1. COMPRESSION = making two syllables into one.
1.1 (i) maddening /mæd ə n/ → /mæd n/  
    (ii) lenient /lɪn ə nt/ → /lɪn jɒnt  
    (iii) diagram /ˈdɑr ə græm/ → /ˈdaʊ græm  
1.2 Words like these are vari-syllabic. Generally, the uncompressed version is more usual in rarer words, in slow or deliberate speech, and the first time a word occurs in a discourse; the compressed version is more usual in frequently-used words, in fast or casual speech, and if the word has already been used in the discourse.
1.3 Compression typically arises from a sequence of X plus Y, where X is any vowel (or syllabic consonant), and Y is any weak vowel. In types (i) and (ii) it is the X that loses its syllabicity; in type (iii) it is the Y.
1.4 A strong vowel at Y prevents compression: radiate (cf. radiant), moderate adj. (cf. moderate v.).

Type (i): X is a syllabic consonant (process alternatively analysed as “elision of /ə/”)
- fattening, listener, fastening, Tottenham; battling, tickling, whistling, basically; battering, federal, separately, deliverance, secretary, memory; national, liberal, reference, out and about, as a matter of fact, a neighbour of mine
Sometimes compression is historical/categorical (lexically determined): gentler, simplest, disastrous, angry; marvellous, battery, camera, factory, opera, sparkling (?); (categorically not:) cookery, redolent, Hungary; cautionary, dictionary
Compression is fed by syllabic consonant formation:
- passionate /ˈpæs ə nt/ → /ˈpæs n/ nat
- national /ˈnæʃ n/ → /ˈnæʃ n/  

Type (ii): X is /i, u/, becoming [i, u] or [j, w] (perhaps making a ‘crescendo diphthong’)
- convenient, Australia; happier, dubious, premium, radiant; happiest, ugliest, various; don’t be afraid influence, undergraduate; genuine, innocuous, annual; about to explode

Type (iii): X is a strong vowel (diphthong), Y is usually /ə/ or /i/ (becoming [ə], [ɪ]).
- Does English have triphthongs? How many syllables in fire? Are lyre and liar different?
- Hypothesis: compression usually presupposes Smoothing (thus making a ‘derived diphthong’, e.g. [aɪ]). If this is true, there are no true triphthongs in English.

2. SMOOTHING (/V_) (a) Vᵢᵢ → ∅ where VᵢVᵢᵢ is a diphthong
(b) V → lax where V is a long vowel

(a) /ai, au, ei, ou, œt/ → [æ, ə, e, œ, o]
- fire, science, dialectal; nowadays, sour, Gower; trying, ploughing; Malaya, deity; Noah, slower; staying, going; loyal, enjoying; —also a possible ‘derived monophthong’ [aː] in fire, sour
(b) /i, u/ → [i, u]
- agreeable, museum, theological; being, seeing; fluent, truancy, brewery; doing, newest, ruinous

3. PRELATERAL EFFECTS*
(i) Breaking ∅ → ə /X_/  
- feel, sail, mile, oil (cf. betrayal, trial, royal); yield, mild
(ii) Darkening œt → œt /_/  
- roll, bowl, golden, shoulder; ? bowling, roller
(iii) i to schwa ı → ə /_/  
- readily 'redlii → 'redli (feeds s.c.f., → 'redli), easily, funnily, mightily
*These processes are variable, and not classical RP. In ‘Estuary English’ ı → ə (fed by i, ii).