and physical activities to discuss their appropriateness, required protective gear, prophylaxis (factor coverage and other measures), and required physical skills prior to beginning the activity. This is particularly important if the individual has any joint with recurrent bleeding (i.e., target joint).[29]

- Ongoing patient/caregiver education on the physical implications of a given activity in relation to hemophilia (i.e., joint flexion, joint or muscle trauma) is important so that they can make informed choices, adapt their self-management accordingly, and responsibly manage the way they participate in sports and physical activities.
- Target joints can be protected with braces or splints during physical activity, especially in the absence of factor coverage.[30,31]
- See Chapter 7: Treatment of Specific Hemorrhages and Chapter 10: Musculoskeletal Complications.

Recommendation 2.3.1:

- **For people with hemophilia, the WFH recommends promotion of regular physical activity and fitness, with special attention on bone health maintenance, muscle strengthening, coordination, physical functioning, healthy body weight, and positive self-esteem.** CB

Recommendation 2.3.2:

- **For people with hemophilia, the WFH recommends promotion of non-contact sports. High-contact and collision sports and high-velocity activities should be avoided unless the individual is on a prophylactic regimen that is adequate to cover such activities and is properly educated on the potential risks and other required protective measures.**
- **Remark: The choice of sports activities should take into consideration the individual's physical condition and ability, preferences and interests, local customs, and available resources.** CB

Recommendation 2.3.3:

- **For people with hemophilia, the WFH recommends consultation with a physical therapist or other musculoskeletal specialist before engaging in sports and physical activities to discuss their appropriateness specific to the individual's condition and their requirement for particular physical skills and/or protective gear.** CB

2.4 | Adjunctive management

- Adjunctive therapies are important in the treatment of bleeds, particularly where coagulation therapies and hemostatic agents are limited (or unavailable), and may lessen the amount of treatment product required.
- First-aid measures are a key component of adjunctive management. In addition to CFCs to raise factor levels (or DDAVP in mild hemophilia A), the PRICE principles—protection, rest, ice, compression, and elevation—based on the conventional rest, ice, compression, and elevation (RICE) protocol for injuries, may be used for joint and muscle bleeds. Another approach, POLICE (protection, optimum loading, ice, compression, and elevation), replaces "rest" with "optimum loading" to focus attention on the need to balance rest with early mobilization and gradual weight-bearing to prevent complications associated with immobilization.[32] It is important to consider the appropriateness of each of these measures for the particular situation.
- In recent years, there has been debate on the application of ice, which is believed to help manage acute pain from joint bleeding and reduce blood flow to the injured tissue.[33] One study suggested that the cooling effect of ice may interfere with coagulation and slow the hemostasis process.[34] However, counter viewpoints note that many people with hemophilia appreciate ice for pain relief and that, for those without access to treatment products, ice for acute and chronic pain may be their only "treatment" option.[35-37]
- See Chapter 7: Treatment of Specific Hemorrhages – Joint hemorrhage – Adjunctive care.
- Physical therapy and rehabilitation are particularly important for functional improvement and recovery after musculoskeletal bleeds and for those with established hemophilic arthropathy.[38,39]
- See Chapter 7: Treatment of Specific Hemorrhages – Joint hemorrhage – Physical therapy and rehabilitation and Chapter 10: Musculoskeletal Complications – Hemophilic arthropathy and joint contractures – Physical therapy for hemophilic arthropathy.
- Antifibrinolytic drugs are effective as adjunctive treatment for mucosal bleeds and invasive dental procedures. (See 2.7 Dental care and management, below, and Chapter 5: Hemostatic Agents – Other pharmacological options.)
- Certain selective COX-2 inhibitors may be used for joint inflammation after an acute bleed and for chronic arthritis.[40] (See 2.6 Pain management, below.)
- Complementary techniques for pain management (e.g., meditation, distraction, mindfulness, or music therapy) may also be helpful for those with chronic hemophilic arthropathy. (See 2.6 Pain management, below.)

Recommendation 2.4.1:

- **For people with hemophilia with a muscle or joint bleed, the WFH recommends following the PRICE principles (protection, rest, ice, compression, and elevation) in addition to increasing factor level.** CB

Recommendation 2.4.2:

- **For people with hemophilia recovering from a joint or muscle bleed, the WFH recommends gradual re-initiation of physical activities under the supervision of a physical therapist with experience in hemophilia to assess resumption of normal motor development and coordination.**
- **Remark: For children with hemophilia recovering from a joint or muscle bleed, the physical therapist and family caregiver should**