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PREVENTING INJURIES. SAVING LIVES.

Background & Goal of the Project

- In 2015, a federal mandate called for health and sport to work together toward a national strategy to raise awareness for parents, coaches, and athletes on concussion treatment.
- There was a recognized need for consistency in the approach to concussion across the Canadian sport landscape.

Partners

- Public Health Agency of Canada
- Parachute's Expert Advisory Concussion Subcommittee
- Sport Canada & F/P-T Working Group on Concussions
- Canadian Concussion Collaborative
- Dr. Jack Taunton, Parachute Clinical Advisor
- National Sport Organizations
- Multi-sport Service Organizations (e.g. Coaching Association of Canada)
- Ophea
- Pan-Canadian Joint Consortium for School Health

Project Deliverables

1. Canadian guideline on concussion, based on the International Consensus Statement on Concussion in Sport (2017).
2. Harmonized sport-specific concussion protocols validated by experts and end users.
3. Accredited online continuing education on concussion for physicians and other health professionals.
4. Social and digital media communications campaign.
5. Return-to-School pilot.

Evidence Base

- Consensus Statement on Concussion in Sport (published every 4 years)
- Systematic review research (the highest quality of evidence)
- Clinical practice guidelines/standards (ONF)
- Expert input from Canadian researchers and health professionals

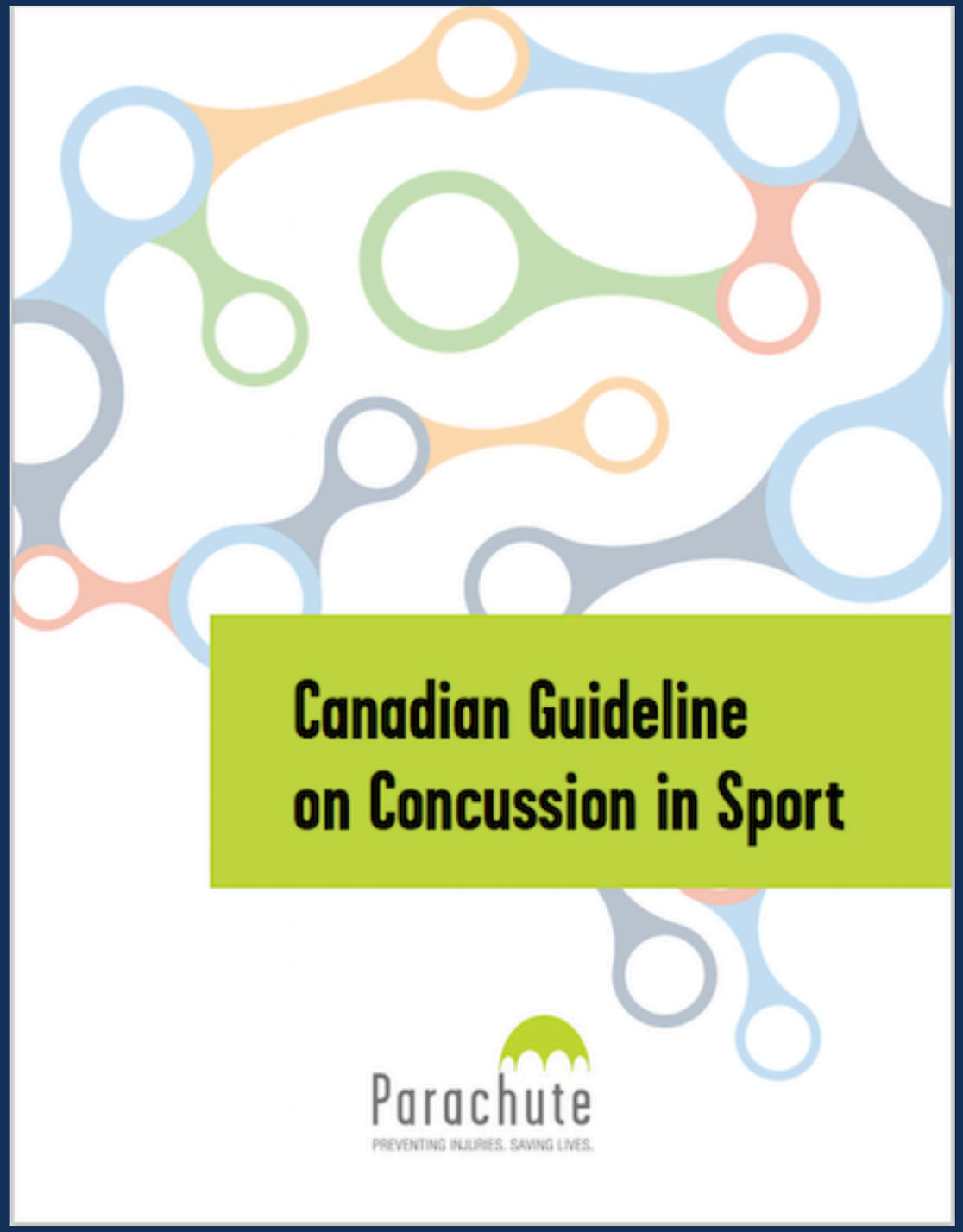
Path to Harmonization

International Consensus Statement (Berlin)

