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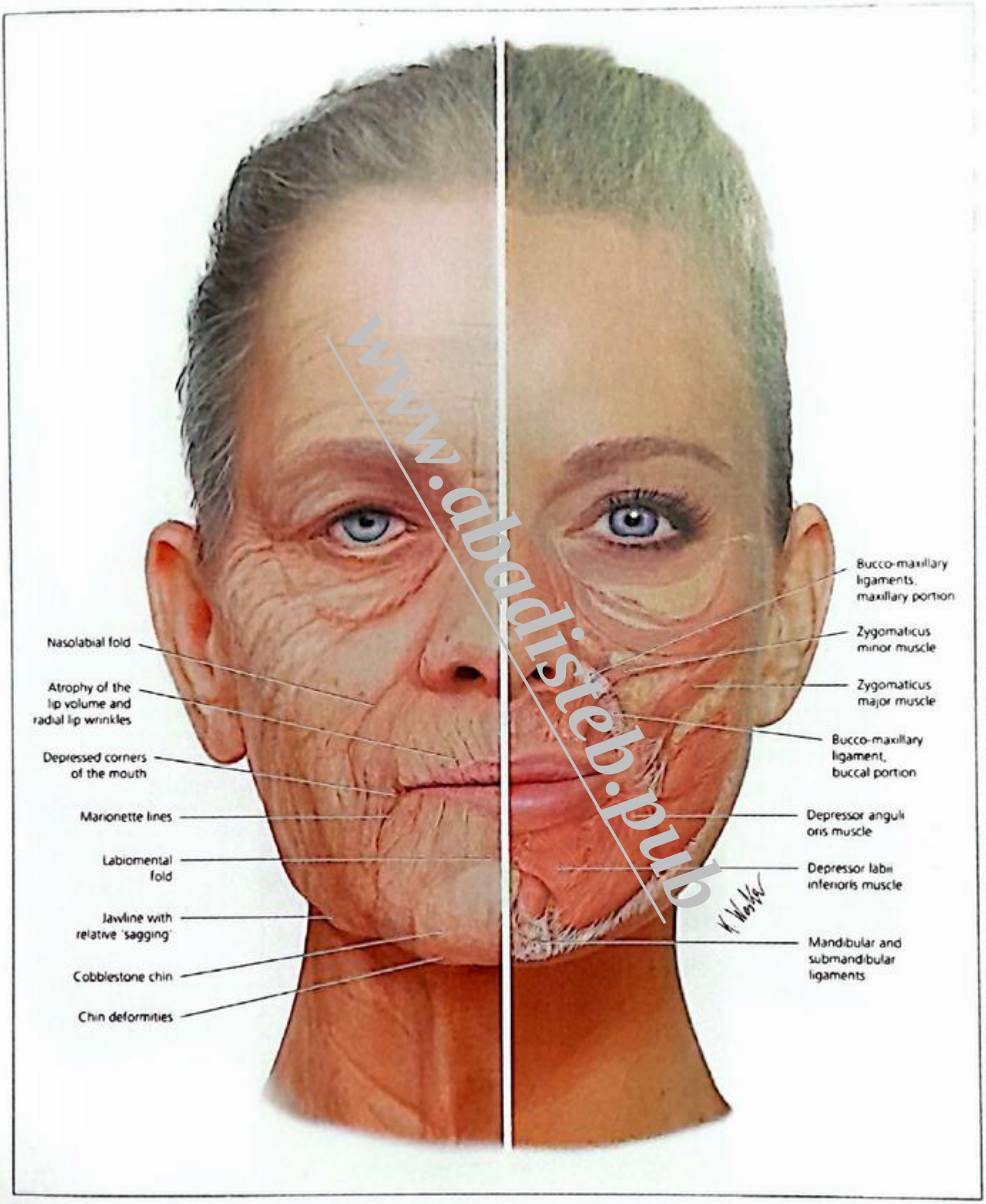


Fig. 2.27 Split view of the clinical signs of ageing and the anatomical structures in the perioral region.

