

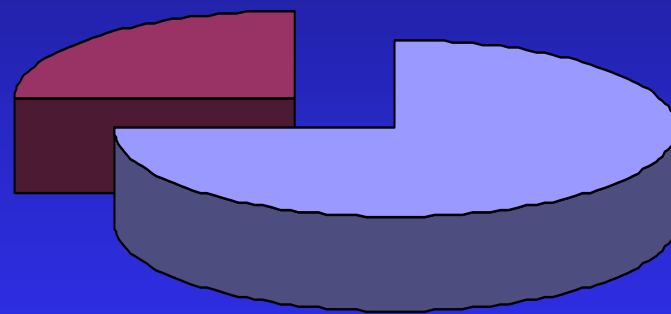
# Temporomandibular Disorders in Children and Adolescents

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# Chronic Pain in Children and Adolescents



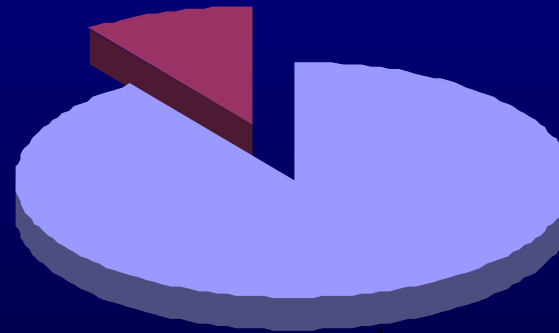
■ 75 % No pain  
■ 25 % Chronic pain



n = 6636 Perquin C et al. (2000)  
The Clinical Journal of Pain

# Headache under the Age of 6, high level of pain

Headache  
10%

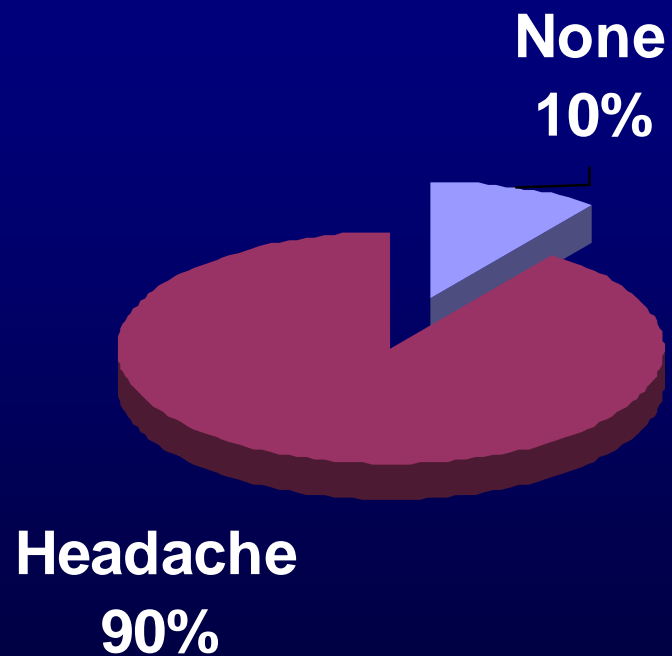