Canadian Guideline on Concussion in Sport

Canadian Harmonized Concussion Protocol

Harmonized Sport-Specific Concussion Protocols



The Guideline aims to ensure that athletes with a suspected concussion **receive timely and appropriate care**, and **proper management** to allow them to return to their sport.

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Canadian Guideline: Outline

- Seven areas* in the prevention, recognition, diagnosis, and management of sport-related concussion:
  1. Pre-season education
  2. Head injury recognition
  3. Onsite medical assessment
  4. Medical assessment
  5. Concussion management
  6. Multidisciplinary concussion care
  7. Return to school and sport

*Informed by Russell, K., et al. (2017). Legislation for youth sport concussion in Canada: Review, conceptual framework and recommendation. *Canadian Journal of Neurological Sciences,44*(3), 225-234.

Canadian Guideline: Tools

- Pre-Season Education Sheet
- Medical Assessment Letter Template
- Medical Clearance Letter Template
- Sport Concussion Assessment Tool 5 (SCAT5)
- Child SCAT5
- Concussion Recognition Tool 5 (CRT5)

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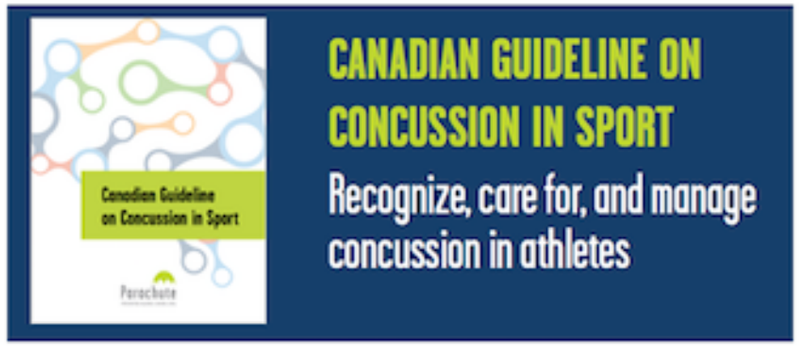
Concussion



The Concussion Protocol Harmonization Project

Concussion Baseline Testing

Read Parachute's *Statement on Concussion Baseline Testing in Canada* and download the Fact Sheet.

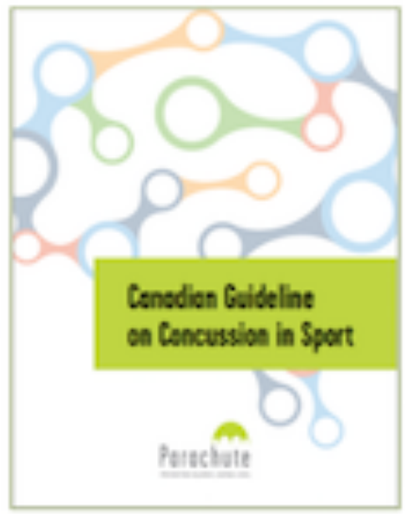
Concussion Basics

Information to answer some basic questions you might have about concussion.

LEARN MORE

Canadian Guideline on Concussion in Sport

The *Canadian Guideline on Concussion in Sport* has been developed to ensure that athletes with a suspected concussion receive timely and appropriate care, and proper management to allow them to return to their sport.



Developed by Parachute and its Expert Advisory Concussion Subcommittee, the Guideline is based on a review of the current scientific evidence and expert consensus on best practices for the evaluation and management of Canadian athletes who sustain a concussion during a sport activity.

This Guideline addresses 7 key areas:

1. Pre-season education
2. Head injury recognition
3. Onsite medical assessment
4. Medical assessment
5. Concussion management
6. Multidisciplinary concussion care
7. Return to sport

Funded by the Public Health Agency of Canada, this Guideline is an important part of the Parachute-led Concussion Protocol Harmonization Project and creates the foundation for a more consistent approach to concussion across the country.