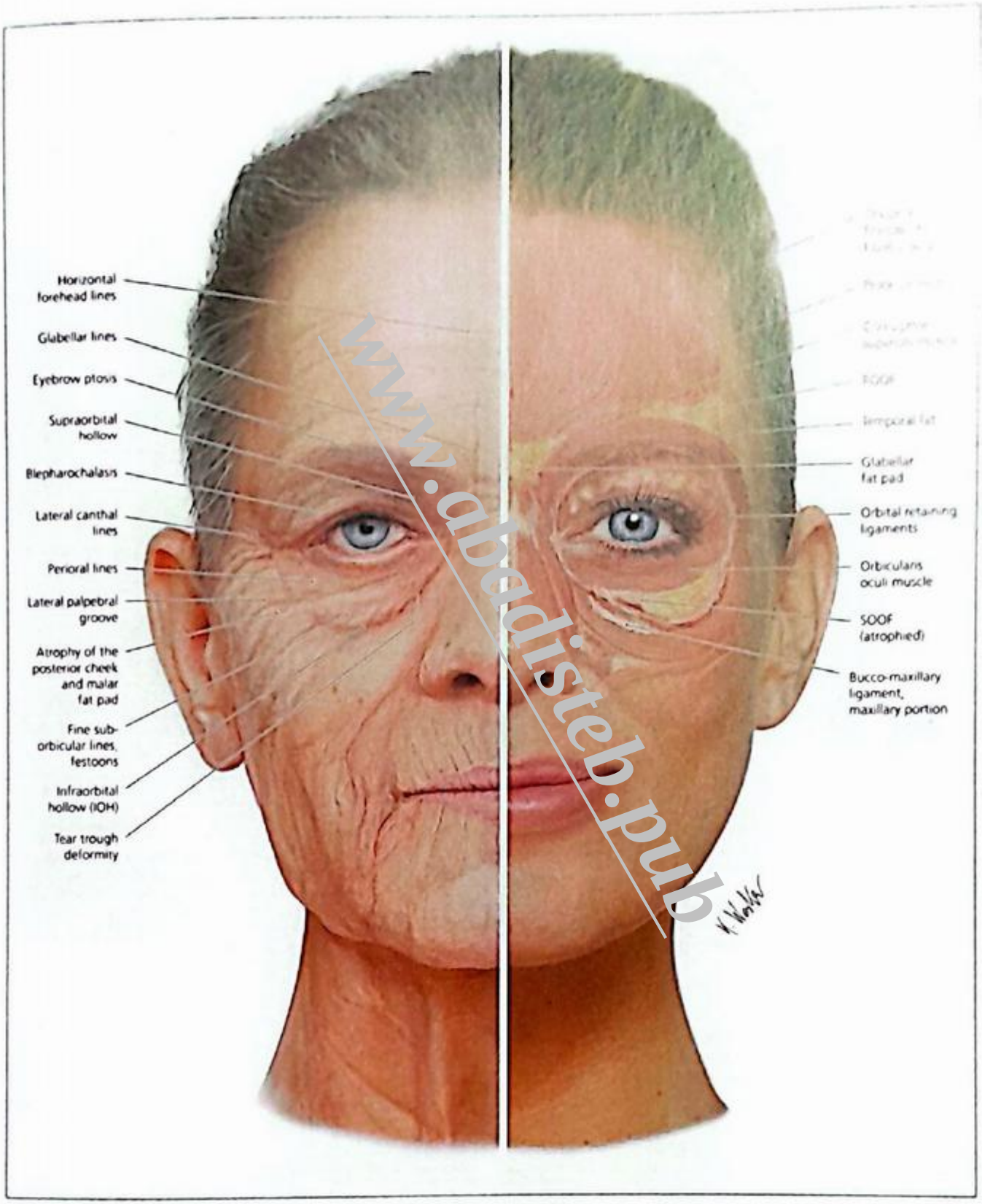


Fig. 2.25 Split view of the clinical signs of ageing and anatomical structures in the periorbital region.

