

EPIDEMIOLOGICAL BURDEN OF OSTEOARTHRITIS IN EASTERN, CENTRAL, AND WESTERN EUROPE BETWEEN 1990 AND 2021

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OBJECTIVES

Osteoarthritis is a leading musculoskeletal disorder causing pain and disability globally. Monitoring its long-term trends is key for effective healthcare planning. This study aims to examine and compare the burden of osteoarthritis in Eastern, Central, and Western Europe between 1990 and 2021, using data from the Global Burden of Disease Study.

METHODS

The epidemiological disease burden of osteoarthritis was analysed using data from the Global Burden of Disease (GBD) Study by the Institute for Health Metrics and Evaluation (IHME). We compared the prevalence, incidence, disability-adjusted life years (DALYs), and years lived with disability (YLDs) associated with osteoarthritis across Eastern (EE), Central (CE), and Western Europe (WE) from 1990 to 2021.

RESULTS

Between 1990 and 2021, the prevalence of osteoarthritis increased from 7,498.40 to 12,596.71 per 100,000 in CE (a 68.0% increase), from 9,292.30 to 13,110.86 in EE (41.10%), and from 9,721.22 to 13,618.85 in WE (40.10%) (*Figure 1*). Age-standardized prevalence increased from 6,276.97 to 6,948.51 per 100,000 in CE, from 7,541.08 to 7,906.11 in EE, and from 6,736.67 to 7,113.44 in WE, corresponding to increases of 10.70%, 4.84%, and 5.60%, respectively (*Figure 2*). Incidence rose from 559.01 to 833.0 per 100,000 in CE (49.01%), from 660.18 to 886.56 in EE (34.29%), and from 684.39 to 895.97 in WE (30.92%) (*Figure 3*). DALYs increased from 261.41 to 446.32 per 100,000 in CE (70.74%), from 327.77 to 467.01 in EE (42.48%), and from 345.29 to 487.28 in WE (41.12%). YLDs rose from 2.21% to 3.18% in CE (43.90%), from 2.63% to 3.27% in EE (24.33%), and from 2.69% to 3.36% in WE (24.91%) (*Figure 4*).

CONCLUSIONS

Between 1990 and 2021, the epidemiological burden of osteoarthritis significantly increased in all European regions, especially in Central Europe. Regional differences highlight the need for targeted prevention, early diagnosis, and strategic resource planning to address the growing impact of osteoarthritis in Europe.

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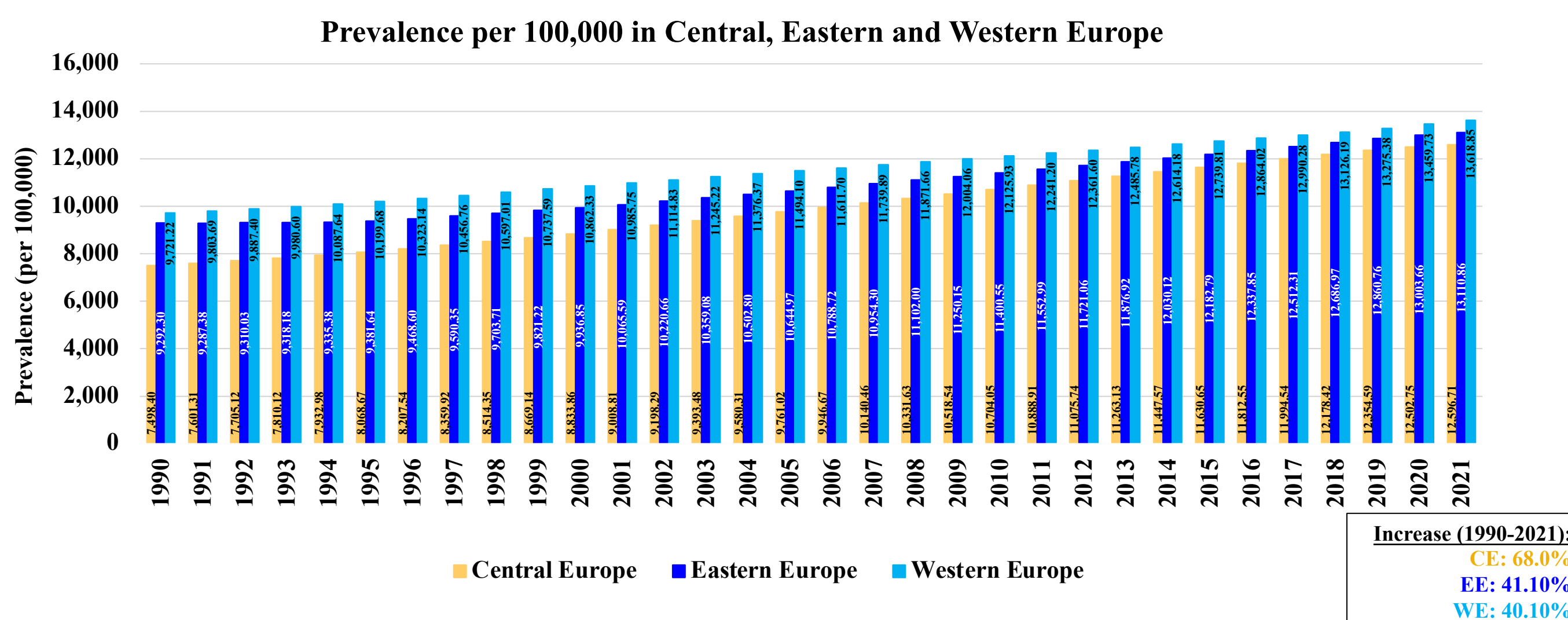