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NSO Protocol Harmonization

- Goal of harmonization:
  - NSOs have concussion protocols that align with current consensus evidence and the *Canadian Guideline on Concussion in Sport*
- Sport-specific element: Return-to-Sport Strategy
- NSO engagement through emails, webinars, in-person event, digital platform
- NSOs provided with tools and templates, expert advisor review

Protocol Template

[ORGANIZATION NAME] CONCUSSION PROTOCOL

[ORGANIZATION] has developed the **[ORGANIZATION NAME] Concussion Protocol** to help guide the management of athletes who may have a suspected concussion as a result of participation in **[ORGANIZATION NAME]** activities.

Purpose

This protocol covers the recognition, medical diagnosis, and management of **[ATHLETES, PLAYERS, SPORT PARTICIPANTS, CHOOSE TERM THAT IS MOST APPROPRIATE]** who may sustain a suspected concussion during a sport activity. It aims to ensure that athletes with a suspected concussion receive timely and appropriate care and proper management to allow them to return back to their sport safely. This protocol may not address every possible clinical scenario that can occur during sport-related activities but includes critical elements based on the latest evidence and current expert consensus.

Protocol Checklist

1. PRE-SEASON EDUCATION

- ☑ Your protocol specifies a plan to provide annual pre-season concussion education to: athletes, coaches, trainers, officials, and medical staff (e.g. team physician)
- ☑ Your pre-season concussion education includes information on:
  - ☑ the definition of concussion
  - ☑ possible mechanisms of injury (i.e. how a concussion might occur)
  - ☑ common signs and symptoms
  - ☐ steps that can be taken to prevent concussions and other injuries from occurring in sport
  - ☐ what to do when an athlete suffers a suspected concussion or more serious head injury
  - ☐ what measures should be taken to ensure proper medical assessment, Return-to-School and Return-to-Sport Strategies
  - ☐ Return-to-Play medical clearance requirements
- ☐ Specifies who is responsible for implementation and decision-making regarding pre-season education

▸ **Helpful tool: Pre-Season Concussion Education Sheet**

Return-to-Sport Strategy Adaptation Tool

Table 1. Return-to-Sport Strategy: Full Contact and Collision Sports

STAGE	AIM	ACTIVITY	GOAL OF EACH STEP	SPORT-SPECIFIC CONSIDERATIONS
1	Symptom-limiting activity	Daily activities that do not provoke symptoms.	Gradual reintroduction of work/school activities	
2	Light aerobic activity	*Example: Light intensity jogging or stationary cycling for 15-20 minutes at sub-symptom threshold intensity.* No resistance training.	Increase heart rate	What is the type of aerobic exercise most relevant to your sport? ▸ Stationary bike? ▸ Treadmill walking/ running?
3	Sport-specific exercise	*Example: Moderate intensity jogging for 30-60 minutes at sub-symptom threshold intensity. Low to moderate impact passing, dribbling, shooting, and agility drills.* No head impact activities.	Add movement	What types of sport-specific skills are required for your sport? ▸ Ball skills, stick handling, racquet skills, cutting, pivoting, spinning, twisting, spotting, etc. Gradually increase speed, complexity and intensity of activities.

Return-to-Sport Strategy: Paddle sport example

Stage	Aim	Activity
1	Symptom- limiting activity	Daily activities that do not provoke symptoms
2	Light aerobic activity	Walking or flatwater paddling at a slow to medium pace for 15-20 minutes. No resistance or interval training
3	Sport-specific exercise	Paddling on flatwater and/or running. No risk of head impact activities - Moderate intensity paddling for 30-60 minutes at sub-symptom threshold intensity.

Added note for clinical consideration regarding the high level of functioning of the cervical, visual-vestibular, and cardiovascular systems in these sports and multi-disciplinary assessment of these systems.

Preliminary Results

Engagement

40+ NSOs engaged, with a variety of characteristics:

- “High” and “low” concussion risk
- Sport environments (water, snow, field, etc)
- Range of experience with concussion policy

Ownership by NSOs & their medical teams

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Usefulness

Significant uptake of the protocol template (Most-used tool)