Because of the biological support function of the subcutaneous fat, an adequate blood supply to the subcutaneous fat is of critical importance for the maintenance of the fluid balance (volume) and the trophic condition of the overall soft tissue complex of the face (Fig. 2.20). In the young face, the subcutaneous soft tissues are well supplied with blood, however, a decrease in blood supply occurs at a relatively early age, and is accelerated by factors such as smoking. This results in two initial features of ageing, namely:

1. Facial volume loss due to atrophy
2. Deterioration in the supply of fluid, oxygen and nutrients to the skin.

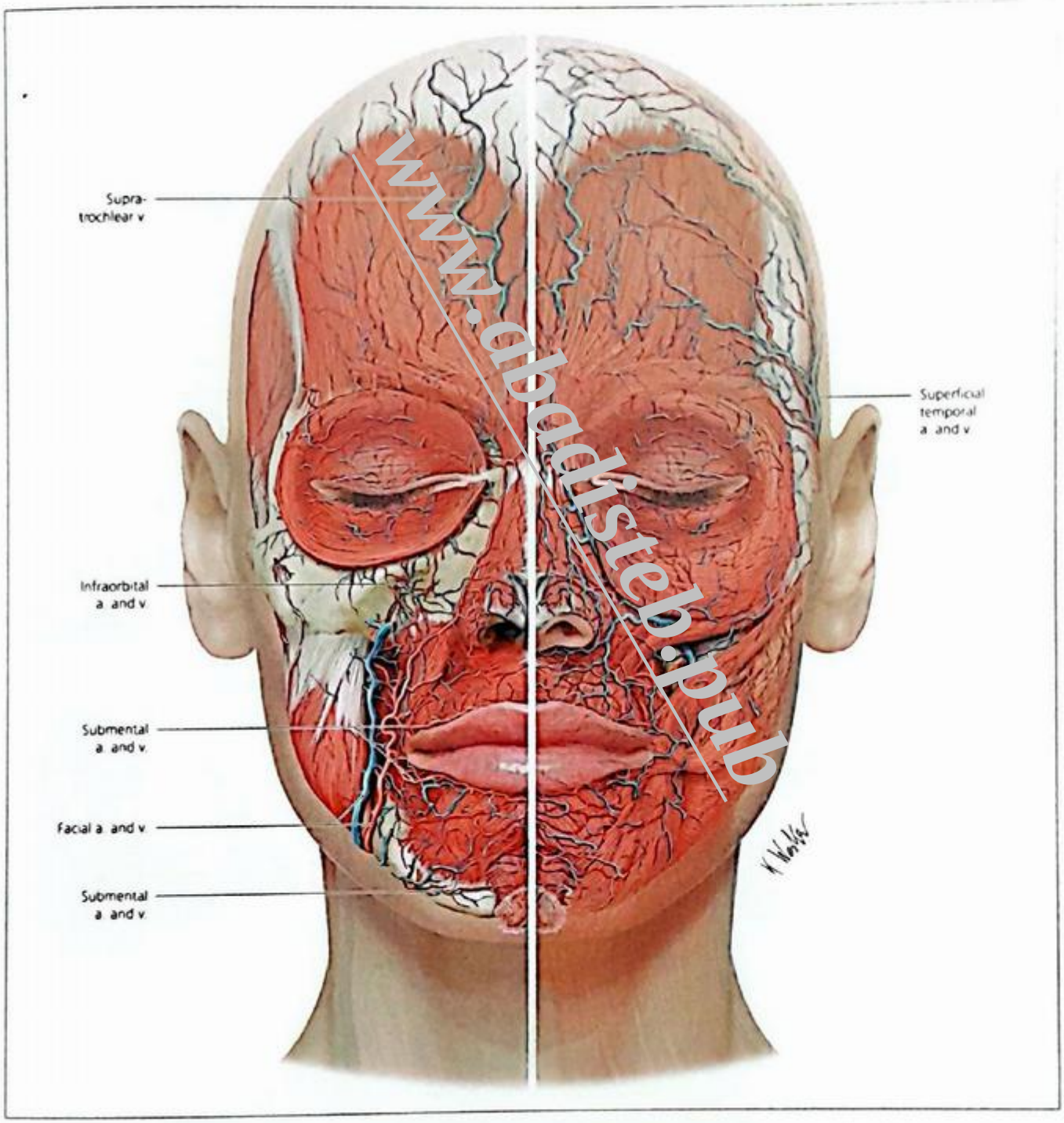


Fig. 2.20 Position of the facial arteries and veins relative to that of the moderately deep (right side) and superficial muscles (left side) (a. = artery, v. = vein).