Figure 1 Prevalence per 100,000 in Central, Eastern and Western Europe between 1990 and 2021

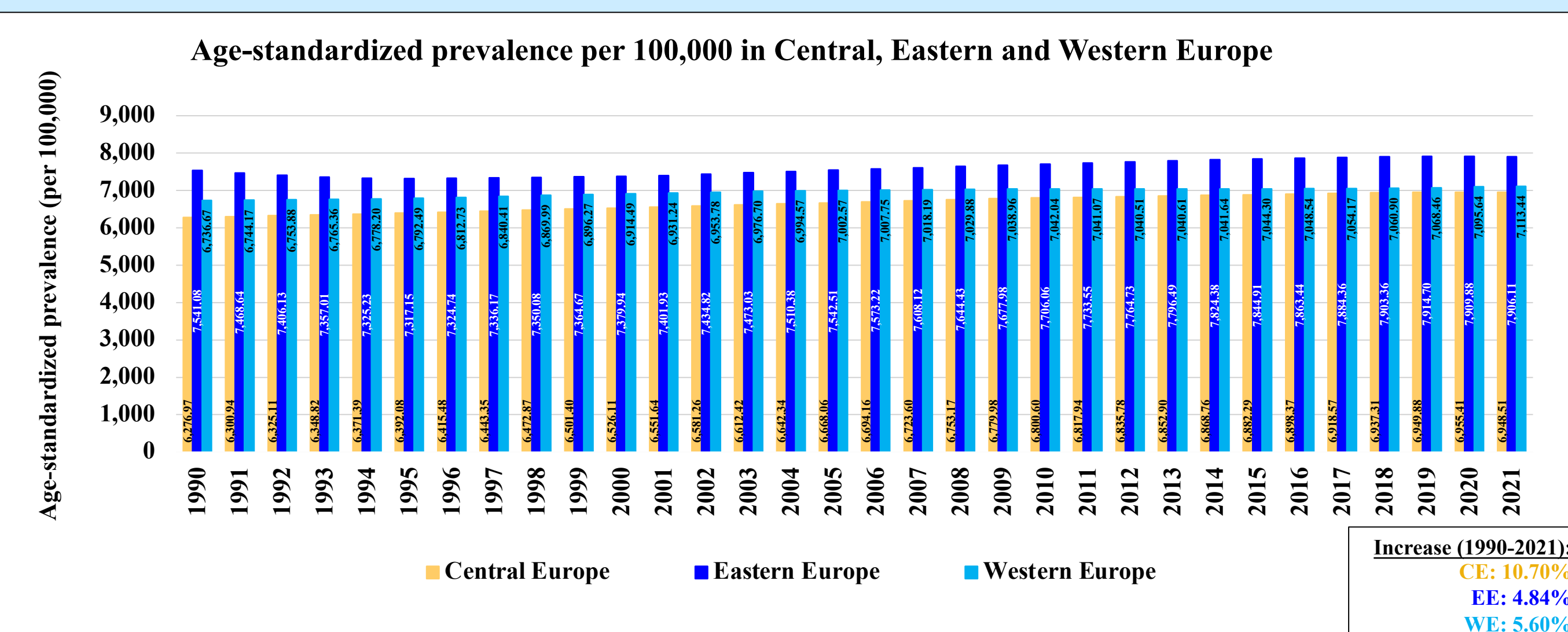


Figure 2 Age-standardized prevalence per 100,000 in