None 90%



Pothmann R, 1999, Headache in Childhood n = 7000

# Headache Experiences up to the Age of 12



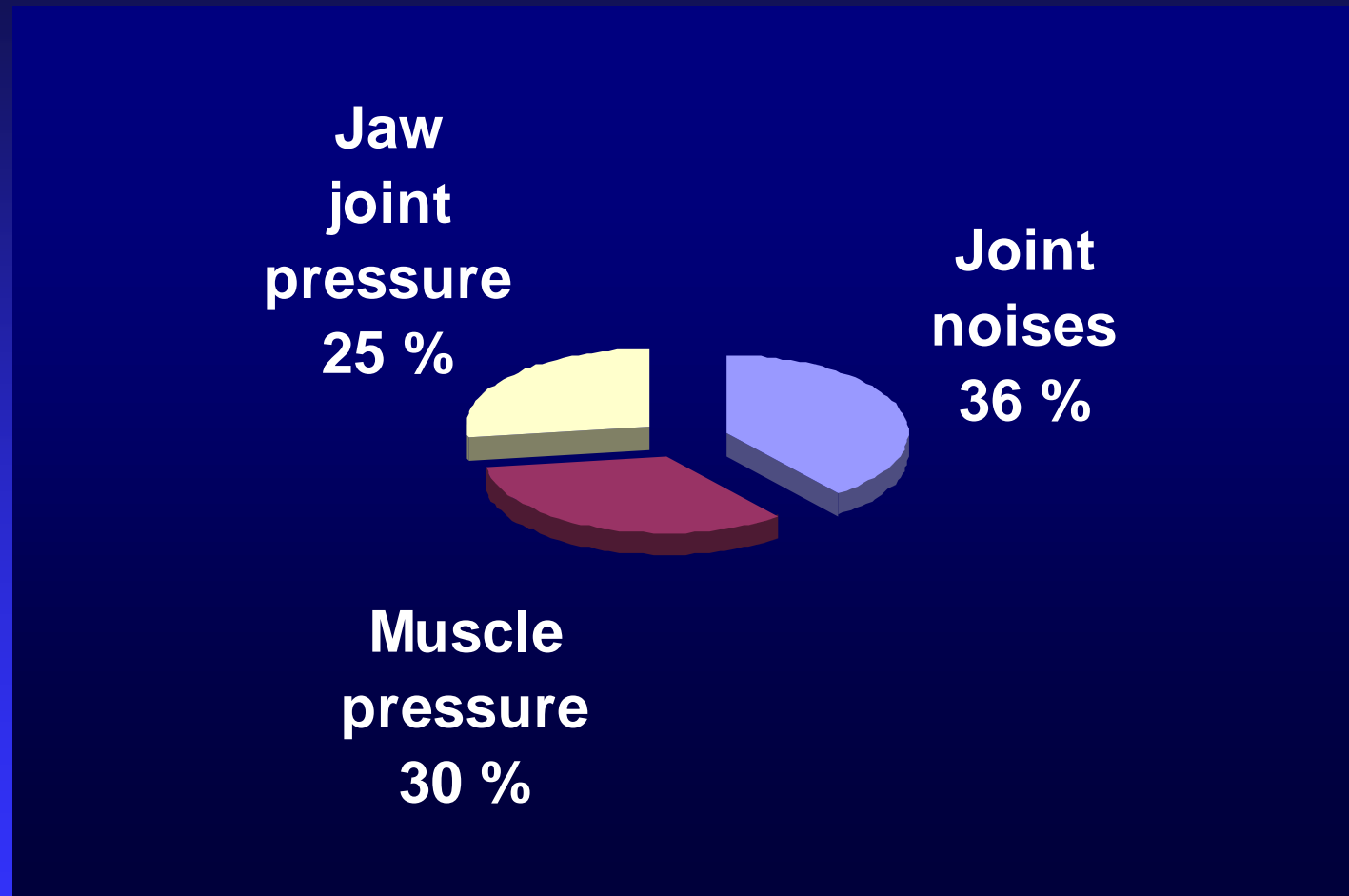
Pothmann R, 1999, Headache in Childhood n = 7000

# Clinical Signs of CMD

10-25%	51 %	31%	50 %	40 %	68 %
4-6	10-13	12-14	15	15-17	16-18
Widmal m et al. 1995 n = 203	Gazit et al. 2001 n =369	Morinush i et al. 1991 n = 160	Pilley et al. 1992 n = 791	Morinus hi 1991 n = 480	Gazit et al. 2001 n = 369



