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Good moves: Martial arts can offer striking benefits but caution advised

by Rebecca A. Demorest M.D., FAAP

Should I sign my 6-year-old up for karate classes? What's the difference between taekwondo and karate? Is there a chance my child could get hurt participating in martial arts? Should my child wear a mouthguard or headgear? I have heard a lot about mixed martial arts ... is it safe for kids?

These questions and many others reflect the ongoing information gap when it comes to kids' participation in the martial arts world. Around since well before our time, the martial arts have been a structured activity available to both adults and children, recreationally and competitively. Known to encompass self-defense, competition and physical fitness, and enhance motor development and emotional growth, martial arts are performed by more than 6.5 million children in the U.S. every year (Yard EE, et al. *J Sci Med Sport*. 2007;10:219-226).

Categorized as striking, grappling, weapon-based or low-impact/meditative, various martial arts utilize different skills and focus, and incur different injury risks. An appropriate knowledge of martial arts may allow enhanced counseling of patients interested in the activity.



The AAP clinical report *Youth Participation and Injury Risk in Martial Arts* provides the clinician with a working understanding of the martial arts world, along with exposure to the direct injury risks of different martial arts forms. It is available at <http://dx.doi.org/10.1542/peds.2016-3022> and will be published in the December issue of *Pediatrics*.

With pediatric data relatively scarce, most studies review adult risk with some extrapolation to a younger age group. The report, from the AAP Council on Sports Medicine and Fitness, reviews the limited pediatric data and provides general recommendations and guidelines for clinicians to use during discussions with patients and their families.

Key conclusions include the following:

- Martial arts can provide kids with vigorous levels of physical exercise that can lead to better overall physical fitness.
- Proper instructor supervision and training of instructors in regard to understanding a child's limitations based on age, maturity, stature and experience is paramount. Martial arts competition should be



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delayed until youths have demonstrated adequate physical and emotional maturity and competency with noncontact moves and forms.

- Providers should discern between noncontact and contact martial arts forms, the latter conferring a higher injury risk.
- Blows directly to the head and other forbidden areas, and a point system encouraging this, should be discouraged. Proper teaching of defensive blocking to avoid dangerous blows should be encouraged.
- There is no evidence that soft headgear or mouthguards decrease concussion risk during participation, though mouthguards reduce orofacial injuries.
- Anticipatory guidance regarding martial arts is encouraged at preparticipation evaluation visits.
- The nature of mixed martial arts confers a high risk of concussion and asphyxia. Therefore, youth and adolescent participation in this martial arts form should be discouraged. Providers also can educate communities about the increased susceptibility to injury if children imitate what they see from media exposure to mixed martial arts.

Dr. Demorest, a lead author of the clinical report, is a member of the AAP Council on Sports Medicine and Fitness and former member of its executive committee.

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