Central, Eastern and Western Europe between 1990 and 2021

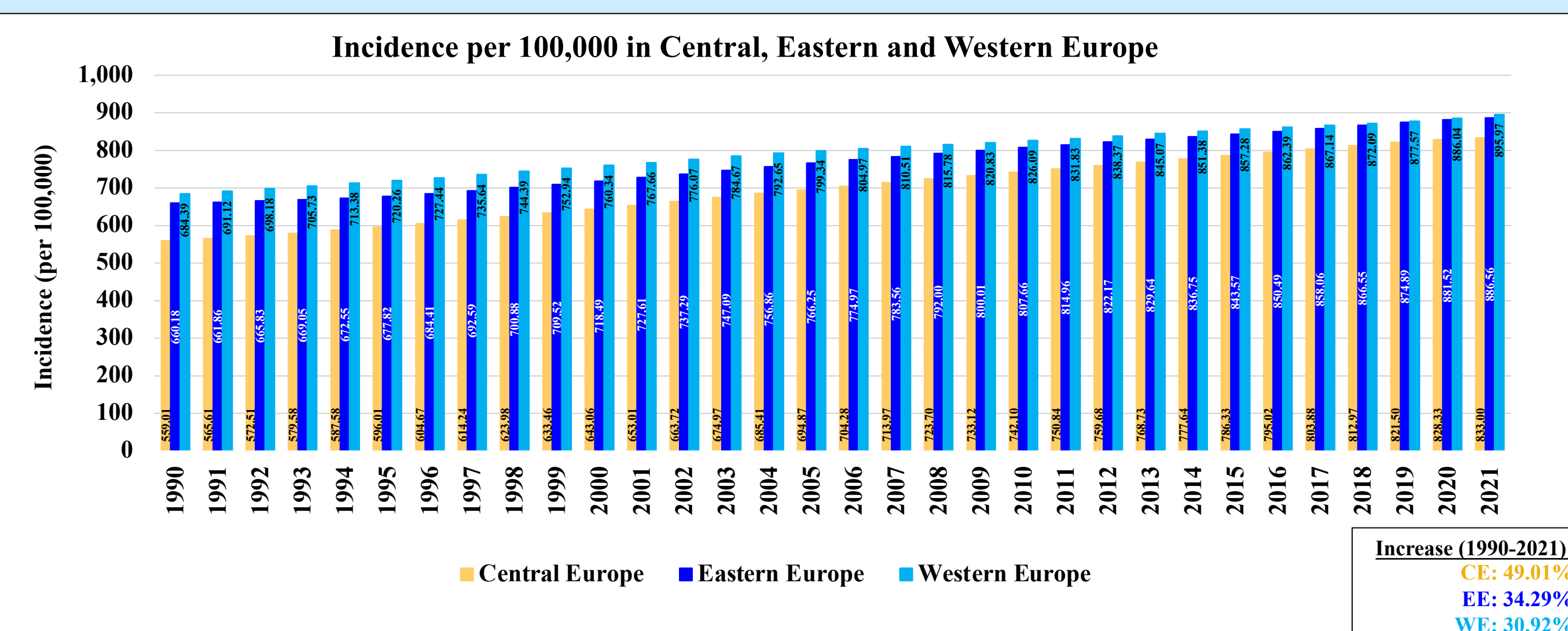


Figure 3 Incidence per 100,000 in Central, Eastern and Western Europe between 1990 and 2021