2.2.3 Muscles of facial expression

The muscles of facial expression are mostly superficial muscles that lie just under the skin. Hence, they are also referred to as the 'skin muscles'. Dynamic wrinkles form due to the contraction of these muscles during the expression of emotions (Fig. 2.12). With age, these muscles tend to become hypertrophic, resulting in the development of persistently visible wrinkles that are involuntary and undesirable.

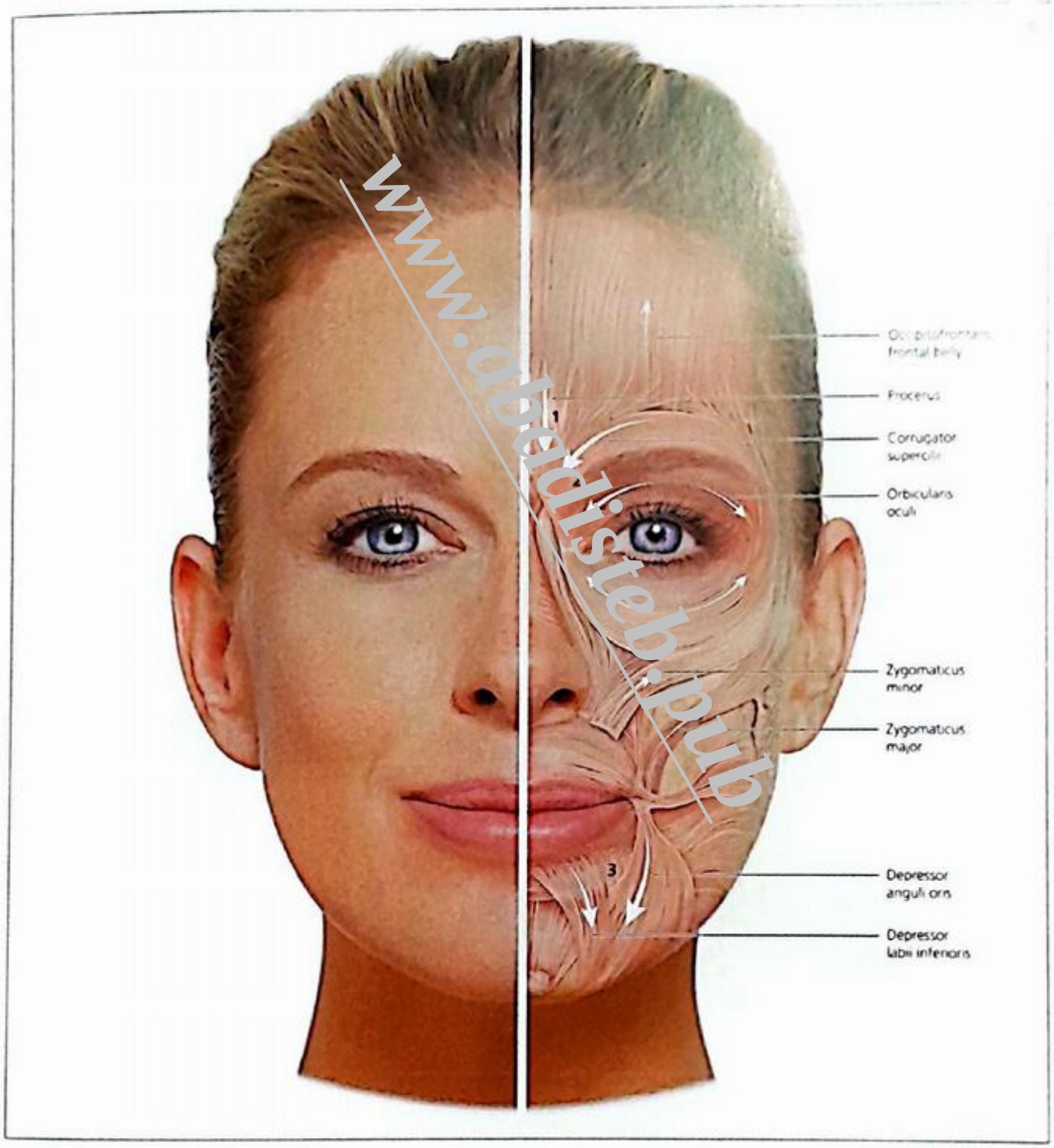


Fig. 2.12 Overview of the muscles of facial expression and schematic representation of the contraction forces (arrows) involved in the facial expression of emotion. An increase in depressor muscle activity (1, 2, 3) and a decrease in elevator muscle activity generally occurs with age.