# Most Common Clinical CMD Signs



Gazit 2001, Widmalm 1995

# CMD by Gender

- No difference

n = 400, Sonmez et al. H. J Oral Rehabil 2001

- Ages 6-8: boys with CMD more often

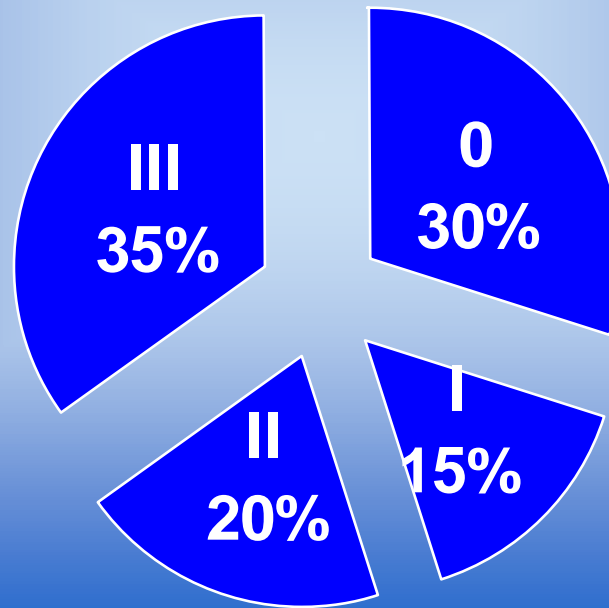
n = 208 Ettala-Ylitalo et al. Arch Oral Biol 1991

