available. Boots/poles recommended. Bring: lunch, snack, water, bug spray, poles. Please note early start time.~~

**MONDAY, JANUARY 19 — Washington Valley Park, Martinsville, NJ**

*Leader:* Debby Bronner, cell 201-563-1648, [debbybronner@gmail.com](mailto:debbybronner@gmail.com)

*Start:* 10:00 AM at the parking lot for Washington Valley Park. We will hike 3 miles alongside a 21 acre reservoir. Terrain includes a small water crossing and two short slopes. Portable facilities available. Boots/poles recommended. Bring: snack, water, traction devices.

**TUESDAY, JANUARY 20 — Norvin Green State Forest, Ringwood, NJ**

*Leader:* Dianne Jones, cell 973-224-3967, [diannejones428@gmail.com](mailto:diannejones428@gmail.com)

*Start:* 10:00 AM. This 6- to 7- mile hike at a moderate pace takes the blue trail to lunch at Chikahoki Falls, returning on the Lower and Mine Trails. About 1,000 feet elevation gain. Note cell service is very poor/nonexistent at the trailhead. No facilities available. Boots/poles recommended. Bring: lunch, water, traction devices.

*Directions:* See TSR Directions #4, New Weis Center.

**WEDNESDAY, JANUARY 21 — Colonial Park, Somerset, NJ – change in hike**

*Leaders:* Debby Bronner, cell 201-563-1648, [debbybronner@gmail.com](mailto:debbybronner@gmail.com) and Carolyn Smith, cell 201-264-0178, [58carolynsmith@gmail.com](mailto:58carolynsmith@gmail.com)

*Start:* 10:00 AM. We will hike approximately 6 miles over flat, fine gravel terrain. The hike will be along the D&R Canal and the Millstone River. The trail is wide and easy to navigate. Option to add on 1 or 2 miles at the end of the hike. Facilities available. Boots/poles recommended.

Bring: snack, water, traction devices.

*Directions:* See TSR Directions #3, Parking Lot F/Perennial Gardens.

**THURSDAY, JANUARY 22 — Johnstontown Road, Harriman State Park, NY - change in hike**

*Leader:* Bill Correa, cell 917-656-3015, [correa.bill@gmail.com](mailto:correa.bill@gmail.com)

*Start:* 10:00 AM. 8 mile moderate hike, 1200 ft elevation gain. We will take the B to Claudia's Smith Den R to the Kakiat then O and B to Sleater Hill then back to the cars. Early out possible at 5 miles. Boots/poles recommended. Bring: lunch, water, traction devices.

*Directions:* See TSR directions for Harriman State Park, Locations off Seven Lakes Drive.

**ALT. THURSDAY, JANUARY 22 — Pyramid Mountain, Boonton, NJ**

*Leader:* Paul Augustyniak, cell 973-219-4807, [paugust586@aol.com](mailto:paugust586@aol.com) and Ed Taylor, cell 732-770-7858, [eltaylor1168@gmail.com](mailto:eltaylor1168@gmail.com)

*Start:* 10:00 AM. We will hike 5 miles with up and downs to Bear Rock on various trails at a moderate pace. 830' elevation change. No facilities available. Boots/poles recommended. Bring: lunch, water, bug spray, poles recommended.

*Directions:* See TSR Directions #3, Kincaid Parking.

**FRIDAY, JANUARY 23 — Lake Skannatati, Harriman State Park, NY**

*Leader:* Julie Stanton, cell 917-972-0212 to be used day of event only, [julienyc@msn.com](mailto:julienyc@msn.com)

*Start:* 10:00 AM. Hike at a brisk pace for 6 to 6.5 miles, including an optional visit to an eerie mine shaft on the A-S, Dunning and Long Path trails with an elevation gain of around 800 ft. We will stop for a 10-15 minute snack/lunch break at Hogencamp Mountain. This hike has numerous ups and downs and a stream crossing. Note cell service is very poor/nonexistent at the trailhead. No facilities available. Boots/poles recommended. Bring: lunch, snack, water, traction devices.

*Directions:* See TSR directions Harriman State Park, Locations off Seven Lakes Drive.

## **SATURDAY, JANUARY 24**

No event is scheduled as of this printing. Leaders wishing to post an event are encouraged to do so at least two days prior to this date. Send the listing to [TSRregistration@outlook.com](mailto:TSRregistration@outlook.com).

## **~~SUNDAY, JANUARY 25~~ — ~~South Mountain Reservation, West Orange, NJ~~ - **cancelled****

*Leader:* Donna Burkat, cell 973-454-5635, [busybees813@yahoo.com](mailto:busybees813@yahoo.com)

*Start:* 10:00 AM. Enjoy this 5-mile moderate-paced hike with rolling elevation and some plank crossings. Facilities available. Boots/poles recommended. Bring: snack, water, traction devices.

*Directions:* See TSR Directions #8, Tulip Springs.

## **~~MONDAY, JANUARY 26~~ — ~~Nomahegan Park, Cranford, NJ~~ - **cancelled****

*Leader:* Ken Donhauser, cell 732-616-7409 to be used day of event only, [kendonhauser@gmail.com](mailto:kendonhauser@gmail.com)

*Start:* 10:00 AM. A 3-mile walk on level paved/stone trail. Perfect for beginners. Sneakers are okay. Portable facilities available. Boots/poles recommended. Bring: water.