Clinical course of facial ageing

Fig. 2.3 Face at the age of 15 years.

Fig. 2.4 Face at the age of 25 years.

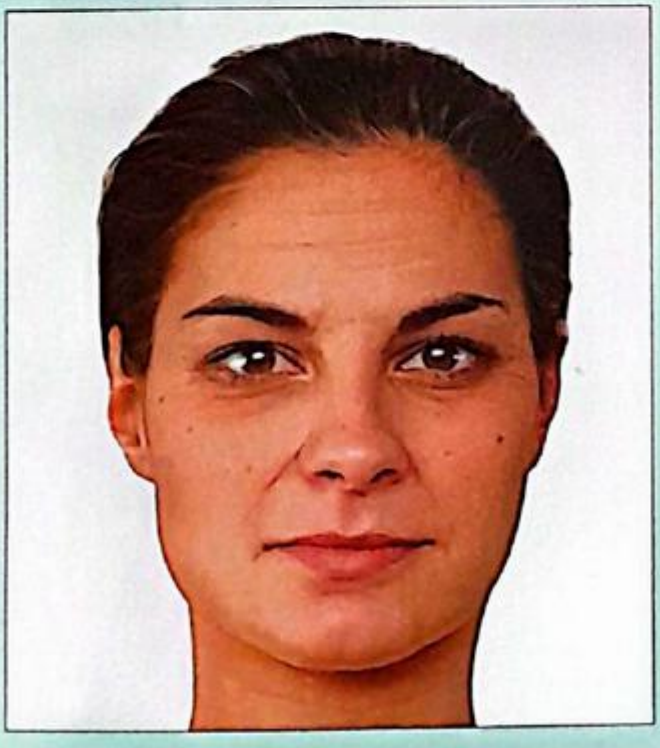
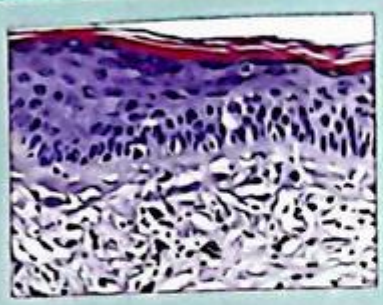
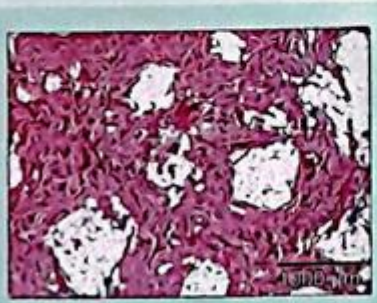


Fig. 2.5 Face at the age of 45 years.

Fig. 2.6 Face at the age of 65 years.

Clinical appearance of intrinsically aged skin		
	**Epidermis/dermis**	**Thin, rough, non-elastic, transparent skin with fine lines** • Decreasing barrier function • Reduced integumental reactivity • Increased vulnerability
	**Hair pigmentation**	**Loss of hair pigmentation** • Appearance grey hair • Pigment shifts on hairless skin
	**Blood vessels**	**Regression, involution and disorganisation of the vascular plexuses** • Impaired thermoregulatory function • Sugillations, ecchymoses, purpura • Haemangiomas
	**Appendages**	**Regression, involution and disorganisation of the appendages** • Reduction in sebum and sweat production – sebostasis, pruritus – impaired thermoregulatory function • Loss of hair pigmentation, reduction in hair number; proliferation of vellus hairs • Thinning of the nail plate, roughness of the nail surface, formation of ridges • Reduction in nervous stimulability
	**Subcutaneous tissue**	**Regression, involution and disorganisation of the subcutaneous tissue** • Reduction in fatty tissue • Osteoporosis of the underlying bone layers leads to sagging skin folds (e.g. jowling)

Tab. 1.1 Clinical appearance of intrinsically aged skin.