- Ages 12-18: Girls with CMD more often

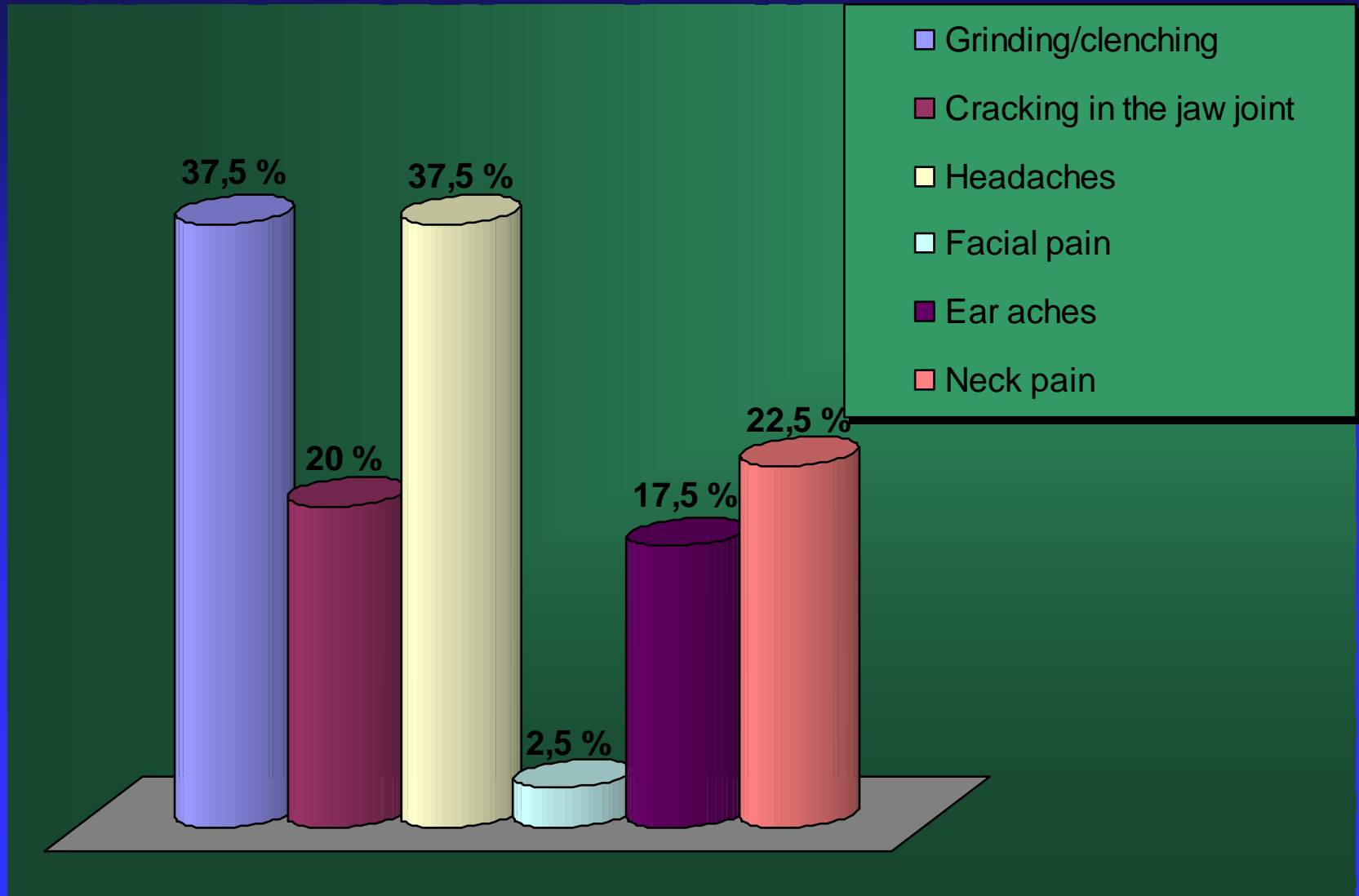
n = 862 List et al. J Orofac Pain 1998



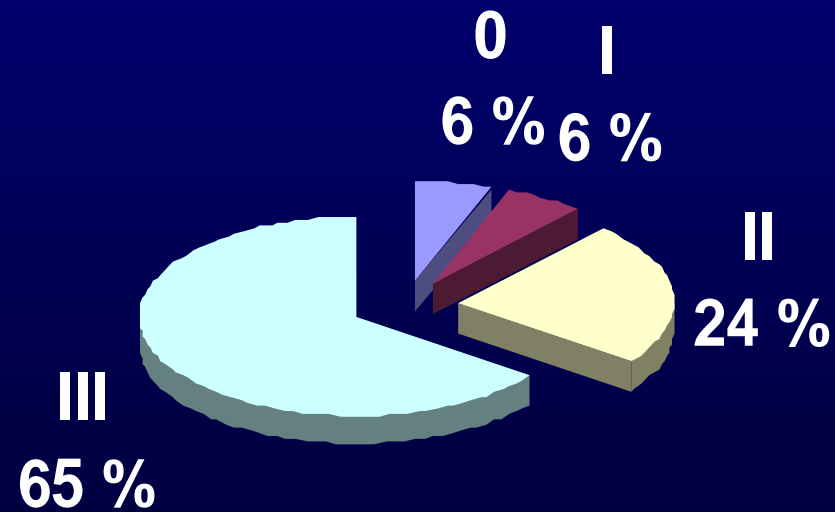
# Helkimo Dysfunction Index for Children and Adolescents Clinical Study n = 40 Ages 4-17



# Clinical Study n = 40, ages 3-17



**Helkimo Index  
for Children and Adolescents  
with Headache  
Clinical Study n = 17**



# Development of CMD Signs/Symptoms

- High fluctuation
- Extreme deterioration seldom
- Complete remission seldom
- Decline in habits
- Increase in grinding and clenching



Egermark, et al.  
Acta Odontol Scand 2001  
n = 240, Longitudinal study 20 years

# Influence of Orthopedic Treatment on CMD

- No influence on the healthy
- On CMD children
  - ◆ Headgear and control group 7x more pain in the mandible joint as shown in the Bionator group



Keeling SD, et al.: S. Semin Orthod 1995 N = 191

# No Correlation between Occlusion Dysfunctions and TMD

Ages 6-10 N = 386	Ages 12-15 N = 1182	Ages 7, 11, 15 N = 240 Long. Age 5
Alamoudi et al.  Clin Pediatr Dent 2000	Verdonck et al.  J Oral Rehabil 1994	Egermark- Eriksson et al.  J Dent Res 1987



# Correlation Occlusion Dysfunction and TMD

<p>Ages 5-15 N = 1008 Precontact</p>	<p>Ages 12-15 N = 29 Dental Restoration!</p>
<p>Pahkala R, Laine T. J  Clin Pediatr Dent 1991</p>	<p>Kampe T, et al.  Acta Odontol Scand 1987</p>



# Diagnostic Conclusions

- TMD in children ever increasing
- TMD screening for all children (esp. Orthopedics)
- Symptoms + clinical signs