## **~~MONDAY, JANUARY 26~~ — ~~Lake Tiorati, Harriman State Park, NY~~ – **added hike, cancelled****

*Leader:* Marianne Ansari, cell 201-519-8975, [marianneroman@hotmail.com](mailto:marianneroman@hotmail.com)

*Start:* 9:30 AM. Estimated 7.5 miles, 1000 feet elevation gain. From the Lake Tiorati parking lot we will take the Blue Trail; go left onto the AT/RD (to Fingerboard Mountain); then take a left onto the HURST/Blue (Past Fingerboard Shelter), then back up and a left onto RD and a right onto the AT, then a right RD and a right onto the AT, then a right onto the Long Path; then right onto an unmarked trail, then right onto the AT/RD, then left onto the Blue which takes us back to the Lake Tiorati parking lot. No facilities available. Boots/poles recommended. Bring: lunch, water, traction devices. Please note early start time. This is NOT a typical Monday hike.

*Directions:* See TSR directions Harriman State Park, Locations off Seven Lakes Drive.

## **~~TUESDAY, JANUARY 27~~ — ~~South Mountain Reservation, West Orange, NJ~~ - **cancelled****

*Leader:* Neil Sullivan, cell 201-787-0491, [neilmsullivan@yahoo.com](mailto:neilmsullivan@yahoo.com)

*Start:* 10:00 AM. 6-mile hike approximately 600 feet elevation. Moderate difficulty. Pace 2-2.5mph. No facilities available. Boots/poles recommended. Bring: lunch, traction devices.

*Directions:* See TSR Directions #9, Turtle Back Rock.

## **TUESDAY, JANUARY 27 — Chimney Rock Park, Martinsville, NJ – **added hike****

*Leader:* Bijoy Mechery, cell 908-487-8482, [bmechery@msn.com](mailto:bmechery@msn.com)

*Start:* 10:00 AM. We will hike around 6 miles in Chimney Rock Park and adjacent Washington Valley Park. Terrain includes two small water crossings, two short and one not too short slopes. Early out is possible half way through the hike. Portable facilities available. Boots/poles recommended. Bring: snack, water, traction devices.

**WEDNESDAY, JANUARY 28 — Cushetunk Mountain Preserve, Clinton Township, NJ –  
added hike**

*Leader:* John Infosino, cell 908-442-9318, [JInfosino@aol.com](mailto:JInfosino@aol.com)

*Start:* 10:00 AM. We will hike up the White Trail to the top, turn onto the Red Trail, following it around close to the Round Valley Reservoir. We will break somewhere for a quick snack/lunch. We will take the Blue Trail to the Yellow Trail returning to the parking lot. Approximate distance will be about 5.8 miles, with around 1,000 feet of elevation. Trail is rated as Moderate on All Trails. We will hike at a relaxed pace, and as always no one will be left behind. No facilities available. Boots/poles recommended. Bring: lunch, snack, water, traction devices.

*Directions:* See TSR Directions #1, Old Mountain Road.

**~~THURSDAY, JANUARY 29 — Jones Point, Harriman State Park, NY - cancelled~~**

~~*Leader:* Rosie Brancato, cell 203-586-8131, [rosiehike@gmail.com](mailto:rosiehike@gmail.com)~~

~~*Start:* 10:00 AM. Moderately strenuous 8-mile circular hike, 1,800 ft elevation gain; vigorous pace. RD to Dunderberg and Bald Mountains, to Timp, return on Timp Torne Trail. No facilities available. Boots/poles recommended. Bring: lunch, water, traction devices.~~

~~*Directions:* See TSR Directions for Harriman State Park, Locations off US 9W.~~

**ALT. THURSDAY, JANUARY 29 — Wawayanda State Park, Hewitt, NJ**

*Leader:* Kaat Higham, cell 862-221-0170, [khigham@verizon.net](mailto:khigham@verizon.net)

*Start:* 10:00 AM. 6.1 mile hike around Wawayanda Lake, on the orange trail. Moderately rocky terrain with minor elevation changes at a moderate pace of about 2 mph. No facilities available. Boots/poles recommended. Bring: lunch, water, traction devices.

*Directions:* See TSR Directions #3, Boat Launch.

**~~FRIDAY, JANUARY 30 — Camp Mohican, Blirstown, NJ - cancelled~~**

~~*Leader:* Bonnie Ackerman, cell 908-864-3680, [ack.bonnie@gmail.com](mailto:ack.bonnie@gmail.com)~~

~~*Start:* 10:00 AM. An 8-mile hike, down the Coppermine Trail, with a stop at the mine site for a quick snack break. We then hike up the steep Kaiser Trail to the ridgeline on the Appalachian Trail where we will stop for lunch and then return back to Mohican Outdoor Center. About 1300 feet elevation gain averaging 2+ mph. Facilities available. Boots/poles recommended. Bring: lunch, snack, water, traction devices.~~

**~~SATURDAY, JANUARY 31 — Cooper Mill, Chester, NJ - cancelled~~**

~~*Leader:* Ed Taylor, cell 732-770-7858, [eltaylor1168@gmail.com](mailto:eltaylor1168@gmail.com)~~

~~*Start:* 10:00 AM. The hike will be about 6.5 to 7 miles with ups, downs, rocks and roots. The return along the Black River is very pretty. Portable facilities available. Boots/poles recommended. Bring: lunch, snack, water, traction devices.~~