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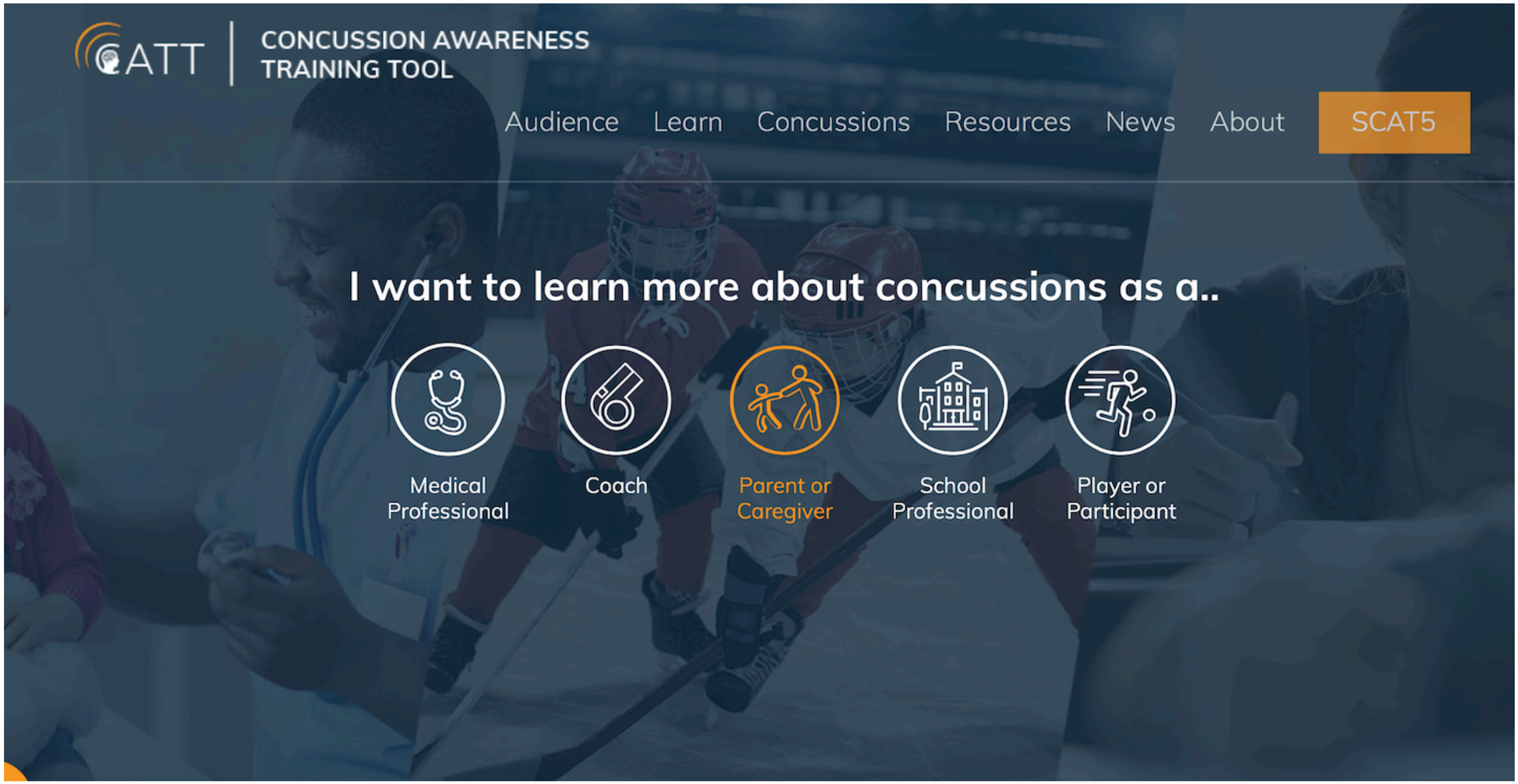
Training for Health Professionals

- Accredited online continuing education for physicians and other health professionals (athletic therapists, physiotherapists, etc)
- Competencies of healthcare providers are critical to the success of concussion protocols
- Partnership between Parachute and BCIRPU to update CATT (Concussion Awareness Training Tool) Medical Professionals toolkit
- Launched June 8 2018

cattonline.com



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Harmonized Sport-Specific Concussion Protocols

Harmonized School Concussion Protocols

Return-to-School Pilot

- Work with pilot school boards and targeted education sector partners to create harmonized school concussion protocol and user-friendly resources/tools
- In partnership with Ophea, we conducted a pilot with schools in New Brunswick and PEI

Return-to-School Pilot

- Pilot activities:
  - Conversations with provincial Ministries
  - Questionnaire for principals
  - Key informant interviews
  - 2-hour training webinars
  - Pre- and Post-Webinar self-assessments

Return-to-School Pilot: Results

Lessons learned:

- Address concerns and challenges head-on.
- Clarifying roles is crucial – within schools, and schools vs. parents vs healthcare.
- Administrators, educators need to be given confidence to use professional judgment.
- Ministerial and school board/district support is key, with identified direction and deliverables

Return-to-School Pilot: Results

- Policies/protocols **must** come with training.
- Pre-/post- self-assessment showed increase in knowledge and confidence
  - "I feel confident in the administration of this protocol."
- Results and resources will be shared across Canada, with the help of the Pan-Canadian Joint Consortium for School Health

For More Information

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Thank you

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