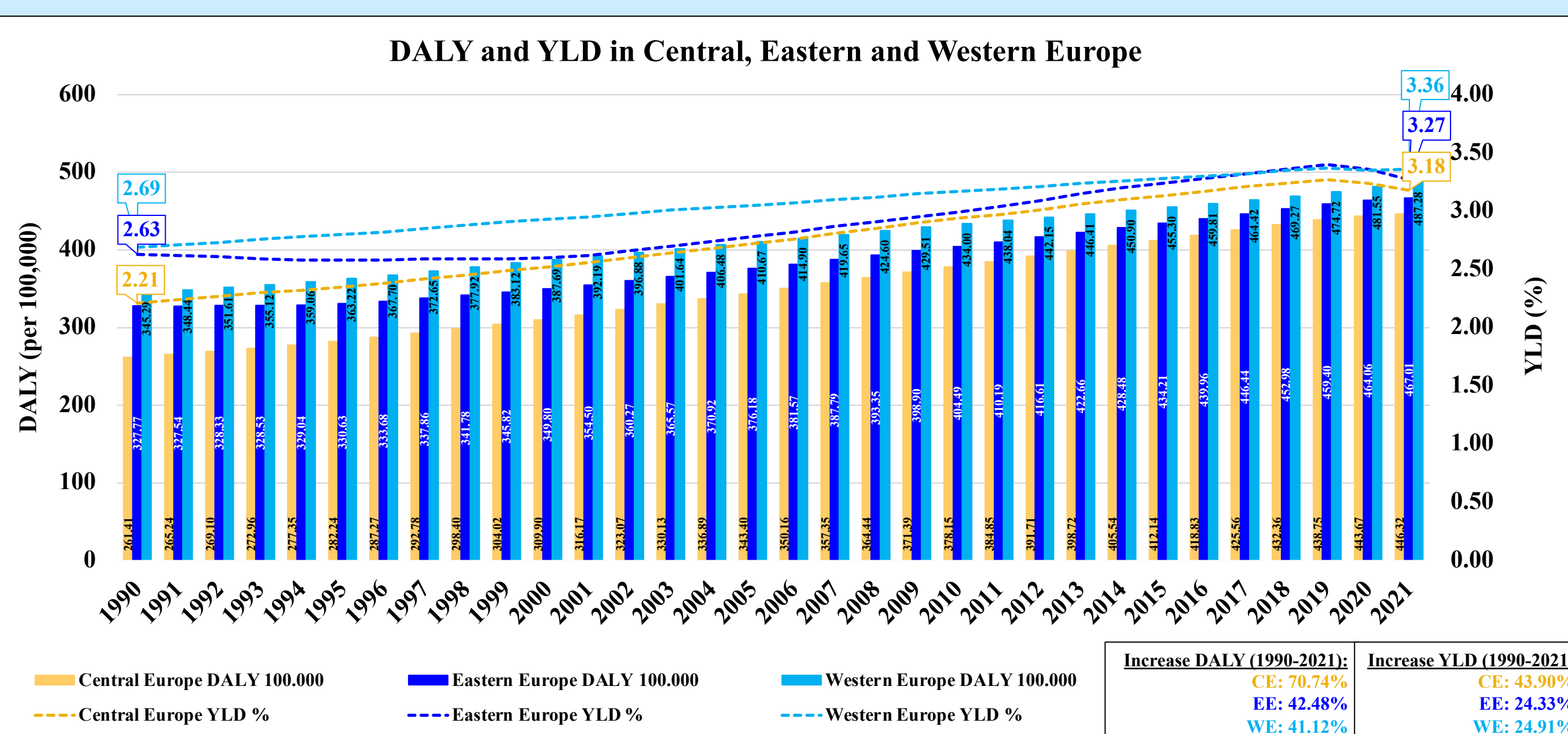


Figure 4 DALY and YLD in Central, Eastern and Western Europe between 1990 and 2021