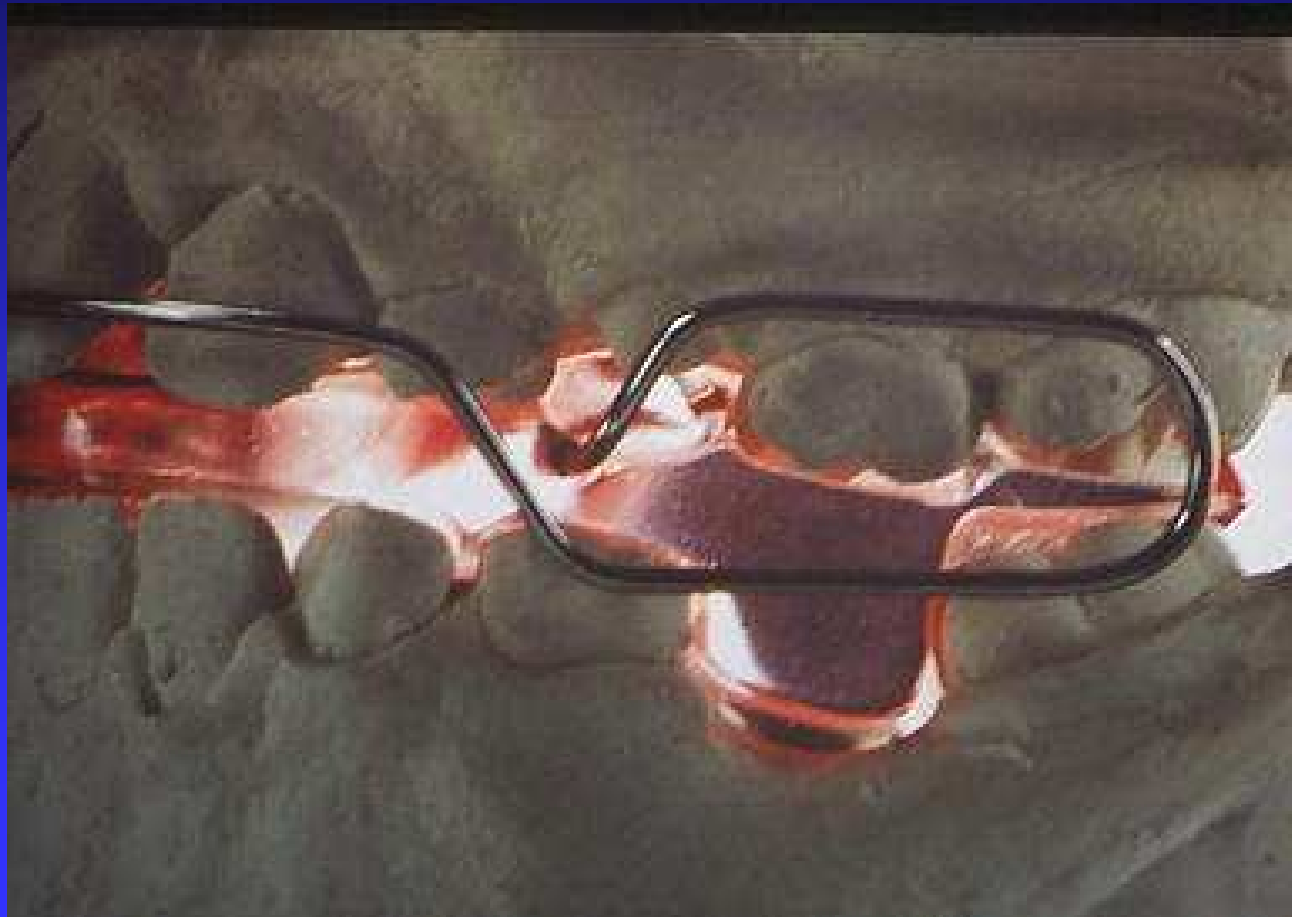


# Therapeutic Conclusions

- Education (children, parents, teachers)
- Interdisciplinary therapy
  - ◆ CBT (sport / relaxation / stress management)
  - ◆ Psychotherapy
  - ◆ Physiotherapy
  - ◆ Functional orthopedics for CMD
  - ◆ Drugs



# Functional Orthopedics



# Treatment of Headaches with Bionator Clinical Study n = 9

